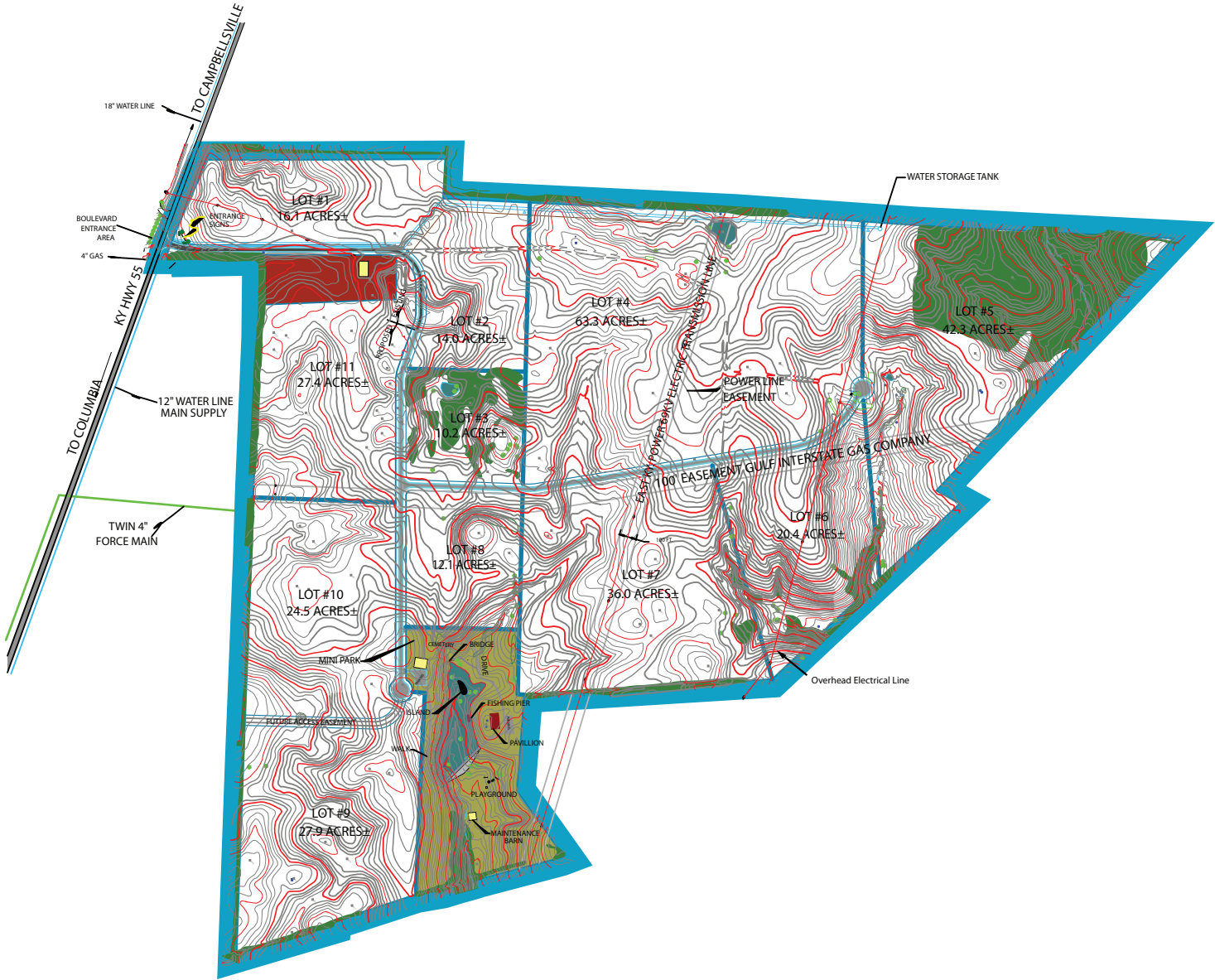


City of Columbia Subdivision Regulations



April 2007

CITY OF COLUMBIA
SUBDIVISION REGULATIONS

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COLUMBIA SUBDIVISION REGULATIONS

ARTICLE 1 GENERAL PROVISIONS AND DEFINITIONS

1.1 PURPOSE

These Subdivision Regulations are designed to encourage the development of sound, healthful and economically stable residential, commercial, industrial and public areas; to provide for safe, convenient and efficient traffic circulation; to coordinate land development to ensure that the future physical growth of the City of Columbia will be orderly, efficient and conducive to the minimum outlay of public and private expenditures in providing necessary services to new growth areas; to provide for the protection of environmentally sensitive and geologic hazard areas: to minimize fire hazards; to provide for light and air in habitable structures; to encourage the efficient use of energy resources and to not impede the use of possible alternative energy resources; to mitigate flooding hazards: to provide for the proper disposal of sewage; to enhance the unique aesthetics of the community; to encourage the protection and enhancement of trees and woodland areas; and to provide for the overall harmonious development of the community in accordance with the adopted Comprehensive Plan for the City of Columbia.

1.2 TITLE

The full title of these regulations shall be the "The Subdivision Regulations of Columbia, Kentucky". As a short title, these regulations shall be known, and may be cited, as the "Subdivision Regulations".

1.3 AUTHORITY AND ADMINISTRATIVE AGENCY

These Subdivision Regulations are adopted by the Columbia City Council, Kentucky, under the authority of Chapter 100 of the Kentucky Revised Statutes, and shall be administered by the Columbia Planning Commission.

1.4 AREA OF JURISDICTION

The Columbia Planning Commission, through these Subdivision Regulations, shall have jurisdiction and control over the subdivision of all land within the boundaries of the City of Columbia.

1.5 SCHEDULE OF CONSTRUCTION AND SALE OF LOTS

No lot tract or parcel in a subdivision may be sold, transferred, agreed to be sold, negotiated to sell; no permit to erect, alter or repair any building upon land in a subdivision may be issued, and no building may be erected in a subdivision unless a final plat has been approved by the Planning Commission and recorded with the county clerk, and until the construction of all improvements required in connection therewith have been completed, guaranteed or provided for in the manner prescribed herein.

1.6 SCHEDULE OF IMPROVEMENTS

The subdivider of any tract or parcel of land located within the City of Columbia shall not proceed with any construction work for: a street, sanitary sewer, water main (including grading thereof) or any other facilities in connection therewith until the developer has obtained conditional approval or final approval of a preliminary plan by the Planning Commission. No site grading or landscaping work shall be done unless a Storm Water Management Plan has been submitted and approved by the City Engineer in accordance with the Columbia Drainage Ordinance (Ordinance 920.32).

1.7 PLAT APPROVAL EXPIRATION

Within 24 months after approval, or conditional approval, of the preliminary plat or improvement drawings and specifications, the developer must submit the final plat (for all sections, of the total area included in the preliminary plat), to the Commission's duly authorized representative for action or preliminary plat approval will expire. The Planning Commission, upon receipt of a request by the subdivider, may grant an extension to this 24 month period if prevailing conditions have not significantly changed.

1.8 VARIANCES

These Subdivision Regulations are adopted only as minimum requirements, and all developers should consider developing their subdivisions at higher standards. The Commission may require standards above the minimum contained herein whenever it finds that public health, safety, or welfare purposes justify such increases. The Commission also may reduce or otherwise vary the requirements of these regulations whenever it encounters the situations described below. In granting such variances, the Commission may attach and require whatever conditions it feels are necessary to secure the basic objectives of the varied regulations. Such variances may be granted only without detriment to the public good, without impairing the purposes, basic objectives, and intent of these regulations, and without impairing the desirable general development of the neighborhood and the community as proposed by the Comprehensive Plan. Any variances granted by the Commission shall be noted in its official minutes along with the reasons which justified the granting of the variance.

- A. EXCEPTIONAL HARDSHIP - Where the Commission finds that strict compliance with these regulations would create an undue hardship because of exceptional unique topographic or other natural or manmade physical conditions encountered on the particular land, the Commission may modify these regulations to the extent necessary to relieve the undue hardship.
- B. DESIGN INNOVATION AND LARGE SCALE DEVELOPMENT -These regulations may be modified by the Commission in the case of plans for complete neighborhoods or other design innovations which, in the Commission's opinion, still achieve the basic objectives of these regulations.

1.9 AMENDMENTS

The Planning Commission may from time to time, revise, modify or amend these regulations by appropriate action and shall notify the public of such changes.

1.10 VIOLATIONS

Violations of these Subdivision Regulations and subsequent penalties shall be as cited in Chapter 100 of the Kentucky Revised Statutes.

1.11 SEPARABILITY AND PREVIOUS REGULATIONS

Should any section, subsection, paragraph, or provision of these regulations be held invalid or unenforceable by a court of competent jurisdiction, such decision shall in no way affect the validity of any other provision of these regulations, it being the intention of the City of Columbia to adopt each and every provision of these regulations separately. Any previous subdivision regulations adopted by the City of Columbia are hereby repealed.

1.12 CONFLICT OF REGULATIONS: EFFECT OF PRIVATE DEED RESTRICTIONS

Whenever these regulations, or subdivision plats approved in conformance with these regulations, are in conflict with other local ordinances, regulations, or laws, the more restrictive ordinance, regulation, or law shall govern and shall be enforced by appropriate local agencies. When subdivision and development plans which have been approved by the Planning Commission contain setback or other features in excess of the minimum Zoning Ordinance requirements, such features as shown in the approved plan shall govern and shall be enforced by the Administrative Officer. Private deed restrictions or private covenants for a subdivision, which have not been included as part of the approved subdivision plan, do not fall within the jurisdiction of enforcement by any local agency and cannot be enforced by the Planning Commission.

1.13 RELATIONSHIP TO ZONING ORDINANCE AND OTHER ORDINANCES

Plans filed pursuant to these subdivision regulations shall be required to comply with applicable zoning ordinances and applicable city ordinances.

1.14 DEFINITION OF WORDS

Throughout these Subdivision Regulations, all words in the present tense include future tense, and all words in the plural number include the singular number or vice versa, unless the natural construction of the wording indicates otherwise. The word "may" is permissive, while the words "shall" and "will" are mandatory. The following words and phrases, when used in these regulations, shall be defined and interpreted as follows:

ARCHITECT, LANDSCAPE- Shall be a person licensed as a landscape architect by the State of Kentucky.

BLOCK - A surface land area which is separated, and distinguished from other surface land areas by visible physical boundaries such as streets, railroads, rivers, extremely steep land, or other physical barriers.

BUILDING - Any man-made physical structure, or part thereof, affixed to the land and intended for work, residence, or other occupancy.

BUILDING SETBACK LINE - A line in the interior of a lot which is generally parallel to, and a specified distance from, the street right-of-way line, or lines. No building shall then be placed in the space between the building setback line and the right-of-way line.

CITY ENGINEER - A qualified person registered and currently licensed to practice civil engineering in the state of Kentucky, who is either employed by the city or a consultant working under a contractual agreement or retained by the city to review subdivision, zoning and related matters.

COMPREHENSIVE PLAN - The adopted plan for Columbia, Kentucky which serves as a guide for public and private actions and decisions to assure the development of public and private property in the most appropriate relationships. Such plan shall include all elements whether expressed in words, graphics, or other forms.

DEVELOPER - An individual, partnership, corporation or other legal entity or agent thereof, which undertakes the activities covered by these regulations. Inasmuch as the subdivision plan drawings are merely a necessary means to the end of assuring satisfactory development, the term "developer" includes "subdivider", "owner", "builder", etc. even through the persons and their precise interests may vary at different project stages.

EASEMENT - The right to use another person's property, but only for a limited and specifically named purpose. The owner generally may continue to make restricted use of such land since they have given up only certain, and not all, ownership rights.

ENGINEER - A qualified person registered and currently licensed to practice civil engineering in the State of Kentucky. Whenever qualifications are questioned, the Commission will consult with the Bluegrass Chapter of the Kentucky Society of Professional Engineers or the Consulting Engineers Council of Kentucky.

ENVIRONMENTALLY SENSITIVE AREA - Any area which due to its natural or physical setting may have environmental problems with regard to development. Areas included are (but not limited to) areas of steep slope (over 15%), floodplains, sinkholes, areas of poor soil, improper fills, wetlands, any significant tree or tree stands, aquifer recharge areas, and similar areas.

FILL - A deposit of soil, rock, or other non-deteriorating material used to replace or supplement the original soil or subsoil. "Construction" fill is a term used to describe fill upon which any permanent structure for human occupancy or other permanent construction for human use (such as roads, parking areas, etc.) shall be built.

GRADE - The inclination, with the horizontal, of a road, unimproved land, etc., which is generally expressed by stating the vertical rise or fall as a percentage of the horizontal distance.

IMPROVEMENTS - Physical changes made to raw land, and structures placed on or under the land surface, in order to make the land more usable for man's activities. Typical improvements in these regulations would be grading, street pavement, curbs, gutters, drainage ditches, storm and sanitary sewers, utility lines of all types, street name signs, property number signs, trees, etc.

LAND SURVEYOR - A person licensed as a "Land Surveyor" by the State of Kentucky.

LOT - A portion of a subdivision or other parcel of land intended for transfer of ownership, or for building development. Generally "lots" are the basic unit of a subdivision plan, i.e., the smallest division of a plan designed to be owned by one person.

LOT AREA - The amount of surface land contained within the property lines of a lot, including land within easements on the lot, but excluding any land within street rights-of-way.

LOT, CORNER - A lot, abutting upon two or more streets at a street intersection, or abutting upon two adjoining and deflected lines of the same street and thereby forming an interior angle of less than one hundred thirty-five (135°) degrees.

LOT, DEPTH - The average horizontal distance between the front and rear property lines of a lot.

LOT, WIDTH - Generally, the distance, measured along the building setback line, between the two side property lines of a lot--although at times the measurement will be along the right-of-way or back property line.

LOT, DOUBLE FRONTAGE - A lot having two or more of its non-adjoining property lines abutting upon a street or streets.

LOT, REVERSE FRONTAGE - A double frontage lot which has its vehicular access point limited to the back of the lot, rather than having access on its front as for most lots.

PLANNER, COMMUNITY- Shall be a person who is a graduate of an approved University program, and a member, in good standing, of the American Institute of Certified Planners.

