

## ARTICLE 4

### SUBDIVISION DESIGN STANDARDS

#### Sections:

- 4-1 Applicability**
- 4-2 Block Standards**
- 4-3 Street Standards**
- 4-4 Lot Standards**
- 4-5 Easements**
- 4-6 Design Techniques**
- 4-7 Access Control**
- 4-8 Land Subject to Flooding**
- 4-9 Building Lines**

#### SECTION 4-1 APPLICABILITY

**4-101.** All subdivisions of land subject to these regulations shall conform to the following minimum design standards and to the intent of the Comprehensive Plan. Such design standards shall govern the approval of subdivision plats by the Planning Commission and by the Governing Body.

**4-102.** Comprehensive Plan Coordination. All subdivisions shall be consistent with the Comprehensive Plan. The Governing Body may disapprove residential subdivision proposals where it is determined that the location of said subdivision is not compatible with the adopted Comprehensive Plan or development policies of the Governing Body. Compatibility of subdivision design with the Comprehensive Plan is also governed by Section 4-6.

**4-103.** Access. All lots located in any subdivision shall take access directly from a street dedicated and accepted for public use.

**4-104.** Land Subject to Erosion. On land subject to excessive soil movement that may result in erosion or deposition of soil, the Planning Commission, in accordance with the City Engineer's recommendations, may require, in addition to those standards set forth in these regulations, and in addition to requirements of site plan review, necessary preventive measures as part of the final plat approval and/or during construction and development of the subdivision.

**4-105.** Conformance to Applicable Laws and Regulations. In addition to the requirements established herein, all subdivision plats shall comply with all applicable laws and regulations, including the following:

- a. City zoning regulations;
- b. Regulations of the Kansas Department of Transportation if the subdivision or any lot contained therein abuts a state highway or connecting street;
- c. City-adopted building and housing codes;
- d. City-adopted fire and life safety codes;
- e. The standards and regulations adopted by the City Engineer; and
- f. Any other applicable state or local laws or regulations.

## **SECTION 4-2 BLOCK STANDARDS**

### **4-201.**

- a. Length. Intersecting streets, which determine block length, shall be provided at such intervals as to serve cross traffic adequately and to meet existing streets in the neighborhood. In residential districts where no existing plats are recorded, the blocks shall not exceed one thousand two hundred (1,200) feet in length, except that a greater length may be permitted where topography or other conditions justify a departure from this maximum. In blocks longer than one thousand (1,000) feet, pedestrian ways and/or easements through the block may be required by the Planning Commission near the center of the block. Such pedestrian ways or easements shall have a minimum width of ten (10) feet. Pedestrian ways shall have a minimum width of ten (10) feet and shall be constructed in a manner approved by the City Engineer. Blocks for business use should normally not exceed six hundred (600) feet in length.
- b. Width. In residential development, the block width shall normally be sufficient to allow two (2) tiers of lots of appropriate depth and shall not be less than three hundred (300) feet nor more than three hundred fifty (350) feet. In certain instances, however, a different arrangement may be required in order to provide better circulation or to protect a major circulation route. Blocks intended for business or industrial use shall be of such width and depth as may be considered most suitable for the prospective use. Block width and depth shall be determined with regard to needs for convenient access, safety and circulation and with consideration of topography.

## **SECTION 4-3 STREET STANDARDS**

### **4-301.**

- a. Relationship to Adjoining Street Systems.

1. The arrangement of streets in new subdivisions shall make provisions for the continuation of the existing streets in adjoining additions (or their proper projection where adjoining property is not subdivided) insofar as they may be necessary for public requirements.
  2. Alleys, when required, and street arrangement shall permit owners of adjoining property to extend street rights-of-ways into such property.
  3. Whenever there exists a dedicated or platted half street or alley adjacent to the tract to be subdivided, the other half of the street or alley shall be platted and dedicated as a public way, or vacated upon the City's determination that the right-of-way is not necessary.
  4. Where topographical conditions make street continuance or conformity impracticable, the Planning Commission may approve an alternative layout.
  5. Where the plat submitted covers only a portion of the contiguous land owned by the subdivider, a sketch of the prospective future street system of the entire ownership shall be submitted.
  6. Where a tract is subdivided into lots of an acre or more, the Planning Commission may require an arrangement of lots and streets such as to permit a later subdivision in conformity with the street requirements.
- b. Street Names. Streets that are obviously in alignment with other already existing and named streets shall bear the names of the existing streets. Otherwise names shall be sufficiently different in sound and in spelling from other street names in the City so as not to cause confusion.
- c. Minor or Local Streets. Minor or local streets shall be so designed to discourage through or non-local traffic.
- d. Cul-de-sacs. Vehicular turnaround at the closed end of a street having a minimum radius of fifty feet (50') and a roadway having a minimum radius of forty feet (40') to the interior curb line. Such local street segment should not exceed five hundred feet (500') in length from the intersection of a cross street to the juncture with the cul-de-sac.
- e. Right Angle Intersections. Under normal conditions, streets shall be laid out to intersect, as nearly as possible, at right angles. Where topography or other conditions justify a variation from the right angle intersection, the minimum angle shall be sixty (60) degrees.

- f. Streets Adjacent to a Railroad Right-of-Way, Limited Access Freeway, Principal Highway or Arterial Streets.
1. When the area to be subdivided adjoins a railroad right-of-way, the intersection of the centerline of any street or highway paralleling the railroad with that of any street that crosses the railroad shall not be less than 140 feet from the line of the railroad right-of-way.
  2. Where lots front or side, but do not back on railroad rights-of-way, limited access freeways, principal highways, or arterial streets a marginal access street or frontage road may be required parallel and adjacent to the boundary of such rights-of-way. The distance from said rights-of-way shall be determined with due consideration to minimum distance required for approach connections to future grade-separated intersections.
- g. Half-Streets. Half-streets shall be avoided, except:
1. Where they are essential to the reasonable development of the subdivision in conformity with the other requirements of these regulations; or,
  2. When the Planning Commission finds that it will be practical to require the dedication of the other half of the street when the adjoining property is subdivided. Where a half-street, or portion thereof, is existing and adjacent to a tract to be subdivided, the other half of the street shall be based on minimum requirements as set forth in 4-301.j and shall be platted within such tract.
- h. Alleys. Alleys may be required in commercial, industrial and residential areas. Dead end alleys shall be avoided, wherever possible; but if unavoidable, such alleys shall be provided with adequate turnaround facilities at the dead-end. Alleys should be avoided in residential areas except where alleys of adjoining subdivisions would be closed or shut-off by failing to provide alleys in the adjoining subdivision.
- i. Minimum Requirements. All right-of-way for streets, alleys and public ways, included in the subdivision, hereafter dedicated and accepted, shall not be less than the minimum width for each classification as follows:

Arterial streets .....	120 feet
Collector streets .....	80 feet
Local streets, residential .....	50 feet
Local streets, industrial and commercial .....	70 feet
Cul-de-sacs .....	50 feet and the turnaround shall have a radius of 40 feet
Marginal access or frontage/parallel access roads, one-way .....	50 feet
Marginal access or frontage/parallel access roads, two-way .....	60 feet
Alleys serving residential development.....	20 feet
Alleys serving commercial or industrial development.....	30 feet
Pedestrian ways .....	10 feet
Bicycle paths .....	10 feet

All widths for streets included in the subdivision, hereafter dedicated and accepted, shall not be less than the minimum width for each classification as follows:

1. Arterial .....41 feet
2. Collector .....35 feet
3. Streets with adjacent average lot sizes of less than thirty thousand (30,000) square feet shall have a minimum roadway width of thirty-two (32) feet curb back to curb back.
4. Streets with adjacent average lot sizes of thirty thousand (30,000) square feet and more shall have a minimum improvement width of twenty-four (24) feet with four (4) feet shoulder.

j. Additional Requirements. When existing or anticipated traffic on arterial and collector streets warrants greater widths of rights-of-way, or where needed for cuts, fills or utilities, additional right-of-way may be required to be dedicated for any streets.

k. Street Grades.