PLANNING COMMISSION OR "COMMISSION" - The City of Columbia Planning Commission.

RIGHT-OF-WAY - Land used generally for streets, sidewalks, alleys, or other public uses. Right-of-way also is a land measurement term, meaning the distance between lot property lines which generally contains not only the street pavement but also the sidewalks, grass area, and underground and aboveground utilities.

ROADWAY - The portion of the street right-of-way which contains the street pavement and gutter and is used primarily as a channel for vehicular movement and secondarily as a drainage channel for storm water.

STREET - Any vehicular way; a general term used to describe a right-of-way which provides a channel for vehicular and pedestrian movement between certain points in the community, which may provide for vehicular and pedestrian access to properties adjacent to it, and which may also provide space for the location of underground or aboveground utilities. Streets are classified by function as follows:

EXPRESSWAYS- Hold the first rank in the classification of streets, and are used only for the

movement of vehicles, providing for no vehicular or pedestrian access to adjoining properties.

ARTERIALS - Hold the second rank in the classification, and should be used only for the movement of vehicles, and preferably should not provide for vehicular access to adjacent properties. Interruption of traffic flow should be permitted only at street intersections which should contain medians, deceleration lanes, and left turn storage lanes. Arterials are the link between freeways and collectors, and rank next to freeways in traffic volumes, speed limit, and right-of-way width. Examples of arterials in Columbia are Jamestown Road (KY 55), Burkesville Road (KY 80-61), Cambellsville Road (KY 55), Russell Road (KY 80) and the proposed by-pass.

COLLECTORS - Hold the third rank in the classification of streets, and are used both for vehicles, and for providing access to adjacent properties. Access to adjoining properties should be planned and controlled so that minimum disturbance is made to the traffic moving efficiency of the collector street. Intersections should contain medians, deceleration lanes, and left turn storage lanes. Collectors are the link between arterials and local streets, and generally rank next to arterials in traffic volumes, speed limits, and right-of-way width.

LOCALS - Hold the fourth rank in the classification of streets, and are used primarily for providing access to adjacent properties. Vehicles moving on these streets should have an origin or destination in the immediate vicinity, and all types of through traffic should be eliminated through initial design of its connections with other streets. Local streets are the primary link between trip generation points (homes, offices, stores, work) and collector streets. Locals have the least right-of-way, the lowest speed limit, and the least amount of vehicular traffic. Local streets can be subdivided further into six subclasses, all but one (dead end streets) of which are permitted in these regulations:

CONTINUING STREETS - Are local streets having two open ends; each end generally connects with different streets; one or more other streets may intersect it between its two open ends; and property fronts on both sides of the streets.

MARGINAL ACCESS STREETS - Local streets generally having two or more open ends which are sometimes referred to as access points, but herein are considered to be full part of the marginal access street; the ends generally connect with the same street, other streets may intersect between the ends, and property fronts on only one side of the street (the other street side is parallel, and adjacent, to a higher classification street such as a collector or arterial). "Service Road" is a term often used to describe most types of marginal access streets.

LOOP STREETS - Are local streets having two open ends; each end generally connects with the same street; no other streets generally intersect between its two ends, and property fronts on both sides of the street.

CUL-DE-SAC STREETS - Are local streets having only one open end providing access to another street; the closed end provides a turn-around circle for vehicles, no other street generally intersects between the two ends, and property fronts on both sides of the street.

DEAD-END STREETS - Are similar to cul-de-sacs except that they provide no turn-around circle at their closed end, and are not permitted as streets in any proposed subdivision. Stub streets, planned for future continuation, are not considered to be dead-end streets.

ALLEYS - Alleys generally have two open ends, each end connects with different streets, and property generally backs onto both sides of the alley. Special permission from the Commission is required whenever alleys are used.

STREET, APPROVED - Any vehicular way approved by the Planning Commission as providing access to a lot. Included in this definition are:

PUBLIC STREETS - which are streets dedicated to the public use and which are maintained by a public governmental body.

ACCESS EASEMENTS - which, when permitted by the Commission as the sole means of vehicular access to a lot, are a type of restricted street which may be used by the public, or privately, as designated by the Commission and subject to the provisions of Section 6-8 of these Subdivision Regulations.

MAJOR SUBDIVISION - Means the division of a parcel of land into three or more lots or parcels for the purpose, whether immediate or future, of sale, lease, or building development, or if a new street is involved, any division of a parcel of land.

ARTICLE 2 MAJOR AND MINOR CLASSES OF SUBDIVISIONS

2.1 PURPOSE

The purpose of this Article is to establish two classes of subdivisions on the basis of their relative importance to the community's overall development. This will permit quicker processing and fewer requirements for subdivisions of minor planning significance.

2.2 MAJOR SUBDIVISION CLASS

The class of "major" subdivisions shall be those subdivisions of land which are of major significance to the development of the community. All subdivisions which do not conform to the definitions established for "minor" subdivisions shall be considered as major subdivisions. Further, any subdivision proposing the creation of a new street shall automatically be considered as, and follow the requirements for, a major subdivision.

2.3 MINOR SUBDIVISION CLASS

The class of "minor" subdivisions shall be those subdivisions of land which are generally of minor planning significance to the community's development. Minor subdivisions include only those subdivisions defined as follows:

- A. **MINOR SUBDIVISION** - Where a subdivision consists of two or less lots in which no new improvements are to be constructed or extended and involving no new streets.
- B. **CONSOLIDATION MINOR SUBDIVISION** - Shall be subdivisions for the purpose of transferring one or more parcels between adjoining properties which share at least one common boundary involved in the transfer. The final effect of a consolidation is to change the lot boundaries of two or more properties, or to combine at least two (2) properties into a lesser number of lots than originally existed. No consolidation may result in there being more separate transferable parcels after consolidation than prior to consolidation.
- C. **MINOR AMENDMENTS TO EXISTING PLANS** - The following defined types of amendments to existing recorded plans shall be deemed as minor subdivision plans.
 1. Corrected Amended Minor Subdivision: Shall be amendments to existing plans for the purpose of correcting obvious errors of an engineering or drafting nature or other similar small discrepancies. Not included in this type of amendment are changes which materially effect building lines, street requirements, easements or any other changes of a significant planning nature. Such changes shall be considered as major subdivisions unless they meet the requirements for another type of minor amendment.
 2. Easement Minor Amendment: Shall be amendments to existing plans for the purpose of release or modification of existing easements and the addition of new easements. The written approval of any beneficiary of the easement is required as set forth in Section 3.5(B)(1). Excluded from this class are any easements for the purpose of pedestrian or vehicular access among properties, or for the purposes of roadway improvements except as may be required under Section 3.4 (E). Any changes in

easements of this nature shall be deemed a major amendment requiring full Commission action.

3. Administrative Action Amendment: Shall be amendments necessitated by official acts of the Columbia City Council or the Board of Adjustment, where the Planning Commission does not share authority in the substance of the change in question and the amendment is for the purpose of clarifying and making consistent the information appearing on the recorded plat of the property.

D. PUBLIC ACQUISITION MINOR SUBDIVISION - Shall be for the purpose of platting parcels of land or easements to be acquired by the City of Columbia for public purposes such as road construction, park acquisition or other similar uses. Prior to filing of such plans, the City Council shall have approved the acquisition of land or easement. The platting of streets or other public facilities constructed by developers and dedicated to public use are not included in this minor subdivision class.

2.4 APPLICABILITY

Each division created by any act of subdividing, whether actually shown in entirety on the plat or not, shall be required to meet the requirements of all city ordinances and regulations.

ARTICLE 3 MINOR SUBDIVISION PLAT PROCEDURES AND REQUIREMENTS

3.1 PURPOSE

The purpose of this Article is to establish procedures and content requirements which must be met by minor subdivision plans.

3.2 PROCEDURE FOR MINOR SUBDIVISION PLATS

Shall be as follows:

- A. **FILING** - The developer shall file the following materials with the City Clerk; three (3) blue or black line prints of the plan, and a filing fee in the amount determined by the City's adopted fee schedule.
- B. **REVIEW** - The Administrative Official shall review the plat for compliance with all applicable requirements and ordinances. Upon determination that all requirements have been met, the City Clerk shall certify the plan as approved. If any question arises as to compliance, however, the plat shall be referred to the Commission for action
- C. **RECORDING** Upon certification of approval by the City Clerk, the plat shall be recorded in the plat records of the Adair County Clerk at the developer's expense. This shall be done within one (1) year of the certification of approval, otherwise, the approval is null and void.

3.3 AUTHORIZATION FOR PLAN PREPARATION

Any qualified individual registered and currently licensed to practice land surveying in the Commonwealth of Kentucky shall be authorized to prepare minor subdivision plans.

3.4 REQUIRED CONTENT AND FORMAT FOR ALL MINOR SUBDIVISION PLANS

The following shall be required information on all minor subdivision plats.

- A. **TITLE BLOCK** The title block shall contain the type of minor subdivision; the name of the subdivision; the mailing address of the property being subdivided; the owner; the land surveyor; the graphic and written scale; date of preparation; and any other appropriate information.
- B. **VICINITY SKETCH** A vicinity sketch shall be shown, oriented as for the lotting scheme. The sketch shall not be required to be drawn to scale and shall include a sufficient number of streets and other landmarks to enable one to quickly recognize the property's location.
- C. **LOTING SCHEME** The lotting scheme shall be drawn at a scale of 1" = 100' with north oriented to the top of the sheet, if possible, or at another scale and/or orientation which permits clear and legible presentation of the required information. The north arrow shall be shown. The boundary of any parcel which is being created by the plan or is proposed for amendment shall be shown as a solid line. Any parcel being created by the

plan shall be surveyed in the field with accurate bearings and dimensions placed upon its boundaries and its acreage shown. Other boundaries shown on the plan, and boundaries of properties which are the subject of a minor amendment, shall be labeled with bearings and distances but the surveyor shall not be required to attest to their accuracy. All adjoining properties shall have their intersections with the parcel being platted shown in dashed lines and their record names shown.

- D. **EASEMENTS** Any existing or proposed easement on or abutting the property being platted shall be shown and labeled as to its purpose.
- E. **STREETS** Any street which adjoins the property being platted shall be shown and its right-of-way width indicated. A cross section or plan view section shall be provided indicating the extent of existing or proposed paving, sidewalks or other construction within the street right-of-way. Where the existing right-of-way is not of sufficient width to be in compliance with community plans or regulations, an easement of sufficient width to comply with such plans and regulations shall be dedicated to public use for roadway purposes.
- F. **CERTIFICATIONS** The following certifications shall be placed on the plat and shall be properly signed:
 - 1. Owner's Certification: Shall be as follows: "(I or We) do hereby certify that (I am or We are) the only (owner or owners) of record of the property platted hereon, said property being recorded in (Deed Book or Plat Cabinet), (Page or Slide), in the Adair County Clerk's Office; and do hereby adopt this as (my or our) record plat for this property." (Witness signature, address & date) (Owner signature, address & date).
 - 2. Land Surveyor's Certification: Shall be as follows: "I do hereby certify that this record plat was prepared under my direction and that, to the best of my knowledge and belief, the boundaries of the property being transferred are true and accurate. (Date, Land Surveyor's signature, address, and seal)
 - 3. Commission's Certification: Shall be as follows: "I do hereby certify that this record plat has met the requirements of the Columbia Planning Commission, and is now eligible for recording." (Date and City Clerk's signature)
 - 4. Recorder's Certification: A blank space also shall be left for the recording stamp of the County Clerk's Office.

3.5 ADDITIONAL INFORMATION AND REQUIREMENTS FOR MINOR PLATS

The following additional information and requirements shall be applicable to the type of minor subdivision so indicated:

- A. **CONSOLIDATION PLANS** - The parcel to be transferred shall be labeled as Parcel 1; the recipient parcel as Parcel 2; and the remaining portion of the original parcel after consolidation shall be labeled as Parcel 3. The acreage of each parcel shall be shown. A notation shall be added stating "Parcel I shall be sold or transferred only to Parcel 2 for consolidation purposes." For multiple consolidations, the developer shall consult with the

Administrative Official to determine appropriate parcel labeling and the wording of such consolidation note.

- B. MINOR AMENDMENTS TO EXISTING PLATS** - All minor amended subdivision plans shall contain a note stating the purpose of the amendment. Only such changes as are contained in this note shall be considered as approved. Lotting scheme information shall be as required for the original final plan. Additional requirements specific to each plan type shall be as follows:
1. Easement Minor Amendment: The developer shall be required to submit a written statement from a properly designated representative of any beneficiary of the easement proposed to be modified stating that the beneficiary approves of the addition, release or modification being made.
 2. Administrative Action Amendment: A note shall be added indicating the date and nature of the action taken which necessitated the minor amendment.
- C. PUBLIC ACQUISITION PLANS** - A certification for the Mayor's signature shall be added as follows: "I do hereby certify that the acquisition of the property shown hereon was approved by the Columbia City Council on (date)." Mayor's and Council Clerk's signature and date).

ARTICLE 4 MAJOR SUBDIVISION PLAN PROCEDURE

4.1 PURPOSE

The purpose of this article is to establish the procedure which shall be followed by the developer and the Planning Commission in preparing, reviewing and approving any subdivision defined as a major subdivision under the provisions of Article 2 of these regulations.

4.2 TYPES OF MAJOR SUBDIVISION PLANS

The following plan types are hereby created and defined as the basic approval steps needed for a major subdivision:

- A. **PRELIMINARY SUBDIVISION PLAN** All proposed major subdivisions, except as exempted under Section 4.3 below, shall be first considered by the Commission as a preliminary subdivision plan. This plan should include a detailed construction plan for public improvements to be developed in conjunction with a subdivision such as streets, drainage, sanitary sewers and other public facilities. Upon approval of the preliminary plan, the developer may construct such improvements in accordance with the approved plan.
- B. **FINAL SUBDIVISION PLAN** Major subdivisions shall receive their last official consideration by the Planning Commission as a final subdivision plan. Upon approval of the final subdivision plan by the Planning Commission and subsequent recordation, lots may be sold or transferred and building permits obtained in accordance with the approved final subdivision plan.