1. The grades of streets, alleys and other public ways included in any subdivision shall not be greater than five percent (5%) for major streets and ten percent (10%) for local streets. Variations from these standards may be made when warranted by topographic conditions. Such changes shall be approved only upon the recommendation of the City Engineer.
2. Gutter grades on paved gutters shall not be less than one-half of one percent (.5%).
3. All changes in street grades shall be connected by a vertical curb of reasonable length to assure adequate visibility.

4. In approaching intersections, there should be a suitable leveling of the street at a grade generally not exceeding four percent and for a distance of generally not less than one hundred (100) feet from the nearest line of the intersection street. The grade within the intersection should be as level as possible, permitting proper drainage.
- l. Street Alignment. Minimum horizontal and vertical alignment on all streets, except in unusual cases, shall be as follows:
    1. Horizontal alignment: Radii at the centerline.
 

Major streets .....	500 feet
Local streets .....	150 feet
    2. A tangent shall be provided between all reversed curves to provide for a smooth traffic flow.
  - m. Vertical Alignment. All changes in street grade shall be connected by vertical curves of such length as to provide for desired sight distance as set out in American Association of State Highway Officials Geometric Design Standards and shall be subject to the approval of the City Engineer.
  - n. Street Layout. Proposed streets shall conform to topography as nearly as possible to reduce drainage problems and grades.
  - o. Intersections.
    1. Street intersections shall be rounded by radii of at least twenty (20) feet.
    2. The design of the intersection should be such that a clear sight distance will be maintained for seventy-five (75) feet at the roadway center line with no obstruction to sight within the triangle formed by these points.

**SECTION 4-4 LOT STANDARDS**

**4-401.**

- a. Minimum lot width shall be measured at the building setback line and shall not be less than required by the zoning regulations of the district in which the subdivision is located. No residential lots shall be less than seventy (70) feet in width at the building line. Corner lots shall have a width at least twenty (20) feet greater than the minimum width.

- b. Minimum lot depth shall be one hundred and thirty (130) feet, measured through the center of the lot and perpendicular to the property line, or radial to the property line or curved streets.
- c. Maximum depth of residential lots shall not exceed two and one-half (2 1/2) times the width of the lot.
- d. If the proposed subdivision is to be served with City water and City sewer or a community-type sewage treatment plant, approval of the plat shall be subject to the minimum requirements set forth in these regulations and the zoning regulations of the district in which the subdivision is located.
- e. If the proposed subdivision is to be served with a public water supply, but not with a public sanitary sewer system, the preliminary plat will be submitted on the basis of the minimum of three (3) acre lots and will be subject to the approval of the City-Cowley County Health Department, which shall make or cause to be made soil analysis and percolation tests for each lot and make recommendations to the Planning Commission. The plat lots will be so proportioned as to permit future re-platting consistent with good subdivision design.
- f. If the proposed subdivision is not served with either an approved public water supply or an approved public sanitary sewer system and the developer will be using a private water supply with an approved private sewage disposal system, the subdivider shall submit his or her preliminary plat on the basis of ten (10) acre lots, subject to the approval of the Health Department, which shall secure soil analysis and percolation tests and submit a recommendation to the Planning Commission. The lots will be so proportioned as to permit future re-platting consistent with good subdivision design.
- g. All side lot lines shall bear sixty (60) to ninety (90) degrees from the street right-of-way line on a straight street or from the tangent of a curved street.
- h. Double frontage lots and reverse frontage lots shall be avoided unless, in the opinion of the Planning Commission, a variation to this prohibition will give better street alignment and lot arrangement.
- i. Every lot shall have frontage on a public street other than an alley.
- j. The subdivision or re-subdivision of a tract or lot shall not be permitted where said subdivision or re-subdivision places an existing permanent structure in violation of the requirements of the zoning regulations or the minimum design standards of these regulations.
- k. Whenever possible, residential lots shall not face on arterial streets. The number of lots facing on collector streets shall be kept to a minimum in each subdivision.

The street pattern shall be designed so that the side line of lots abut collector streets wherever land shapes and topography permit.