4.3 BYPASSING PRELIMINARY PLANS

In any subdivision not involving new public streets or other public improvements, the developer may be permitted to omit the preliminary plan approval stage, and proceed directly to the final plan submission stage. Whenever a final subdivision plan is submitted under this section and the Administrative Official questions the need for preliminary plans, the question shall be referred to the Planning Commission for judgment.

4.4 PRELIMINARY PLAN PROCEDURE

All preliminary subdivision plans shall be processed as follows:

- A. **PRE-APPLICATION CONFERENCE** - At least five (5) working days prior to filing of a preliminary subdivision plan, the developer is encouraged to prepare a rough sketch of the proposal and meet with the Administrative Official to discuss the proposed subdivision. The purpose of this conference is to discuss at the earliest stages subdivision requirements and procedures, and possible issues related to the development of the property in question. It is intended that this procedure will help alleviate possible conflicts over subdivision requirements by early recognition of existing conditions, necessary facilities and other requirements which the developer can then consider in preparing the formal subdivision proposal. The developer is also encouraged to discuss the proposal with other public agencies and utilities at this stage.

- B. **APPLICATION AND DISTRIBUTION** - To formally ask for action on the preliminary plan, the developer shall file a completed application blank, filing fee and copies of the plan two weeks in advance as required by the Commission's adopted meeting, filing and fee schedules.
- C. **REVIEW** - The Columbia Administrative Official including the utility director and other concerned agencies shall review the preliminary plans and make recommendations to the Commission. The Planning Commission may direct comments to a Subdivision Committee or consider them directly. The developer may secure recommendations from the staff at any of the review checkpoints and proceed to make plan changes so that revised plans may be submitted to the remaining review groups.
- D. **COMMISSION ACTION** - All preliminary plans shall be approved, conditionally approved or disapproved within ninety (90) days of the date they are officially filed for Commission action. The Commission will review the Administrative Official and/or Subcommittee recommendations, if any, and then act for approval, conditional approval with conditions noted, postponements, or disapproval. Reasons for action of postponement or disapproval and any requirements associated with a conditional approval shall be fully incorporated in the Commission's minutes and shall be available to the developer and the public. The following actions by the Commission shall have the meanings so stated:
1. **Approval**: Means the developer is now authorized to proceed with the construction of physical improvements and to proceed with the preparation of the final plan. Preliminary plan approval automatically grants a developer two (2) years within which they shall submit final plans for all property shown on the preliminary plans for approval. Before expiration, the Commission may extend the approval period in increments not to exceed one (1) year at a time, provided the Commission finds that progress has been made in the physical construction of improvements. In conjunction with such approval period extensions, the Commission shall have the right to require changes in the development when it finds that time has necessitated such changes for health, safety and welfare of the residents of the community or when applicable ordinances or regulations have been changed. Upon expiration of any approval period specified under this section, the plan shall be deemed as disapproved by the Commission.
 2. **Conditional Approval**: Means the developer may proceed to the preparation of the improvement plan, but only after the preliminary plan has been corrected to reflect all requirements placed on the plan by the action of the Commission.
 3. **Postponement**: Means that the Commission is delayed for definite reasons which shall be noted by the Commission. Certain specified changes may have to be made in the plans, but no completely new resubmittal is required of the developer as is the case for disapproval. However, all preliminary plans shall be approved or disapproved within ninety (90) days of the date they are officially filed for Commission action unless the developer agrees to a longer postponement.
 4. **Disapproval**: Means disapproval of the plan. For further action, the developer must file a new application along with a filing fee and preliminary plan copies as required under Section 4.4(B) above.

- E. **CERTIFICATION OF APPROVAL** - The developer shall make any required additions or corrections to the preliminary plan and submit copies in a number required by the Commission to the Commission's Secretary for certification within fourteen (14) days for any preliminary plan which has been substituted for a development plan in conjunction with a map amendment (as provided in the Zoning Ordinance) and within one (1) year of the date of Planning Commission approval for all other preliminary plans. The action of the Commission shall be null and void if these requirements are not met.

4.5 FINAL PLAN PROCEDURE

All major final subdivision plans shall be processed as follows:

- A. **PRE-APPLICATION CONFERENCE** - The developer is urged to prepare a rough sketch of the proposal and discuss it informally with the Administrative Official in order to share information and open a dialogue at the earliest stages of the process. This conference is not a mandatory pre-requisite to the formal filing of the final subdivision plan by the developer.
- B. **APPLICATION, DISTRIBUTION AND REVIEWS** - The application, distribution, and review procedures for final subdivision plans shall be the same as for preliminary plans as outlined under Sections 4.4(B) and 4.4(C) above and submitted at least two weeks in advance.
- C. **COMMISSION ACTION** - No final plan shall be considered for action by the Commission until it has been reviewed, and recommendations made by the Administrative Official. All final plans shall be approved or disapproved within ninety (90) days of the date they are officially filed for Commission action. The Commission will review the Administrative Official's recommendations and then act for approval, conditional approval with conditions noted, postponements, or disapproval. The reasons for action of postponement or disapproval and any requirements associated with a conditional approval shall be fully incorporated in the Commission's minutes and shall be available to the developer and the public. The following actions by the Commission shall have the meanings so stated:
 - 1. Approval: Means the final plan is ready to be certified by the Commission Chairman with no further corrections or revisions of the plan required by the developer.
 - 2. Conditional Approval: Means the final plan cannot be certified until the developer has complied with the conditions of approval set forth in the Planning Commission's action on the plan.
 - 3. Postponement: Means that the Commission has deferred action until some future Commission meeting in order that certain clarification can be made in regard to the plan. No completely new resubmittal is required of the developer as is the case for disapproval. However, all final plans shall be approved or disapproved within ninety (90) days of the date they are officially filed for Commission action unless the developer agrees to a longer postponement.

4. Disapproval: Means disapproval of the plan. To request new review and action, the developer must file a new application along with a filing fee, plan copies, and other material as required under Section 4.5(B) above.

D. **CERTIFICATION OF APPROVAL AND RECORDING** - Within one (1) year of the Commission's approval, unless a time extension has been granted previous to the expiration date, the following steps shall be completed, or else the Commission's approval becomes null and void: (1) the developer shall fully comply with any conditions of approval placed on the plan by the Commission and submit the completed plan drawing to the City Clerk; (2) the plan shall be certified by the Commission Chairman if it is in conformance with all requirements; (3) the plan shall be recorded in the plat records of the Adair County Clerk by the developer at the developer's expense.

E. **NO OCCUPANCY PERMIT** - No person shall allow occupancy of any building until the issuing agent has been notified by all appropriate agencies that the private utilities (water, electricity, telephone, and where applicable, sanitary sewers, and natural gas) are completed in such a fashion that such private utilities are available for use on the property in question.

4.6 COMPLETION OF PUBLIC IMPROVEMENTS

As provided in Section 4.2 above, developers may begin construction of public improvements after the preliminary plan has been fully approved. If such improvements have not been fully constructed at the time of Commission consideration of the final record plan, the Commission may, but is not required to do so, permit the plan to be approved and recorded prior to the completion of such improvements. For any such case, a performance bond or irrevocable letter of credit shall be posted by the developer to cover the full cost of incomplete public improvements. The following requirements and procedures shall apply:

A. **ACCEPTABLE SURETIES** - Shall either be an irrevocable letter of credit in favor of the City of Columbia from a bank with offices in Adair County, or a performance bond in favor of the City of Columbia from a reputable bonding company acceptable to the City. The bond or letter of credit shall establish a completion date approved by the Commission after which the Planning Commission shall call the surety and cause the work to be constructed. For the purposes of these Subdivision Regulations, the term "bonding" shall be construed to also include the posting of a irrevocable letter of credit as surety.

B. **MINIMUM CONSTRUCTION PRIOR TO BONDING** The following minimum construction must be completed and passed inspection prior to bonding:

1. **Street Sections**: All dense graded aggregate (DGA), base, binder, curb and gutter, or concrete pavement, except panels for utility crossings must be in place. The surface course of bituminous and the sidewalk may be bonded. Portions of the stone base and the blacktop binder course may be bonded if the construction season ends while this is in progress. If the developer elects to bond the streets in this manner, they will be expected to remove some of the stone base in the spring in order to obtain a uniformly compacted base. This bonding permission will be reviewed in each case after efforts have been made to complete the streets and the construction season runs out.

2. Storm Sewer System: The system must be completed to the point that it is functional. Individual components, (manholes, headwalls, etc.), may be bonded if they do not affect the performance of the system.
 3. Sanitary Sewers: All manholes and pipes must be installed and air tested. As-built reproducible sanitary sewer plans must be submitted.
 4. Miscellaneous Items: Minor items, including the placement of monuments and other items up to ten (10) percent of the value of the total amount of the bond may be included if they do not seriously conflict with the requirements of 4.6(B)(1 through 3) above.
 5. Exceptions: The Planning Commission may approve changes from these minimum construction requirements in cases where the developer requests a modification. For any such exception, the developer shall be required to show good cause for the exception and prove that the intent of these Regulations shall not be impaired by the exception. The Commission shall not take action on any such case until it has received recommendations from the Utility Department. The Commission may require special conditions to be attached to the final plan where such conditions are necessary to protect the public interest in the timely completion of public improvements.
- C. DETERMINATION OF BOND AMOUNT The Administrative Official shall determine the amount of the performance bond or letter of credit based upon the estimated costs which would be incurred by the City of Columbia to construct the unfinished improvements. In addition to the actual estimated cost of construction, the Administrative Official shall also include estimated costs for engineering, contingencies and inflation. The Administrative Official shall prepare an itemized list of all items to be bonded and estimated associated bonding amount and shall make such listing available to the developer. Upon receipt of the bond or letter of credit in the established amount from the developer, and assuming all other requirements have been met, the plan will then be forwarded to the City Clerk for certification.
- D. REDUCTION OF SURETY Two (2) reductions in the amount of the surety will be permitted. However, the surety will not be reduced to less than twenty-five (25) percent of its original value. No reduction will be granted after a completion date has passed, and no reduction will alter the original completion or termination date of the surety. A fee may be charged by the City for each reduction to cover inspection and clerical record keeping costs.
- E. RELEASE OF SURETY When the developer has completed all required improvements and submitted as-built plans for storm, grade, drainage, and the sanitary sewer has been passed and accepted, the Administrative Official will conduct a final inspection. Upon determination by the Administrative Official that all improvements have been properly constructed in conformance with the requirements of these Subdivision Regulations, the Administrative Official shall notify the Planning Commission which shall release the surety.

4.7 AMENDMENTS TO PLANS

With the exception of minor amendments set forth in Section 2.3 (C), any amended preliminary plan or final plan shall follow the same procedures as required for the original subdivision plan.

SIMPLIFIED DESCRIPTION OF STEPS INVOLVED IN PROCEDURE FOR PROCESSING MAJOR SUBDIVISION PLANS

Step #1 - PRE-APPLICATION - Developer reviews sketch plan ideas and preliminary development plan, if needed, with the Administrative Official.

Step #2 - DEVELOPMENT PLAN - If needed, developer prepares development plan for Commission review and approval.

Step #3 - PRELIMINARY PLAN - Developer is ready to proceed with the preparation of the preliminary subdivision plan.

Step #4 - Developer properly files preliminary plan with the City Clerk who distribute copies to other agencies.

Step #5 - The Administrative Official reviews plans and comments from other agencies and prepares recommendations to the Subdivision Committee or full commission.

Step #6 - The Commission's Land Subdivision Committee meets and prepares recommendations to the full Planning Commission.

Step #7 At official meeting, the Commission acts on preliminary plan.

Step #8 - FINAL PLAN - As soon as preliminary plan is fully approved, the developer may proceed to construct improvements and, after improvements have been completed (unless a bond is to be used) proceed to prepare final plans.

Step #9 - Within two years of approval of the preliminary plan, developer must properly file final plat (s) with the City Clerk who distributes copies to other agencies.

Step #10 - The Administrative Official reviews final plat and prepares recommendations to the full Commission.

Step #11 - The Commission's Subdivision Committee meets and prepares recommendations to the full Planning Commission.

Step #12 - At official meeting, the Commission acts on the final plat.

Step #13 - Within one year of Commission approval, final plat must meet all requirements, be certified and recorded. Lots may then be sold.

Step #14 - If a construction bond has been permitted, it shall be released if work is properly completed within specified time. Otherwise, the Commission shall call the bond and have work properly performed.

NOTE: This illustration is presented for general information purposes only. In many cases all steps are not required. All developers should consult with the Administrative Official prior to filing to determine the required procedural steps for the proposed subdivision.

ARTICLE 5 CONTENT AND FORMAT REQUIREMENTS FOR MAJOR SUBDIVISION PLANS

5.1 PURPOSE

The purpose of this article is to describe the minimum content and format of required plan materials before they can be considered as officially filed for commission review.

5.2 PRELIMINARY PLAN REQUIREMENTS

The following information and requirements shall be applicable to any submission for Commission consideration of a preliminary subdivision plan:

- A. **AUTHORIZATION TO PREPARE PLANS** - Preliminary subdivision plans may be prepared only by a registered civil engineer, registered landscape architect, or community planner. However, certain information associated with the plan may be required to be provided only by a registered civil engineer, such as drainage calculations (including sizing of retention/detention basins, pipes and culverts); street design and sanitary sewer design information (especially where capacity or grade problems are an issue).
- B. **TITLE BLOCK** - The title block shall be placed on the bottom of the sheet and shall contain the subdivision name, which shall not duplicate nor closely approximate (phonetically or in spelling) the name of any other subdivision in Adair County, preceded by the words "Preliminary Plan of (Subdivision Name)"; the record name and mailing address of the property being subdivided; the name and mailing address of the property owner, the developer, the engineer, and any other persons directly involved in the transaction; and legend information such as the graphic scale, written scale, north arrow, date of preparation, and any other pertinent legend data.
- C. **VICINITY SKETCH** - A sketch showing the general location of the subdivision in relation to the surrounding area and to existing and proposed community features such as major traffic arteries, public transportation, schools, recreation areas, shopping areas, industrial areas, and residential neighborhoods; with the sketch oriented in the same direction as the lotting scheme.
- D. **LOTING SCHEME** - The lotting scheme shall be drawn at a scale of one 1"= 100' or less, north oriented to the top of sheet, and show the following existing and proposed features on the adjacent, as well as the subject, property.
 - 1. **Boundary Lines:** The location, distance, and bearings for boundary lines; and location, width, and purpose of all easement lines.
 - 2. **Streets:** The street name (which shall not be the same nor closely approximate, phonetically or in spelling, to the name of any other street in Adair County), right-of-way width, location, and typical cross section, and any access points designated for use by construction vehicles. The plan and profile of each proposed street (with elevations and distances for the existing and proposed ground and street grade surface on, and three hundred (300) feet beyond, the tract) at a horizontal scale the same as for the approved preliminary plan and a vertical scale of 1/10 of the horizontal scale. A typical cross section of each proposed street or other construction item, at a scale of

- ten (10) feet or less to the inch, showing the width of pavement, the location and width of sidewalks, bikeways, street lights and rights-of-way.
3. Lotting and Setback: The location and distances for lot lines; lot numbers and block numbers; and the proposed building setback lines, with dimensions showing the distance setback from the street right-of-way.
 4. Existing Utilities: The location, size, and invert elevation of sanitary and storm sewers; location of water mains; location of gas lines, fire hydrants, electric and telephone poles or underground wires, and street lights.
 5. Contours: Normally with two (2) foot vertical intervals, referenced to North American Vertical Datum 1929, or to a permanent benchmark approved by the Administrative Official. Source of contours shall be noted.
 6. Subsurface Conditions: When required, location and results of tests made to ascertain subsurface soil, rock, and ground water conditions, especially for septic tanks, street construction or flood hazards.
 7. Public and Non-Public Sites: The name, acreage, and use of any parcels to be conveyed or held for public use, or for joint use of property owners, and an explanation of the provisions of reservation and arrangement for maintenance and the name, acreage and use of any nonpublic uses (other than single family dwellings) such as multifamily dwellings, shopping centers, churches, etc.
 8. Existing Tree Stands: Areas of substantial existing trees including those located along fence rows and drainage areas shall be shown along with a general description of the type and size of such trees.
 9. Drainage Features: The location of watercourses shall be shown as well as the location of any floodplain area. The elevation of the regulatory flood shall be labeled where such information is available. The general location of any proposed storm water retention basin and/or stream location shall also be shown.
 10. Areas of Environmental Sensitivity: Any such area as defined under Article 6 of these regulations shall be shown on the lotting scheme and labeled as to its nature. Additional information as required in Article 6 shall also be filed.
 11. Sewers and Storm Water Drainage: The plans and profiles of proposed sanitary sewers and storm water drainage sewers or other drainage ways, at a horizontal scale the same as the approved preliminary plan and at a vertical scale of 1/10 of the horizontal scale, with grades and sizes indicated. If piped system of sewers is not proposed, then an alternate system shall be properly illustrated as required by the City Engineer scale, with grades and sizes indicated. If piped system of sewers is not proposed, then an alternate system shall be properly illustrated as required by the City Engineer.
 12. Landscaping & Signage plan: This plan shall show the location and types of landscaped areas and landscaped buffers including fences, berms and landscape plant materials. The proposed location, type and size of signs and landscaping around signs shall be shown.
 13. Noise Assessment: For any development containing residential buildings or other

noise sensitive uses within 900 feet of the Cumberland Parkway, a site specific noise assessment prepared by a registered engineer shall be submitted showing noise contours and any proposed noise attenuation measures such as walls or berms.

14. **As-Built Improvement Plan:** This plan shall include the same information as required for improvements plans, except that the "as-built" plan shall accurately reflect the actual installation of the improvements, and shall be labeled "As-Built Improvement Plan" in the title box, and dated and signed; and, for sanitary sewers, show the invert elevation at the manholes, service connection locations, and "as found" solid rock profile.
 15. **Other Conditions:** Such as ponds, marshes, or other significant natural or manmade features; owners or subdivision name of adjacent land including record plat reference; and other information related to the adjoining land as necessary to ensure proper continuity of storm drainage, sanitary sewers, street grades and other facilities.
- E. **PROPOSED PRIVATE UTILITIES** - A listing of the private utilities (those improvements generally not later dedicated to, and maintained by local government, such as gas, electricity, telephone, and, at times, sewage disposal), whether or not the developer intends to have them provided, agency or means by which they are to provided, and agency which will supervise or approve any installation.
 - F. **SITE STATISTICS** The total acreage; acreage in street right-of-way, and single family lots, other land uses; average lot sizes; lineal feet of streets; zoning, etc.
 - G. **DEVELOPMENT PLAN** Where the land area shown on the preliminary plan represents only a portion of an undeveloped tract of land, a development plan may be required as a means of showing the proposed street layout, land uses, public facilities, etc., for the entire property. Such plan shall be prepared at the developer's expense.

5.3 FINAL PLAT REQUIREMENTS

The following information and requirements shall be applicable to any submission for Commission consideration of a final subdivision plan.

- A. **AUTHORIZATION FOR PLAT PREPARATION** - Final subdivision plats must be prepared by a Kentucky Licensed Professional Land Surveyor.
- B. **MATERIALS** The final plat sheet size may not exceed 24" x 36", and all information will be shown clearly and legibly.
- C. **TITLE BLOCK AND VICINITY SKETCH** The same information shall be required as for a preliminary plan, except that the title shall be "Final Record Plat of (Subdivision Name)."
- D. **LOTING SCHEME** The lotting scheme shall be drawn at a scale of 1" = 100' or less, north oriented to top of the sheet, and shall show the following:

1. For Adjacent Land: Show the exact location of adjoining streets with dashed lines; show the bearings and distances to nearest established street bounds, established survey lines, or other official monuments; and for adjacent property, show the boundaries with dashed lines and the record name of the subdivision of owner's name.
 2. Boundary Lines of Tract: Show the subdivision tract boundary lines with lengths of courses to hundredths of a foot, and bearings to nearest five (5) seconds of an arc, determined by an accurate survey in the field.
 3. Street and Lot Lines: For street and alley rights-of-way, show the names, bearings, angles of intersections, and width including the widths along the line of any obliquely intersecting street; for all arcs, show the length, radii, points of curvature, and tangent bearings; for all lot lines, show dimensions in feet and hundredths, and bearings and angles to minutes if other than right angles to the street or alley lines.
 4. Easements: All easements will be shown and clearly labeled as to their width and purpose.
 5. Floodplain Information: All floodplain areas shall be shown and clearly labeled, and where available, the actual computed elevation of the regulatory flood shall be noted.
 6. Other Information on Lotting Scheme: Show lots numbered in numerical order, blocks lettered in alphabetical order, and street address numbers for each lot; show the accurate location, description and material of all permanent control monuments, set as required in Section 6.11; show all property intended for public use or dedication and for common use of property owners; shown front yard setback as required by the Zoning Ordinance or, if more restrictive, as desired by developer.
- E. PROPOSED PRIVATE UTILITIES A listing of the private utilities (those improvements generally not later dedicated to, and maintained by local government such as water, gas, electricity, telephone, and, at times, sewage disposal), whether or not the developer intends to have them provided, agency or means by which they are to be provided, and agency which will supervise or approve any installation.
- F. NOTES Any informational or restrictive notes to be included on the plan shall be numbered in sequential order and grouped together as one list whenever possible.
- G. MAINTENANCE NOTE A note shall be included on the plat which notifies potential lot purchasers of their responsibilities for maintaining drainage and other easement areas.
- H. CERTIFICATION BLOCK Shall contain the following certifications along with required signatures:

1. Owner's Certification: "I (we) do hereby certify that I am (we are) the owner(s) of record of the property platted hereon which is recorded in Deed Book Volume (or Plat Cabinet) _____, Page (or Slide) _____, in the Adair County Clerk's Office; do hereby adopt this as my (our) plan of lots for this property; do hereby dedicate the streets and any other spaces so indicated to public use; and do establish that the easements shown hereon are reserved for the use so indicated and no structure, tree, or other obstruction of any kind shall be erected or permitted to remain upon or over any portion of said easements. And do hereby dedicate the water and sanitary sewer system to public use."

"Also I (we) do hereby agree that before any lot herein is sold or transferred, the purchaser shall be notified in the contract or deed of any private utilities (water, gas, electricity, telephone, and where applicable, sanitary sewers) not installed, and the deed or contract shall contain a statement that no building occupancy certificate may be secured until any such utility is installed. (Witness. address and date) (Owner and Lien Holder address and date)

2. Engineer's and Surveyor's Certification: Shall be as follows:

"I hereby do certify that this record plan was prepared by me or under my direction; that all work performed by me or under my direction, including engineering design, was done in accordance with the provisions of the Subdivision Regulations and the requirements of the Planning Commission; that all monuments indicated hereon do exist and their locations, size, and materials are correctly shown; that, to the best of my knowledge and belief, the information shown hereon is accurate." Engineer's and surveyor's signature, address, date, and seal)

3. Administrative Official's Certification: Shall be as follows:

"I hereby certify that all public improvements have been inspected and found to be installed, and "as-built" construction drawings received, and all are in conformance with the requirements of the Planning Commission and its Subdivision Regulations."

(or, if a bond is involved, substitute the following)

"I hereby certify that the improvement plans for this subdivision have been reviewed by my office, are in conformance with the Subdivision Regulations, and the estimated costs for such improvements have been prepared by my office. I further certify that a performance bond, in the amount determined by my office to cover the full cost of required improvements has been posted in my office by the developer."

(or, if no public improvements are contained in the subdivision, substitute the following)

"I hereby certify that the requirements of the Subdivision Regulations and the Planning Commission do not require public improvements for this subdivision, and therefore no improvement plans or performance bonds were required by my office. (Administrative Official's signature and date).

4. Commission's Certification: Shall be as follows:

"I do hereby certify that this record plat was approved by the Columbia Planning Commission at its meeting on , 20__ and is now eligible for recording."
(Commission's Chairman's signature and date).

5.4 AMENDMENTS

The required content and format for any amendment to a major subdivision plan shall be the same as for the original submission. In addition, the plan title shall be labeled to indicate the plan is an "Amended (type of plan) of (Subdivision Name including lot numbers affected by the amendment)"; and a note shall be included on the plan setting forth the specific purpose of the requested amendment. No plan change shall be considered in effect unless it is referenced in this note.

ARTICLE 6 DESIGN AND IMPROVEMENT STANDARDS FOR MAJOR SUBDIVISIONS

6.1 PURPOSE

The purpose of this article is to establish the basic and minimum design and improvement standards which will be required as a precondition to development or in conjunction with development for lots, streets, utilities, and other physical elements in the subdivision. Standards exceeding these minimum requirements may be provided by the developer, or required by the Commission. A major direction of this Article is to promote development which is most harmonious with the existing environment while providing guidelines and standards to protect the public health, safety and welfare. To achieve this end, development should follow as closely as possible the contour of the land and should be designed to minimize cuts and fills. The developer's engineer shall design the work, and the Administrative Official or City Engineer shall review all design work and inspect the improvements during construction.

6.2 ADEQUATE PUBLIC FACILITY STANDARDS

In addition to the specific design standards and requirements contained herein, the following minimum site conditions shall exist prior to Planning Commission approval of any subdivision, whether such facilities are provided by the developer, a private utility, or the City.

A. PUBLIC SANITARY SEWERS - Shall be provided as follows:

1. **Treatment Plant Capacity:** The projected amount of sewage effluent generated by the proposed development shall not cause the allocated capacity of the treatment plant that will serve the projected development to be exceeded nor will it cause any violation of Federal, State or local water quality laws or standards in effect at the time of development.
2. **Sewage Collection System:** The proposed development is served by a sewer collection line of sufficient size and capacity to accommodate the effluent projected to be generated by the proposed development in addition to the demands placed on the system by existing development, without exceeding the design capacity of the sewer line and/or sewage pump stations.

For purposes of making this determination, "served" means that there is a sewage collection line in the public way on which the proposed development will have frontage or otherwise serving the proposed development or, the developer will finance, and will at the appropriate time execute a bond or other surety to guarantee the extension.

- #### **B. PUBLIC ROADS**
- The Planning Commission will review each proposed subdivision to determine whether it is served by proper community access roads. The Commission may postpone approval of any such subdivision until it has determined that such needs are properly met.

6.3 PUBLIC NEED STANDARDS AND REQUIREMENTS

- A. **RESERVATION OF LAND FOR PARKS, OPEN SPACE, SCHOOLS AND OTHER PUBLIC FACILITIES** - The developer in the design for the subdivision plan and the Planning Commission in its review of the plan, shall consider the adequate provision of sites for parks, open space, schools and other public facilities as indicated on the Comprehensive Plan. Where such facilities are shown and located on the Comprehensive Plan or where the Planning Commission otherwise determines that a portion of the land is required for such public facilities, the developer may be required to reserve such sites for a period not to exceed two (2) years after preliminary subdivision plan approval, during which time the City shall either acquire the property, release the reservation, or make other arrangements agreeable to the developer.
- B. **FENCING ALONG AGRICULTURAL LAND** - A diamond mesh wire fence with four (4) foot posts shall be constructed by the developer along the boundary line between any residential subdivision and land that is being actively used for agricultural purposes unless the owner of the agricultural property agrees to an exemption. Such exemptions may be made in consideration of an agreement over the type of fence to be utilized, the extent of the fence, elimination of the fence, or similar matters of agreement between the developer and the adjoining agricultural land owner. The Commission, however, despite any agreement by the developer and the agricultural landowner to eliminate the fence, shall have the right to require the minimum fence as specified above where it feels such is necessary to protect the public health, safety and welfare.