1. In subdivisions located outside the city limits, plats with lots which exceed the minimum areas or dimensions set out in these regulations may be denied upon a determination that such lots, if platted, will obstruct the future growth and development of the area, for example by making the extension of municipal services uneconomical.

## **SECTION 4-5 EASEMENTS**

### **4-501.**

- a. Where alleys are not provided, permanent easements of not less than ten (10) feet in width shall be provided on each side of all rear lot lines, and on side lot lines, where necessary, for utility poles, wires, conduits, storm and sanitary sewers, gas, water and heat mains, and other public utilities. Where a utility company or other service provider can demonstrate the need for a wider easement than required above for a specific location, such may be required by the Governing Body and provided by the developer. These easements shall provide for a continuous right-of-way at least twenty (20) feet in width. An additional twelve (12) foot wide temporary construction easement abutting each side of a utility easement shall be provided for initial construction of water, sewer and other utility lines. Such temporary easement shall be terminated by the City upon its determination that development of lots adjoining the easement is completed with all utilities fully installed.
- b. All easements shall be shown on the plat. Permanent easements shall not be obstructed by structures or vegetation. No fences may be placed in storm drain easements located along side lot lines. A property owner may otherwise erect fences and landscape the easement at his or her own risk of loss.
- c. Drainage Easements. If a subdivision is traversed by a water course, drainage way or channel, then a stormwater easement or drainage right-of-way shall be provided. Such easement or right-of-way shall conform substantially to the lines of the natural water course and shall be of such width or construction, or both, as may be necessary to provide adequate stormwater drainage and for access for maintenance thereof. Parallel streets or parkways may be required in connection therewith. The City Engineer shall make a study and report his or her recommendation to the Planning Commission as to the desired width of such easement. Such study and report shall be based on the one hundred year flood depth (if known). Maintenance of stormwater easements and drainage right-of-way shall be the responsibility of the owners of property adjoining such easements or right-of-way.



- d. Where a lot or group of lots side or back on an existing high pressure oil line or existing high pressure gas line, a seventy-five foot (75') easement shall be provided on each side of said oil line or gas line. The seventy-five foot (75') easement shall be provided on that part of the lot which abuts the oil line or gas line, and no building or structure shall be located or constructed within said seventy-five foot (75') easement.

#### **SECTION 4-6 DESIGN TECHNIQUES**

**4-601.** Subdivision Design: The design of the subdivision shall provide for efficient traffic flow, proper mixing of land uses, and a logical link between surrounding, existing development, and the proposed layout. The Planning Commission shall have the authority to deny a plat or request redesign, if, in its opinion, the layout is not suitable for the site, or if the development of the subdivision would be premature.

#### **SECTION 4-7 ACCESS CONTROL**

**4-701.** In the interest of public safety and for the preservation of the traffic carrying capacity of the street system, the Planning Commission shall have the right to regulate points of access to all property from the public streets system. Such proscriptions shall be indicated on the final plat.

#### **SECTION 4-8 LAND SUBJECT TO FLOODING**

**4-801.**

- a. Land subject to intermediate regional flood shall not be subdivided for any use incompatible with such flooding. An intermediate regional flood is a flood having an average frequency of occurrence in the order of once in 100 years, although the flood may occur in any year or even in successive years. It is based on statistical analyses of stream flow records available for the watershed and analyses of rainfall and runoff characteristics in the general region of the watershed. Data on the flood characteristics for the planning area may be obtained from the Kansas Water Resources Board or the Corps of Engineers, U.S. Army, and FEMA.
- b. Subdivision proposals shall include regulatory flood elevation data in areas zoned Floodway or Floodplain on the Arkansas City Zoning Map.
- c. Adequate drainage shall be provided so as to reduce exposure to flood hazards.
- d. All public utilities and facilities shall be located so as to minimize or eliminate flood damage.

- e. All proposed development shall be consistent with the need to minimize flood damage.

#### **SECTION 4-9 BUILDING LINES**

**4-901.** Building lines conforming with zoning regulations shall be shown on all lots within the platted area. Provisions shall be made by the owner's declaration of plat, requiring all enclosed parts of buildings to be set back to such building lines.