6.4 LOT AND BLOCK STANDARDS

The following shall be the minimum standards for lots and blocks:

- A. **BLOCK STANDARDS** - In general, intersecting streets which determine block length shall be provided at such intervals as necessary to meet existing street patterns, topography, and requirements for safe and convenient vehicular and pedestrian circulation. Through streets or loop streets shall be used rather than cul-de-sacs when possible. Residential blocks generally shall not exceed one thousand six hundred (1,600) feet in length, nor be less than five hundred (400) feet in length, with the block width generally being sufficient to allow two (2) tiers of lots of appropriate depth. Nonresidential blocks shall be of such length, width, and other design as the Commission finds necessary for the prospective use, including adequate provision for off-street parking, truck loading and unloading, buffer areas, pedestrian movement, and proper vehicular access to adjacent streets.
- B. **LOT SHAPE** - Excessive depth in relation to width should be avoided, with a proportion of 2 1/2 to 1 normally being considered as a desirable maximum for widths of sixty (60) feet or greater. Pointed or very irregular shaped lots shall be avoided where possible. Additional depth of at least twenty (20) feet over the typical lot depth shall be required on lots which back up to major streets, commercial or industrial areas or other conflicting land uses.
- C. **LOT FRONTAGE AND ACCESS** - All lots shall abut an approved street for at least the minimum frontage requirements for the zone in which the lot is located. Frontage shall be measured at the street right-of-way line, except that in cases where curved streets or cul-

de-sac radii are involved, the measurement shall be taken at the building line as set forth for the zone in which the lot is located, or if more restrictive, as set forth on the subdivision plan. All lots shall be designed so as to provide safe and convenient vehicular and pedestrian access to the street.

- D. LOT LINES - Side lot lines should be generally be at right angles to straight street center lines and radial to curved street center lines. However, this design standard is not intended to prohibit the creation of lots at a reasonable angle to the street where the intent of the developer is to create a north-south lot orientation for the purposes of maximizing the potential for use of solar related energy technology and techniques. Rear lot lines should consist of straight lines with a minimum number of defections.
- E. LOT AREA AND MINIMUM BUILDING SETBACK LINE - Lots for residential or nonresidential use shall meet the minimum standards required by the Zoning Ordinance.
- F. CORNER LOTS - Corner lots should be of sufficient width and depth to equal non-corner lots in the subdivision plus sufficient area to comply with the required minimum building setback line on each street frontage.
- G. DOUBLE FRONTAGE LOTS - Double frontage lots shall be prohibited except where employed to prevent excessive vehicular driveway access to streets or to separate residential areas from other areas of conflicting land or traffic use.
- H. LAND REMNANTS - If remnants of land exist after subdividing, and have no apparent future use which can be properly controlled, they shall be incorporated into the proposed lotting scheme.
- I. STREET ADDRESS - Street address numbers shall be assigned as approved by the Adair County 911 Center

6.5 UTILITY STANDARDS

The following shall be the minimum standards for utilities such as telephone supply, electric supply, gas supply, water supply or other utilities:

- A. TELEPHONE, NATURAL GAS, AND ELECTRIC SUPPLY - Every subdivision shall be provided with a proper telephone and electric system. Natural gas supply systems shall be provided at the option of the developer.
- B. WATER SUPPLY - Every subdivision shall be provided with a complete water distribution system adequate to serve the area being developed with pipe lines, valves, fire hydrants, and other water facilities. In the layout or design of the water system, the following factors will be considered: piping characteristics; ground elevations; type of building construction; hydraulic capability of adjacent interconnected piping; fire flow requirements and any unusual requirements peculiar to the specific development. In general, the distribution system will be able to supply peak demands and fire flows without reducing pressures below desirable limits. No pipe smaller than six (6) inch nominal diameter will be used where water flow is to a fire hydrant. The standards of the American Insurance Association or applicable state or local fire insurance rating association will be used as a guide in the matter of fire flow requirements and the spacing of fire hydrants. Each residence or business will be provided with a separate service line

and meter. Fire hydrants will be of such construction as will conform to applicable specifications of the American Water Works Association and/or the American Standards Association. The water system shall be designed and constructed of materials which will meet the approval of the Utility Department, the Health Department, the Fire Department and Planning Commission.

- C. **UTILITY EASEMENTS** - Easements for new, or the continuation of existing, utilities shall be provided for all subdivisions with the width or other characteristics as required by the Planning Commission based upon recommendations from the various utility companies. Generally, easements may run completely through one (1) lot, or split along side or rear lot lines. Where the placement of any utility easement would conflict with locations of existing or proposed trees, every effort shall be made to locate easement lines in such a fashion that the utility facilities within the easement do not result in the destruction of the trees. Any easement labeled as a "utility easement" obtained through the subdivision process shall be for the provision of utility services by franchised local electric supply company, telephone service provider, and cable television franchise. The City shall also have the right to utilize such easements for the provision of water supply services, natural gas supply, street light and sanitary sewer services. Release or other modification of utility easements shall require the expressed approval of all such parties holding the right to use the easement. Further, the Columbia City Council, through the Utility Department, may fully dictate standards for and restrictions of use and installation of utility services within any general or specifically labeled utility easement for the purposes of settling disputes between utilities, coordination for major capital improvement projects, and other cases involving the health, safety, and general welfare of the City of Columbia.

6.6 SEWAGE DISPOSAL STANDARDS

Every subdivision shall be provided with a sewage disposal system approved by the Adair County Health Department, the appropriate state agency with jurisdiction, the Utility Department and the Planning Commission. Construction requirements shall be as depicted on Standard Detail Sheets prepared and approved by the Utility Department and the Planning Commission.

- A. **SEPTIC TANKS** - Septic tanks may be permitted for residential lots of five (5) acres or more in size if public sanitary sewers are not immediately available to the property. For any proposed subdivision utilizing septic tanks, the Adair County Health Department shall review the generally suitability of the site for septic tank use prior to Planning Commission action. In areas of questionable suitability, the Planning Commission may postpone action on the subdivision plan until the developer has obtained Health Department approval of percolation tests to ascertain whether or not septic tanks will properly function. In all cases, no building permits may be issued until the Health Department has issued a septic tank permit, and language shall be required on final subdivision plans to this effect.
- B. **SANITARY SEWAGE SYSTEM** - The subdivider shall construct a sanitary sewage collection system designed to serve adequately all lots in a subdivision plus lines adequate in size to facilitate the orderly development of nearby land which is an integral part of the neighborhood service or drainage area and connect said collection system to

the city sewerage system. Where permitted, individual septic systems must be approved by the Adair County Health Department.

- C. **SANITARY SEWER EASEMENTS** - Easements for sanitary sewers shall be shown on the final subdivision plan at widths and locations approved by the Utility Department. Sanitary sewer easements may be combined with utility and other easements if sufficient widths are provided; however, except for necessary crossing points, no sanitary sewer easement may be combined with a utility easement containing underground electric or natural gas lines unless sufficient clearance between the facilities as determined by the Utility Department is provided and documented. Release or modification of sanitary sewer easements shall require the expressed approval of the City Council. Encroachments and other uses within sanitary sewer easements shall be at the approval of the Utility Department.
- D. **RELATIONSHIP OF STRUCTURES TO MANHOLE ELEVATIONS** - If the lowest floor of any residential or nonresidential structure containing sanitary facilities is proposed to be lower than the top elevation of the nearest downstream sanitary sewer manhole, then one (1) of the following options must be followed:
 - 1. The lowest floor elevation of the structure shall be raised six (6) inches above the top of the nearest downstream manhole.
 - 2. A sewage pump shall be installed pumping the lowest floor sewage to a higher elevation to discharge into the sewer lateral. The point of discharge into the sewer lateral shall be higher than the top of the lowest downstream manhole.
 - 3. A backwater trap with manhole, clean-out or other suitable access for maintenance shall be constructed in the sewer lateral. This option is available only if the tap-on is not being made into a trunk sewer twelve (12) inches or larger or a collector sewer with known backup problems.
 - 4. A registered professional engineer shall certify that the location of the house lot, sewer lateral and eight (8) or ten (10) inch collector sewer grades are such that sewer backup should not occur even in periods of excessive rainfall with heavy infiltration and inflow into the sewer system.

6.7 STORM WATER DISPOSAL STANDARDS

Every subdivision shall provide satisfactory drainage of storm water by means of underground sewer pipes and/or surface ditches, provided that such storm water drainage system conforms to the requirements of this Article. The basic standard for design for drainage system for subdivisions will be to keep runoff characteristics after development at the same level as existed prior to development. To achieve these objectives, storm water retention and/or detention systems will be required in most cases. The proposed drainage shall be in conformance with the overall drainage plan for the City and the City's drainage ordinance.

- A. **STORM SEWER DESIGN REQUESTS** - Concrete pipe for storm sewers shall have flexible, sealed joints. All concrete pipe twelve (12) inches in diameter and above shall be reinforced, meeting Kentucky State Highway specifications. Alternate pipe material may be used when approved by the City Engineer. Gauge shall conform to Kentucky Department of Transportation specifications. Materials for all items of construction of

any description or nature shall conform to standards set out in the Kentucky Department of Transportation specifications, except as herein set out and described. Sources such as the American Society for Testing and Materials, and the American Association of State Highway Officials (ASIA) or other nationally recognized sources may be used in determining actual requirements. Portland cement concrete for all items of construction shall conform to requirements for "Class A", Kentucky Department of Transportation, Bureau of Highways, Standard Specifications, Current Edition.

- B. MANHOLES - Manhole shall be constructed of brick and/or pre-cast concrete with a concrete foundation.
- C. INLETS OR CATCH BASINS - Inlets or catch basins shall be constructed of concrete with reinforced concrete tops. The type of manholes, inlets, and other drainage structures shall be indicated on the plans for the proposed work and approval obtained before the final processing of the plan.
- D. BOX CULVERTS - Any drainage requiring box culvert construction shall be constructed of reinforced concrete. Structures shall be designed for at least HS20 loading. The back-filling of any box culvert shall be done in layers not exceeding six (6) inches and each layer shall be thoroughly compacted.
- E. TRENCHING - Drainage shall be constructed as per the approved improvement plans for the proposed work. The City Engineer may approve field changes from the plans. Trenches for sewers shall be excavated to a minimum depth of six (6) inches below the outside diameter of the pipe if in solid rock and properly back-filled before the pipe is installed.

Trenches not in solid rock shall be excavated to a uniform grade to a minimum depth of four (4) inches below the outside diameter of the pipe. During the trenching operations, if unsuitable material is found, it shall be removed to a sufficient depth and back-filled in layers of not more than six (6) inches. Each layer of the back-filled material shall be compacted. After the trenching has been completed and suitable bedding material laid, the pipe shall be laid to a uniform grade and back-filled in layers not exceeding six (6) inches in depth and thoroughly compacted by mechanical or hand methods.
- F. RELATIONSHIP TO SANITARY SEWER SYSTEMS - No storm water drainage system may be designed, constructed or connected so as to flow into any public or private sanitary sewer system.
- G. RETENTION/DETENTION BASINS - Where required to be included in the subdivision design, retention and detention basins shall be provided by the developer. The City's Engineer shall approve all designs for such facilities. Such facilities shall be designed so that no standing water will remain in the basin during dry weather, unless a permanent pond is to be constructed of sufficient size that the standing water will not stagnate and present health hazards. In certain cases, other non-basin retention/detention techniques such as underground vault storage may be utilized when approved by the City's Engineer.
- H. STORM DRAINAGE EASEMENTS - Easements for storm water drainage systems shall be shown on the final subdivision plan. Special notes relating to the maintenance of such easements may be required to be placed on the final subdivision plan. Drainage easements may be combined with utility and other easements if sufficient widths are

provided, however, no drainage easement containing underground storm sewers may be combined with a utility easement containing underground electric or natural gas lines except for necessary crossing points unless sufficient clearance between the facilities, as determined by the City's Engineer is provided and documented. Release or modification of storm drainage easements shall require the expressed approval of the City Council. Encroachments, construction of drainage improvements and facilities shall be at the approval of the City Engineer.

- I. DITCHING- Where backyard open channels or ditches are used as the method of storm drainage in lieu of underground pipes, at the request of the Planning Commission, the developer will be required to provide a small concrete paved ditch, rip rap or other suitable material (as determined by the provision of storm water calculations) in order to stabilize the bottom of the ditch and prevent erosion.
- J. SINKHOLES For the purposes of this section, the following definitions shall apply:

Sinkhole: Any closed depression formed by removal (typically underground) of water, surficial soil, rock or other material. The existence of a sinkhole shall be as indicated by the closed depression contour lines on topographic maps or other documents. Its actual limits may, however, be determined by field measurements with concurrence of the City's Engineer. Sinkholes may be either circular in plan or irregular depending upon structural control.

Immediate Sinkhole Drainage Area: Any area that contributes surface water directly to the sinkhole(s); this does not include areas which contribute surface water indirectly to a sinkhole (via streams).

Sinkhole Cluster Area: Any area that contributes surface water other than by way of a stream to a sinkhole which is located in a group of two or more sinkholes clustering together.

- 1. Plan Requirements: A sinkhole, the immediate sinkhole drainage area, a sinkhole cluster area or portions of such items shall be shown on any development or preliminary subdivision plan for land where they exist. Sinkhole related non-buildable areas and restricted fill areas shall be shown on final subdivision plans and development plans.

Analyses and studies required by Section 6.7(J) shall be submitted for staff review at least ten (10) working days prior to any public hearing or commission meeting at which they will be considered.

- 2. Sinkhole Related Non-Buildable Areas: Based upon the topography, geology, soils, and known history of the sinkhole (such as past filling) and the developer's engineer's storm water analysis and plan, the Planning Commission shall establish sinkhole related non-buildable areas. No buildings, parking areas or other structures shall be permitted, within the sinkhole related non-buildable area.

This non-buildable area shall follow the limits of the sinkhole in most cases. However, the nonbuildable area may be expanded or contracted by action of the Planning Commission where warranted due to the nature of the specific sinkhole, the

underlying geology, soils, drainage and any related information such as depth to bedrock. In sinkhole cluster areas, the Planning Commission may require the developer to provide recommendations from a consulting engineer and a consulting hydrogeologist based upon substantial and state of the art field studies and evaluation of the specific sinkhole system. The Planning Commission may have such studies reviewed by the City's Engineer.

3. Development in Sinkhole Drainage Areas: Development may occur in the immediate sinkhole drainage area if the developer provides alternative surface drainage away from the sinkhole, while keeping the water in the same surface drainage basin, and provided further that the water shall not go into another sinkhole drainage area off the petitioner's property, nor into another stream of known flooding problems. The immediate sinkhole drainage area (or portion thereof) which cannot be provided with an alternative drainage system can be deleted from the development area and be used to meet the normal open space requirements. The developer may request that the Planning Commission increase the density on the remainder of the developable area with the total resulting density no greater than if the entire area were developed to the permitted density.

For portions of the immediate sinkhole drainage area where alternative surface drainage methods cannot be provided, as determined by the City's Engineer, the developer may choose one of the options described in Section 6.7 (J.4) herein below.

4. Sinkhole Surface Drainage Analyses: The sinkhole can be used for surface runoff drainage of a proposed development if the conditions of either of the following alternatives are met:
 - a. Alternative 1: A sinkhole can be used for surface runoff of a proposed development with or without retention or detention facilities as recommended by a consulting engineer and a consulting hydrogeologist, provided that any increase in the quantity of surface runoff due to development of the entire sinkhole drainage area in question will not aggravate flooding on the proposed development adjacent existing development, or connected/adjacent sinkhole subsurface systems. Such engineering and geological report must be substantive and based on state of the art field studies and evaluation of the specific sinkhole system. The Planning Commission shall not approve development proposals subject to Alternative 1 provisions unless the study findings meet the requirements of this subsection.
 - b. Alternative 2: A sinkhole can be used for surface drainage of a proposed development if all of the following conditions and provisions are met:
 - (1) That the runoff from the development area is either (1) completely retained in a retention basin or (2) retained in a detention basin. The flow rate out of the above basins shall be regulated so that it is no greater than the flow rate into the sinkhole of the development area prior to development for each of the following storms: ten (10) year/one (1) hour, twenty-five (25) year/twenty-four (24) hour storm or a one hundred (100) year/one (1) hour storm. The outflow rate shall not aggravate flooding on downstream properties for any of

these storms.

- (2) As previously noted in Section 6.7(J.3), the developer may elect to divert enough of the sinkhole drainage area so that the development of the remaining area does not increase the total quantity of runoff into the sinkhole. Where additional runoff is anticipated, a consulting engineer and a hydrogeologist shall evaluate and show the effect of any additional quantity of runoff to the sinkhole and sinkhole system. For approval, the study must show the development will not aggravate flooding on the proposed development, adjacent lands, or connected/adjacent sinkhole systems.
 - (3) Where the sinkhole outlet is off site, either the runoff leaving the subject property must be shown to be no greater in flow or in quantity than that which existed before development or written approvals must be submitted from owners of the property where any increase in flow or quantity of water must go to reach the sinkhole outlet. Easement areas shall be approved by the Planning Commission, based upon the developer's engineer calculations of proposed ponding elevation.
5. Filling in Sinkholes and Sinkhole Drainage Areas: Development may involve some filling of the sinkhole drainage area or sinkhole upon approval by the City Engineer. However, no principal or accessory buildings with soil bearing foundations shall be permitted to be constructed on fill within the limits of any sinkhole.
 6. Required Plan Notes: For any land which includes a sinkhole related non-buildable area, or restricted fill area, the developer shall place the following note on the final subdivision plan or development plan:
 - a. Based upon the evidence presented to them, the Planning Commission has identified sinkhole related non-buildable areas on this plan. However, approval of this plan is not to be interpreted as any guarantee that future sinkhole problems will not occur due to either natural or human activities.

The following notes may be required in whole or part by the Planning Commission depending upon the nature of the sinkhole and the method of treatment (if any) constructed by the developer:

- b. Any sinkhole related non-buildable area identified here has been determined to be unsuitable for any construction activity, and no buildings, parking areas or other structures shall be permitted within this area.
- c. Any sinkhole or restricted fill area identified here has been determined to be unsuitable for soil bearing foundations, and the entire structure of any building (including the floor system) constructed therein must be founded on solid rock.
- d. No basement or first floor elevations shall be lower than an elevation, USGS datum, to be determined on a case by case basis, said elevation being at least one (1) foot above the one hundred (100) year six (6) hour storm assuming no outflow from the sinkhole.

Based upon the facts of each case additional notes may be required or the above language modified as deemed appropriate by the Planning Commission.

6.8 STREET STANDARDS

All streets (which are classified herein as either arterials, collectors, or locals) shall conform to the following standards:

- A. **STREET GEOMETRICS** - All streets shall conform to the applicable geometric, cross section and sight triangle standards of Exhibits 6-1, 6-2, and 6-3.
- B. **STREET CONTINUITY** - Streets shall be related to topography and shall generally provide for the continuation of existing or dedicated streets in adjoining or nearby tracts, and provide for connection to adjoining un-subdivided tracts, especially those which would otherwise be landlocked. Arterials shall not penetrate or bisect existing or proposed neighborhoods, but rather, shall be located as appropriate boundaries for such. Collectors shall carry traffic from arterials into neighborhoods. Locals shall carry traffic from collectors into the neighborhood for the primary purpose of access to individual properties.
- C. **STREET NAMES** - Streets which are obviously in alignment with existing streets shall bear the name of the existing street. Street names including cul-de-sacs shall not duplicate or closely approximate the names of other streets in Adair County. All proposed street names shall be approved by the Adair County 911 Center. All final street names must be approved by the Columbia City Council. Subdivision names, property and building numbers, etc. shall be approved by the Planning Commission.
- D. **PLANNING FOR CONFLICTING TRAFFIC OR LAND USE** - Whenever the proposed subdivision contains, or is adjacent to a arterial or expressway right-of-way, or conflicting changes in land uses, the Planning Commission may require marginal access streets, reverse frontage lots, lots with rear service alleys, lots with additional depth, or other such treatment as may be necessary for protection of abutting properties and to afford separation of conflicting types of traffic or land use.
- E. **HALF STREETS AND RESERVE STRIPS** - New half or partial, streets shall not be permitted. Existing half streets generally shall be completed to full right-of-way requirements. All streets to extend into an adjoining property shall have full right-of-way dedicated and street improvements constructed. When streets are constructed adjacent and parallel to an adjoining property, the right-of-way shall be established at the common property line. Reserve strips shall be prohibited.
- F. **CUL-DE-SACS** - Cul-de-sacs shall not generally be longer than one thousand (1,000) feet, including the turnaround which shall be provided at the closed end with a right-of-way radius of fifty (50) feet, curb radius of forty (40) feet, and a transition curve radius of seventy-five (75) feet. Alternate turn around designs depicted in these regulations (See Exhibit 6-5) shall also be permitted because of unusual topographic or other conditions and, in such cases the Planning Commission may require additional paving width if necessary to prevent overloading of street capacity. Temporary turnarounds may be required at the end of stub streets as long as it is retained within the street right-of-way.
- G. **MEDIANS** - Medians may be permitted in street cross sections when approved by the Commission. Medians shall only be allowed when the street cross section is designed to provide for all necessary traffic movements inherent in the standard cross sections contained in Exhibit 6-2. Provision for the maintenance of any median areas and

associated plantings shall be noted on the final subdivision plat of the property. Plantings shall be of a nature that will not conflict with sight distance or other traffic related requirements.

- H. PEDESTRIAN WALKWAYS & BIKEWAYS - In addition to the normal sidewalks paralleling streets, the Commission also may require pedestrian walkways and/or bikeways with at least a ten (10) foot easement, at mid block or other locations to provide better pedestrian and bike access to parks, schools, or other land uses.
- I. STREET AND SIDEWALK LIGHTING AND EASEMENTS - All streets, sidewalks, and walkways shall have street light poles, lights, accessories and the necessary easements in accordance with the specifications of the City of Columbia provided at the subdivider's or developer's expense. Easements necessary for the provision of such lighting shall be provided and shall be labeled as "street light easement". Release or modifications of street light easements shall require the expressed approval of the City Council.
- J. STREET NAME SIGNS - Temporary street name signs shall be provided by the developer at all street intersections. Permanent signs shall be installed by the City.
- K. SIDEWALK CONSTRUCTION Concrete sidewalks, when required by the Planning Commission, shall be constructed on a thoroughly compacted sub-grade and shall be four and one half (4 1/2) inches in thickness and a minimum width of four (4) feet. Expansion joints shall be placed at thirty-two (32) foot intervals. Concrete shall meet the specifications for Class "A", Kentucky Department of Transportation, Bureau of Highways, Standard Specifications, Current Edition. Sidewalks shall be placed adjacent to the street right-of-way line. Slope toward curb shall be one-quarter (1/4) of an inch to the foot.
- L. STREET CONSTRUCTION - All streets shall be paved and constructed in conformance with the following standards. Construction materials and methods for streets, sewers, and sidewalks shall conform to those of the Kentucky Department of Transportation, Bureau of Highways Standards Specifications, Current Edition except as herein set out and described; Portland cement concrete for all items of construction shall conform to requirements. Class "A", Kentucky Department of Transportation, Bureau of Highways, Standards Specifications, Current Edition.
 - 1. Grading and Embankments: The area on which streets are to be constructed should be cleared of all vegetation and disposed of outside of the limits of the typical section. Prior to the construction of embankments, any unsuitable material, on which the embankment will be superimposed, should be removed and the area should be stabilized by conventional methods. The embankments shall be formed by placing material in successive horizontal layers of no more than twelve (12) inches in thickness, loose depth. Each layer shall be thoroughly compacted by rolling with a ten (10) ton three (3) wheel roller, sheep's foot roller, or other approved type roller.

2. Cut Section Excavation: Cut sections should be excavated to the required typical section and any unsuitable material encountered shall be removed and the area back-filled in six (6) inch horizontal layers and thoroughly compacted before successive layers are placed.
3. Solid Rock Excavation: If solid rock is encountered in connection with the grading operation, the solid rock shall be removed to a depth of six (6) inches below subgrade elevation and back-filled to meet the grading and embankment requirements.
4. Subgrade Preparation: Prior to the construction of either rigid or flexible type surface course construction, the subgrade shall be shaped to the required typical section and thoroughly compacted. Any subgrade found to be unstable or irregular shall be corrected ahead of the various types of base or pavement construction.
5. Concrete Street Paving: Shall have a minimum depth of five (5) inches and shall meet requirements for Class "A", Kentucky Department of Transportation, Bureau of Highways, Standard Specifications, Current Edition. Construction and finishing methods shall be as approved by the current edition of the Kentucky Department of Transportation, Bureau of Highways, Standard Specifications. Actual pavement design shall be based upon soil data (Kentucky Method California Bearing Ratio [CBR], and other tests including but not limited to soil classification and Atterburg limits) to be provided by the developer and the functional classification of the street in accordance with Exhibit 6-4 herein. The City Engineer shall have the authority to approve alternative designs which equal or exceed the specified requirements.
6. Bituminous Concrete (Asphalt) Base and Surface: The design of flexible pavements shall be based on soil data (Kentucky Method California Bearing Ratio (CBR), and other tests including but not limited to soil classifications and Atterburg limits) supplied by the developer and the functional classification of the street in accordance with Exhibit 6-4 herein. If dense graded aggregate is a component of the approved design it shall be compacted to a density no less than eighty-four (84) percent of solid volume as specified by the Kentucky Department of Transportation, Bureau of Highways, Standard Specifications, current edition. The bituminous courses shall be Bituminous Plant Mixed Pavement placed generally in two (2) lifts, base and surface. A tack coat between the bituminous base and the surface course may be required by the City Engineer. The City Engineer shall have the authority to approve alternative designs which equal or exceed the specified requirements.
7. Street Crown: A street crown of one-fourth (1/4) inch per each foot of street width from the center of the street shall be required.
8. Concrete Box Curb and Gutter: When required (as determined by the provision of storm water calculations) by the Planning Commission, the developer shall install concrete box curb and gutter. The box curb and gutter shall be the standard requirement for public streets and shall measure twenty-four (24) inches from back of curb to the outer edge of gutter. The back of curb form shall be a full twelve (12) inches in depth. The curb shall be a full six (6) inches in thickness for its entire width. The gutter shall slope one (1) inch toward the curb. Sub-grade for curb and gutter shall be thoroughly compacted. Compaction shall be either by approved type of self propelled roller, or by approved type mechanical tamper. Concrete shall meet

requirements for Class "A", Kentucky Department of Transportation, Bureau of Highways, Standard Specifications, Current Edition. For new development in commercial or high density residential zones, concrete curb and gutter shall be required.

9. Lip Curb and Gutter: A 4" concrete lip curb shall be permitted on residential local public streets.

M. STREET IMPROVEMENT REQUIREMENTS FOR DEVELOPMENT ADJOINING EXISTING ROADWAYS - Any substantial development of subdivided property may reasonably be anticipated to create a burden on existing public roads, thereby posing a traffic and safety hazard. In order to ameliorate that hazard and to advance the public's interest in having safe and adequate roadways the following requirements shall apply whenever a subdivision is proposed for property abutting an existing public roadway which does not meet the right-of-way and pavement width standards for the functional classification of that street:

1. Proposed Subdivisions Which Abut Local or Collector Streets: Whenever a subdivision is proposed for property which abuts a local or collector street as defined in these Subdivision Regulations, the developer shall be required to dedicate right-of-way along the entire street frontage to a width which will provide one-half (1/2) of the total right-of-way necessary to comply with the standards as set out in Exhibit 6-2 of these Subdivision Regulations. It is assumed that the same right-of-way dedication will be required on the opposite side of the roadway at such time as that property develops, thereby providing the full necessary right-of-way width. Construction of roadway widening improvements (including paving, curb, gutter and sidewalk where appropriate) shall also be required as necessary to bring the roadway up to full cross section requirements as set forth in Exhibit 6-2 of these Subdivision Regulations. The Commission may permit a long term performance bond or letter of credit to be posted in lieu of construction of such improvements where such are intended to augment programmed improvements to be made by the government
2. Proposed Subdivision of Property Abutting an Arterial Street: Whenever a subdivision is proposed for property which abuts an arterial highway which is, or is proposed to be four (4) lanes or more in width, the developer may be required to dedicate sufficient right-of-way to permit any necessary widening. In consideration of the fact that such dedication requirement may exceed that which would ordinarily be required for subdivisions abutting local or collector streets, the developer shall not be required to construct roadway widening improvements for the full road frontage, but rather, improvements such as turn lanes for new intersecting streets or other access points may be required when necessary to provide as safe a situation as possible under the circumstances.

N. INTERSECTION AND ACCESS SPACING GUIDELINES The following guidelines shall be the basis for the determination of proper spacing for street intersections and driveway access for subdivisions. It is recognized that these guidelines will not be able to be adhered to in all cases, especially in areas where existing development is present. The Planning Commission shall attempt in all cases, however, to apply these guidelines to the greatest extent feasible in order to create safe and efficient traffic movement systems.

1. Spacing Measurement Definition: Distance shall be defined as the distance between the center lines of intersecting streets and roads. However, in the case of interchange, distances shall be measured from the center line from any intersecting roadway to the closet near edge (projected) of the ramp roadway.
2. Access Standards by Functional Classification:
 - a. Expressways: Expressways shall have intersections with arterials and/or other expressways. There shall be no intersections with lower type facilities. All intersections shall be of the grade-separation interchange type. The spacing of interchanges on expressways within the City shall be determined jointly by the City Council and the Kentucky Department of Transportation.
 - b. Principal Arterials: Principal arterials shall have intersections with expressways, other principal arterials, minor arterials, and collector streets. Intersections shall be signalized as warranted. Any access to a principal arterial must be located at a minimum of one thousand six hundred (1,600) feet from any other access along that principal arterial (i.e. principal arterials, minor arterials, collectors, major commercial or industrial driveway accesses). No new residential driveway access shall be allowed on a principal arterial. Protected left and right turn lanes with ample storage space must be provided at all intersections. The Kentucky Department of Transportation will be consulted when state maintained roads are involved.
 - c. Minor Arterials: Minor Arterials shall have intersections with other arterials and collector streets. Intersections shall be signalized as warranted. No new residential driveway access shall be allowed on a minor arterial. Commercial or industrial driveways shall be treated according to the nonresidential spacing formula. Adequate provisions for left and right turn lanes shall be determined by the City Engineer and the Kentucky Department of Transportation for state maintained facilities. The spacing of intersections along a minor arterial shall be as follows:
 - (1) Between an intersection with an expressway and an intersection with a principal or minor arterial, the distance shall be a minimum of one thousand six hundred (1,600) feet.
 - (2) Between an expressway and a collector -- minimum one thousand four hundred (1,400) feet.
 - (3) Between one principal arterial and another-- minimum one thousand four hundred (1,400) feet.
 - (4) Between an principal or minor arterial and a collector -- minimum one thousand two hundred (1,200) feet.
 - (5) Between a collector and another collector-- minimum one thousand (1,000) feet.
 - d. Collector Streets: Collector streets shall have intersections with arterials, collectors and locals. Collector streets shall be designed for system continuity and traffic flow. The spacing of intersections along collectors shall be as follows:
 - (1) Between a principal or minor arterial and another, the distance shall be a

minimum of one thousand four hundred (1,400) feet.

- (2) Between a principal or minor arterial and a collector--minimum one thousand (1,000) feet.
 - (3) Between one collector and another-- minimum eight hundred (800) feet.
 - (4) Between one principal or minor arterial and a local--minimum five hundred (500) feet.
 - (5) Between a collector and a local--minimum four hundred (400) feet.
 - (6) Between a local and another local--minimum two hundred fifty (250) feet.
- e. Local Streets: Local streets shall have intersections with collectors and other local streets. Some designs may warrant exceptions. The spacing of intersections on local streets shall be as follows:
- (1) Between one collector and another collector--minimum eight hundred (800) feet.
 - (2) Between a collector and a local--minimum two hundred fifty (250) feet.
 - (3) Between a local and another local--minimum two hundred fifty (250) feet.

3. Land Use Access

- a. Residential: All single family residential structures shall be allowed one (1) access per lot. An additional point of access may be permitted for corner lots, loop driveways, or other instances where public safety will not be impaired by utilizing a second point of access. Duplexes and four-plexes shall be permitted two (2) accesses. Subdivisions shall be designed such that these uses have no direct driveway to either principal or minor arterials.

Apartment complexes, condominium developments, as well as all other developments which are accessed through a common private drive or street system may be allowed access to arterials provided that the private driveways are allowed consistent with the access spacing standards governing the access of collector streets to arterial streets.

- b. Non-residential: All nonresidential land uses may have access to principal arterial streets via service roads. Nonresidential land uses may also have access to minor arterials and to collector streets. Nonresidential land uses shall generally not have access to residential local streets.

6.9 LANDSCAPING AND TREE PLANTING STANDARDS

- A. LANDSCAPE AND LAND USE BUFFERS All land subdivision plans shall conform to the requirements of Section 5.6 of the Columbia Zoning Ordinance.
- B. STREET TREE PLANTINGS The Planning Commission shall encourage the planting of street trees. However, the planting of street trees shall only be required when new collector and local streets in residential subdivisions are constructed adjacent to areas which have established the planting of trees as an integral part of the neighborhood

character. When required, street trees shall be installed in accordance with the following provisions:

1. Type and Number: Trees to be planted shall be of the deciduous type, and shall be of a type of root growth pattern which minimizes potential damage to street and utility facilities. Trees shall be required at the standard of one (1) tree per forty-five (45) feet of street frontage for large trees, thirty-five (35) feet for medium size trees, and twenty-five (25) feet for small trees.
2. Locational Criteria: Two options shall be permitted at the developer's discretion. The first option shall be to place the trees within a planting easement with a minimum width of five (5) feet to be located immediately adjacent and parallel to the street right-of-way. The second option shall be to plant the trees within the street right-of-way between the street curb and the sidewalk in the area commonly called the "utility strip". The developer's choice shall be shown appropriate subdivision and development plans, and shall be consistent on any given street. Trees shall not be planted where future growth will touch overhead utility lines.
3. Platting Requirement: The cross section to be utilized and tree species shall be determined at the time of Commission action on the preliminary subdivision plan, and shall also be reflected on the final subdivision plan. Tree species shall be consistent for any given street, and at least one (1) alternative species of the same genus shall be specified. The final plan will also indicate by symbol the number of trees required on each lot based upon Section 6.9(B)(1) above, and its general location. The final subdivision plan shall also contain a note stating that the street trees required herein either within the right-of-way or designated easement shall be maintained by the property owner in accordance with Section 6.9(B)(5) herein below. A note stating that no tree may be removed without the approval of the Administrative Official shall also appear on the final plan.
4. Planting: It shall be the responsibility of the developer to plant the street trees within one (1) year from the date of the recording of the final subdivision plat.
5. Maintenance: The developer shall maintain all trees for a period of one (1) year from the date of the planting and shall replace any required tree which dies within one (1) year of its planting. Upon the expiration of one (1) year from the date of planting, the owner of the subject property shall be responsible for the continued proper maintenance of all street trees and shall keep them in a proper, neat, and orderly appearance free from refuse and debris at all times. Topping trees or the severe cutting of limbs to stubs larger than three (3) inches in diameter within the tree crown to such a degree as to remove the normal canopy shall not be permitted for the maintenance of trees required by this section.

6.10 STANDARDS FOR ENVIRONMENTALLY SENSITIVE AREAS

It is recognized that certain areas in or around the City of Columbia due to environmental or geologic conditions, may pose problems to providing safe development where such conditions are encountered on the land to be developed. These areas are defined and described as follows:

- A. ENVIRONMENTALLY SENSITIVE AREAS This term applies to any area which due to its natural or physical setting may have environmental problems with regard to development. This is not to say that the land cannot be developed; but if it is determined that development can occur, then some safeguards such as detailed site planning will be necessary to overcome the physical limitations of the land. Lands in question shall include (but shall not be limited to) areas of steep slope (over 15%), floodplains, sinkholes, areas of poor soils, improper fill, wetlands, cliff areas, significant areas of tree stands, aquifer recharge areas, etc.
- B. ENVIRONMENTALLY SENSITIVE AREAS REQUIREMENT All such areas shall be identified and located on the preliminary subdivision plan as provided in Article 5. In addition, the developer shall be required to file with the application a general statement describing the nature of the environmentally sensitive areas, and the manner in which and such area is to be handled during development of the property, as well as any special design measures taken by the developer to attempt to minimize the development's impact on the environmentally sensitive areas. If, after a review of this general statement and any other available information, the Planning Commission finds that questions remain concerning the development's impact on the environmentally sensitive area, or the health and safety of future users of the area, the Commission shall refuse to fully approve the preliminary subdivision plan until it is satisfied that the hazards have been eliminated or adequate safeguards provided to ensure the least negative impact on the environmentally sensitive area. To assist it in making this determination, the Commission may require the developer to have comprehensive and detailed environmental assessment studies prepared by qualified professionals for Commission consideration.

6.11 SURVEYING AND MONUMENTATION STANDARDS

The following standards shall be applicable to all major subdivision plans.

- A. All vertical measurements shall be based upon the North American Vertical Datum 1929 or latest revision or adjustment.
- B. Any required horizontal control monuments to be placed shall meet a minimum of third order accuracy. Third order is defined to be one foot per five thousand feet (1:5000').
1. Number of azimuth courses between azimuth checks not to exceed fifty (50).
 2. Azimuth closure at azimuth check points not to exceed thirty (30) seconds times the square root of the number of angles or eight (8) seconds per station.
 3. Each distance measurement to be accurate within one foot (1) in seven thousand five hundred (7,500) feet.
 4. After azimuth adjustment, closing error in position not to exceed one foot per five thousand feet (1:5000).

Any vertical control monuments to be placed shall have the unadjusted vertical distances not exceeded by 0.05' times the square root of miles.

Orders and classification of surveys (vertical and horizontal) are defined by the latest publications of the National Geodetic survey.

- C. The starting point of the traverse must be tied to the nearest permanent control monument of the third order or better. The coordinates shown shall be the Kentucky State Plane.
- D. The subdivision control monument, herein described, shall have the maximum spacing of three thousand (3,000) feet. Every boundary corner location which is determined by a land survey on the subdivision boundary or within the subdivision property will be monumented or witness monumented with re-bar, steel pipe, stone markers etc. as described and required in 201 KAR 18.150.
- E. There shall be a minimum of four (4) subdivision control monuments placed on the subdivision boundary.
- F. Where corners are found to coincide with a previously set permanent control or subdivision monument, the designation on the previously set monument shall be shown on the plat.
- G. A subdivision control monument with both horizontal and vertical control shall be required to be set at every intersection of a collector street with an arterial street in a location shown on the final subdivision plat.

If another monument station is not intervisible, an azimuth mark shall be set which is visible and shall be the same as a subdivision control monument or cultural feature which is permanent, suitable, and easily identified, such as spires, towers, stacks, or similar objects. An azimuth mark shall be at a distance of one thousand (1,000) feet or more away from the station monument so as to assure that a bearing determined from the permanent station marker for which it applies shall not vary from true bearing more than fifteen (15) seconds of arc.

- H. The location and designation of all control monuments and azimuth markers shall be shown on the final subdivision plat. Data sheets on each subdivision control monument shall be submitted to the City Engineer.

The corner or location chosen for permanent concrete monuments should be one that will not be likely to be disturbed. Original ground or excavated ground should be used for locating the control monument. Never should a monument be placed in a new fill area without special precautions to make the monument permanent as will be approved by the City. The final placement of monuments shall occur after substantial completion of subdivision construction.

- I. **DEFINITIONS-** The following terms shall have the meaning indicated for the purposes of Section 6.11:

1. Permanent Control Monuments, both vertical and horizontal, shall be substantial concrete monuments, set under the supervision of governmental agencies and within third order accuracy or better.
2. Subdivision Control Monuments, both vertical and horizontal, shall be substantial concrete monuments, established by third order methodology, by traverse or loops originating from and closing on permanent control monuments, as indicated in 6.11 (A) and 6.11 (B).
3. Control Monuments shall be construed as either permanent or subdivision control

monuments.

4. Boundary Location Monuments shall be rebars, steel pipe, stone markers, etc. as described in the "Minimum Standards of Practice for Land Surveying in Kentucky".

6.12 STANDARDS FOR CONSTRUCTION FILL MATERIALS FOR STREETS

Any fill which is to be utilized for the purpose of construction of any public or private street upon such fill shall conform to the following provisions at a minimum. Higher standards may be required, where these standards are not sufficient to ensure stability.

- A. CONSTRUCTION FILL MATERIAL- No organic material shall be permitted in the fill. No rock or similar irreducible material with a maximum dimension greater than twelve inches shall be buried or placed in fill unless approved by the City Engineer.
- B. PREPARATION OF GROUND- The natural ground surface shall be prepared to receive the fill by removing any vegetation or nonconforming fill. Where slopes are five horizontal to one vertical or steeper, benching into sound bedrock or other competent material shall be required.
- C. COMPACTION - The fill shall be compacted to a minimum of ninety-five percent (95%) of maximum density (ASTM, 99, current) when structures are to be supported by the fill or if that compaction is necessary as a safety measure to aid in preventing the saturation, slipping, or erosion of the fill.
- D. FILL SLOPE - No compacted fill shall be made which creates an exposed surface steeper in slope than two (2) feet horizontal to one (1) vertical. A flatter slope may be required for stability and safety.
- E. SLOPES TO RECEIVE FILL - Fills shall not be permitted on natural slopes steeper than two (2) feet horizontal to one (1) foot vertical unless an analysis proving the stability of the soil is submitted to, and approved by, the Planning Commission.
- F. EROSION PREVENTION- Adequate provision shall be made to prevent any surface waters from damaging the face of an excavation or fill. All slopes shall be protected from surface water runoff from above by berms or swales.
- G. PLACEMENT OF FILL - The placement of fill may be end dumped if it is to be compacted to a height no more than five (5) feet in depth. The fill material must be layered and compacted in layers not to exceed one (1) foot in height before each compaction.
- H. AREAS OF EXISTING FILL - Where development is proposed on areas of existing fill where the composition and compaction of fill material is in doubt test borings may be required by the City Engineer before development is permitted to occur.

APPROVED BY RESOLUTION OF THE COLUMBIA PLANNING COMMISSION FOR
ENACTMENT: April 12, 2007

EXHIBIT 6-1: STREET GEOMETRICS

LOCAL STREETS

	<u>COLLECTOR STREET</u>	<u>CONTINUING</u>	<u>LOOP/CUL DE-SAC</u>	<u>SERVICE ROAD</u>	<u>NON- RES</u>
<u>STREET DIMENSIONS</u>					
Right-of-Way Width	60-70	50	50(*3)	40-50	60
Roadway Width (face/face)	36-40	30	27-30(*3)	30	36
Curbs & Gutters	Yes	Yes	Yes	Yes	Yes
Sidewalk (width & sides)	4'(both)	4'(both)	4'(both)	4'(*1)	4'(both)
Driveway Access	(*1)	Yes	Yes	Yes	Yes
Backup Lots	(*1)	No	No	No	No
Street Grade, Maximum *(4)	6%	8%	8%	6%	6%
Street Grade Minimum	0.8%	0.8%	0.8%	0.8%	0.8%
<u>STREET ALIGNMENT</u>					
Horizontal Curve Radius	500'	250'	100'	150'	300'
Stopping Sight Distance	250'	200'	200'	200'	200'
Crest Vertical Curve Formula	L=45A	L=22A	L=22A	L=22A	L=22A
Crest Vertical Curve Minimum	100'	100'	100'	100'	100'
Sag Vertical Curve Formula	L=60A	L=35A	L=35A	L=35A	L=35A
Sag Vertical Curve Minimum	100'	100'	100'	100'	100'
<u>STREET INTERSECTIONS</u>					
Maximum Street Legs	4	4	4	4	4
Intersection Angle (Preferred and Minimum)	90-80°	90-80°	90-80°	90-80°	90-80°
Intersection Spacing	(*2)	(*2)	(*2)	(*2)	(*2)
Curb Radius Along Street	(*1)	20'	20'	20'	20-40'
Max. Grade Within 50' of Intersecting Gutter	3%	3%	3%	3%	3%
Max. Tangent Offset Within 100' of Intersecting Gutter	8.3'	11.3'	11.3'	11.3'	11.3'

(*1) As approved by the Planning Commission

(*2) Intersection spacing shall apply as described in Section 6-8(N)

(*3) Alternate dimensions of 20' (face to face) roadway width may be utilized as described in Exhibit 6-2

(*4) On collector streets, grades from 6-8% may be approved for short distances provided that no crest sight distance problem. Steeper grades may be approved by the Planning Commission on a case-by-case basis.

Note: Typical cross section applications are described in Exhibit 6-2

EXHIBIT 6-2: TYPICAL STREET CROSS-SECTIONS

Note: The following cross-sections shall be considered typical for the situations listed. Other cross-sections may be required by the Planning Commission upon advice from the City Engineer based upon the design of the actual situation encountered.

<u>CROSS-SECTION</u>	<u>APPLICATION</u>
<p style="text-align: center;">70' R. O. W. 4' 5' 5' 50' 5' 5' 4'</p>	Collector street in non-residential areas; intersection with an arterial street for at least 250'. A transition section is required to be the normal collector street cross-section.
<p style="text-align: center;">70' R. O. W. 4' 10.5' 5' 40' 5' 10.5' 4'</p>	Collector street in non-residential areas; industrial area collectors and locals. (Note: sidewalk may be eliminated on one side when street is completely contained within an industrial area)
<p style="text-align: center;">60' R. O. W. 4' 5.5' 5' 40' 5' 5.5' 4'</p>	Residential collector street, industrial area locals and cul-de-sacs. (Note: sidewalk may be eliminated on one side when street is completely contained within an industrial area)
<p style="text-align: center;">60' R. O. W. 4' 7.5' 5' 30' 5' 7.5' 4'</p>	Residential collector – Low Density
<p style="text-align: center;">50' R. O. W. 4' 5.5' 5' 30' 5' 5.5' 4'</p>	Continuous residential local street; long (over 1000') residential cul-de-sacs except where density is very low; shorter cul-de-sacs in very high density areas; also, commercial service roads.
<p style="text-align: center;">50' R. O. W. 4' 7' 5' 27' 5' 7' 4'</p>	Residential cul-de-sac; loop street under 2000' in length.
<p style="text-align: center;">6' ESMT 50' R. O. W. 6' ESMT 4' 5.5' 5' 20' 5' 5.5' 4'</p>	Residential local, where 15 units or less have access or the average lot width is greater or equal 100' (single family only) and where two parking spaces are provided behind the building line each having independent access to the street. Easement area for sidewalks and utilities required.

Note: The above cross-sections are typical of streets to be constructed by developers in conjunction with their subdivisions. Cross sections for arterial or other roadways larger than those shown in this exhibit shall be designed by the Kentucky Department of Transportation, as appropriate.

EXHIBIT 6-3: CORNER SIGHT DISTANCES AT INTERSECTIONS

TYPE OF ROADWAY(*1)	PUBLIC OR PRIVATE STREET(*2)	DRIVEWAY(*2)
MAJOR ARTERIAL	325L/150R/15M(*3)	325L/150R/15M
MINOR ARTERIAL	275L/150R/15M	275L/150R/15M
COLLECTOR	200L/150R/15M	200L/150R/15M(non-res.) 150L/120R/15M(res.)
LOCAL	175L/130R/15M	75L/55R/10M

(*1) This column considered as “major” street or intersection.

(*2) This column considered as “minor” street or intersection.

(*3) 325L/150R/15M – Sight triangle to the left/Sight triangle to the right/Distance from edge of curb on minor street or drive approach

Note: This table assumes right angle intersections and straight major street movement within the sight distance. Situations involving skewed intersections, curvilinear streets and other mitigating factors shall have sight distances determined by the Administrative Official or City Engineer.

EXHIBIT 6-4: MINIMUM PAVEMENT SPECIFICATIONS

FUNCTIONAL CLASSIFICATION	CBR(*1)	BITUMINOUS WITH GRANULAR BASE (*2)	FULL DEPTH BITUMINOUS	CONCRETE (*3)
RESIDENTIAL LOCAL	4,5,6	2" Binder/8" Base	6"	6"
RESIDENTIAL COLLECTOR	4	3" Binder/8" Base	7 1/2"	5"
	5	3" Binder/8" Base	7"	5"
	6	3" Binder/6" Base	6 1/2"	5"
NON-RESIDENTIAL AND ARTERIALS	4	4" Binder/8" Base	8"	5"
	5	4" Binder/8" Base	7 1/2"	5"
	6	4" Binder/6" Base	7"	5"

(*1) California Bearing Ratios (Kentucky Method) of less than 4" will require soil stabilization. Paving thickness may be reduced if CBRs are greater than "6".

(*2) Bituminous with granular base includes compacted dense grade aggregate base, asphalt binder course and a one inch surface course.

(*3) A 3" insulation course of aggregate shall be required under rigid pavement.

GENERAL

- Bituminous surface course will be 1" thick unless otherwise directed by the City Engineer. Thickness and number of lifts to be approved by the City Engineer.
- Tack coat of SS-1 or SS-1h (0.1 gal/s yd) required between bituminous binder and surface.
- Pavement components presented in this chart are examples of acceptable specifications. Alternate designs using different materials and/or component ratios will be considered when submitted and approved by the developers engineer.
- Subdivision construction may proceed pending final pavement design.
- The maximum deviation from this standards is 1/2".

EXHIBIT 6-5: ALTERNATE CUL-DE-SAC DESIGNS

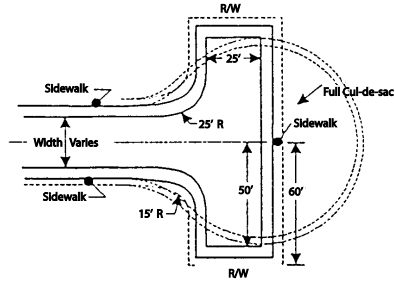


Figure 1: HAMMERHEAD

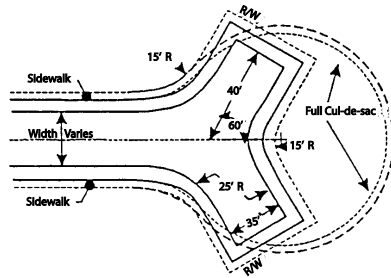


Figure 2: "Y"

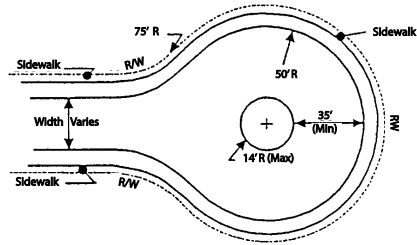


Figure 3: CUL-DE-SAC WITH MEDIAN

**APPLICATION
COLUMBIA PLANNING COMMISSION**

PROJECT NAME: _____

TYPE OF REQUEST: _____ MINOR SUBDIVISION
 _____ MAJOR SUBDIVISION – PRELIMINARY PLAT
 _____ MAJOR SUBDIVISION – FINAL PLAT
 _____ ZONE CHANGE
 _____ OTHER: _____

DATE APPLICATION COMPLETE: _____

REQUIRED FEE: _____ DATE FEE PAID: _____

CONTACT PERSON: _____

ADDRESS: _____

PHONE: _____

OWNER: _____

ADDRESS: _____

PHONE: _____

BRIEF DESCRIPTION OF PROJECT OR REQUEST: (Type of project, acres, # of units, etc.)

LOCATION: _____

UTILITY PROVIDERS:

WATER: _____ SEWER: _____

ELECTRIC: _____ GAS: _____

**COLUMBIA PLANNING COMMISSION
MINOR SUBDIVISION CHECKLIST**

Name of Site: _____

Location: _____

Date Submitted for Review: _____ Filing Fee: _____

- _____ Filing Fee Received
- _____ Three copies of plans submitted

_____ **TITLE BLOCK**

- _____ Type of minor subdivision
- _____ Name of subdivision
- _____ Address of property
- _____ Owner's name
- _____ Land Surveyor
- _____ Graphic & written scale
- _____ Date of preparation

_____ **VICINITY SKETCH**

_____ **LOTING SCHEME**

- _____ Appropriate scale
- _____ North Arrow
- _____ Bearings & dimensions all shown
- _____ Acreage
- _____ Adjoining properties & record names
- _____ Parcels labeled

_____ **EASEMENTS**

- _____ Written approval of beneficiary

_____ **STREETS**

- _____ Cross section or plan view
- _____ Sufficient easement
- _____ Sufficient road width

_____ **CERTIFICATIONS**

- _____ Owner's
- _____ Land Surveyor's
- _____ City Clerk's
- _____ Recorder's
- _____ Mayor's (for public acquisition)
- _____ Required notes

NOTES:

**COLUMBIA PLANNING COMMISSION
PRELIMINARY SUBDIVISION CHECKLIST
Page 1**

Name of Site: _____

Location: _____

Date Submitted for Review: _____ Filing Fee: _____

- _____ Filing Fee Received
- _____ Three copies of plans submitted

_____ **TITLE BLOCK**

- _____ Name of subdivision
- _____ Name & address of property
- _____ Name & address of owner
- _____ Developer name
- _____ Engineer's name
- _____ Graphic & written scale, north arrow
- _____ Date of preparation

_____ **SITE PLANS**

- _____ Appropriate scale
- _____ Boundary lines with dimensions
- _____ Proposed easements
- _____ Adjoining properties & record names
- _____ Street name(s)
- _____ Street cross section
- _____ Street plan & profile
- _____ Lot lines
- _____ Lot numbers & block numbers
- _____ Setback lines
- _____ Existing utilities
- _____ Contours
- _____ Subsurface conditions
- _____ Public or non-public sites
- _____ Existing tree stands
- _____ Drainage features
- _____ Environmentally sensitive areas
- _____ Sewer plans
- _____ Water plans
- _____ Drainage plans
- _____ Other information:
- _____ Other information:

NOTES:

**COLUMBIA PLANNING COMMISSION
PRELIMINARY SUBDIVISION CHECKLIST
Page 2**

Name of Site: _____

Location: _____

Date Submitted for Review: _____ Filing Fee: _____

_____ **PRIVATE UTILITIES**

- _____ Gas
- _____ Electric
- _____ Telephone
- _____ Other:

_____ **SITE STATISTICS**

- _____ Total acreage
- _____ Street acreage
- _____ Lot acreage
- _____ Lineal feet of streets
- _____ Zoning
- _____ Other
- _____ Other
- _____ Other
- _____ Other

_____ **DEVELOPMENT PLAN**

NOTES:

COLUMBIA PLANNING COMMISSION
Final SUBDIVISION CHECKLIST
Page 1

Name of Site: _____

Location: _____

Date Submitted for Review: _____ Filing Fee: _____

- _____ Filing Fee Received
- _____ Three copies of plans submitted

- _____ **TITLE BLOCK**
- _____ Name of subdivision
- _____ Name & address of property
- _____ Name & address of owner
- _____ Developer name
- _____ Surveyor & Engineer's name & seal
- _____ Graphic & written scale, north arrow
- _____ Date of preparation

- _____ **VICINITY SKETCH**

- _____ **LOTING SCHEME**
- _____ Appropriate scale
- _____ Boundary lines with dimensions
- _____ Easements with width & purpose
- _____ Adjoining properties & record names
- _____ Street name(s)
- _____ Street bearings
- _____ Street right-of-way widths
- _____ Lot lines with bearings
- _____ Lot numbers & block numbers
- _____ Setback lines
- _____ Floodplain information
- _____ Street addresses
- _____ Location of control monuments
- _____ Public or non-public sites
- _____ Zoning

- _____ **AS-BUILT PLANS**
- _____ Sewer plans
- _____ Water plans
- _____ Drainage plans
- _____ Other information:
- _____ Other information:

NOTES:

**COLUMBIA PLANNING COMMISSION
FINAL SUBDIVISION CHECKLIST
Page 2**

Name of Site: _____

Location: _____

Date Submitted for Review: _____ Filing Fee: _____

_____ **PRIVATE UTILITIES**

- _____ Gas
- _____ Electric
- _____ Telephone
- _____ Other:

_____ **NOTES**

- _____ Restrictive notes
- _____ Maintenance notes
- _____ Septic notes

_____ **CERTIFICIATIONS**

- _____ Owner
- _____ Engineer
- _____ Land Surveyor
- _____ Commission Chairman

_____ **BONDED IMPROVEMENTS**

NOTES: