

## ARTICLE 6. DESIGN STANDARDS

- 100 Scope. All subdivision of land subject to these regulations shall conform to the minimum design standards of this Article.
- 101 Comprehensive Development Plan. Subdivisions shall conform with the intent of the Comprehensive Plan.
- 102 Land for Public Facility Sites. Public agencies using the Comprehensive Plan as a guide may use the following procedure for acquiring sites for public facilities which does not preclude voluntary dedication and mutual negotiations for land or the use of the condemnation laws of the State: (See Section 2-102 for definition of RESERVE.)
- A. The subdivider offers to sell to the appropriate public body, agency or authority, lands, sites and locations for parks, recreational areas, schools, fire stations or other public facilities. As soon as the preliminary plat has been received and reviewed, the Planning Commission shall give 45 days notice to the public body, agency or authority that it appears that lands should be considered for public acquisition. If within that 45 days the body receiving notice fails to act or submits a negative report on acquisition, then the subdivision and design thereof shall be treated as if no such request for land had been made.
  - B. If the organization receiving notice replies in writing that they desire to acquire land within the subdivision, they shall have an additional 45 days after making such reply to make arrangements for such land acquisition.
  - C. The time allocated for making the above determination may be extended with the mutual consent of the subdivider and the organization involved.
- 103 Land for Open Space. The following conditions may be required as part of the approval of any subdivision plat: (See Section 2-102 for definition of RESERVE and WETLAND.)
- A. That the subdivider provide appropriate dedication of land or easements for the preservation of open space areas within a subdivision. Such open space may be needed to preserve areas containing natural water-courses, drainage ways, areas subject to periodic flooding, wetlands, substantial woodland, rugged topography and wildlife habitat; to maintain water quality and quantity; and to protect land from soil erosion. In general, such land is not normally considered as buildable land and should not be developed in order to maintain the quality of the environment.

104 Land Subject to Flooding.

- A. Whenever a subdivision of land including platting for manufactured home parks and other developments on one-lot plats is located on flood prone land identified on a Flood Insurance Rate Map(s) (F.I.R.M.) prepared by the Federal Emergency Management Agency, the following requirements shall apply: (See City Zoning Regulations for "F-P" Floodplain District.) (See Section 5-101 0 for minimum pad elevations.)
1. Show on the preliminary and final plats the boundary lines and elevations for both floodway, if any, and base flood elevation; and
  2. Assure that (a) all such subdivisions are consistent with the need to minimize flood damage, (b) all public utilities and facilities, such as sewer, water, gas and electrical systems are located, elevated and constructed to minimize or eliminate flood damage, and (c) adequate drainage is provided so as to reduce exposure to flood hazards.

105 Land Subject to Excessive Erosion by Wind or Water. On land subject to excessive soil movement by the forces of wind and/or water and that may cause environmental health hazards, necessary preventive measures shall be a part of the subdivision plat. Conservation standards applicable to subdivisions shall be adhered to which are used by the Osage County Conservation District.

106 Access. All lots located in any subdivision must contain at least 40 feet of frontage for driveways directly connected to an opened public street and not across the land of others. Flag lots are not permitted, unless warranted by an unusual shape of the land or the ownership of property. (See Section 2-102 for definition of FLAG LOT.)

107 Streets-Layout and Design.

- A. The arrangement, character, extent, width, grade and location of all streets shall conform to the intent of the Comprehensive Plan, and shall be considered in their relation to existing and planned streets, to reasonable circulation of traffic within the subdivision and adjoining lands; to topographical conditions; to the run-off of storm water; to public convenience and safety; and in their appropriate relations to the proposed uses of the land to be served by such streets.
- B. Where such is not shown on a Comprehensive Plan, the arrangement of streets in a subdivision shall either:
1. Provide for the continuation or appropriate projection of existing streets in surrounding areas; or

2. Conform to a plan for the neighborhood approved or adopted by the Planning Commission to meet a particular situation where topographic or other conditions make continuance or conformance to existing streets impracticable.
- C. Local streets shall be laid out so that their use by through traffic will be discouraged.
  - D. If a subdivision abuts or contains an existing or proposed limited access highway, arterial street or railroad right-of-way, the Planning Commission may require marginal access streets, reverse frontage lots with access control provisions along the rear property line and screening, deep lots with rear service alleys or such other design as may be necessary for adequate protection of residential properties and to afford separation of through and local traffic.
  - E. Reserve strips controlling access of streets shall be prohibited except where their control is placed with the Governing Body under acceptable conditions.
  - F. Street right-of-way requirements for other than arterials shall be determined by the total aggregate needs for the functional components for the particular system being considered. The total aggregates shall be in increments of even feet, even numbers only. The components involved shall be as follows depending upon the type of characteristics of the street needed based on land use, traffic and density:
    1. Moving or traffic lanes may be variable from nine to 12 feet depending on function, e.g., low density residential, cul-de-sac residential, collector, industrial, etc., and on design speed of the roadway. A moving lane may utilize a portion of the surface of certain types of curb construction.
    2. Parking lanes for on-street storage of vehicles shall be at least eight feet in width. For computation purposes, up to two feet for curb or shoulder may be included as part of the parking lane.
    3. A curb and gutter shall be considered to require two feet irrespective of construction type.
    4. Shoulders for streets without curbs shall be not less than three feet in width.
    5. Parking strips for streets shall be at least 14 1/2 feet in width from the back of curb to the right-of-way line. This area shall be used for the installation of utilities, street signs, street lights, traffic control devices, fire hydrants, sidewalks, driveways, street furniture, street trees from an approved City list and to provide a transition area in grades, if necessary, between the roadway and the property adjacent to the right-of-way.

6. Based on the above general criteria, street rights-of-way and roadways shall be calculated from the following guidelines:

	R-O-W for Street In feet*	Roadway Width In feet
a. Collector including Commercial, Industrial or Multiple-Family Areas.	70-80	36-40**
b. Local Residential including Cul-de-sacs and Single and Two-Family Areas.	60	30 **
c. Local Marginal Access Street (two moving lanes with no parking on one side plus a parking strip between curb and the main road right-of-way).	50	28 **
d. Alleys for Residential, if necessary, and Commercial Areas.	20	20

\* For arterial standards, see Sections 6-107G and H.

\*\* Face of curb to face of curb.

These widths may be modified by the Planning Commission on a showing that special conditions exist such as drainage and utility requirements, safe and efficient traffic and pedestrian movement, intersection design, etc. In applying these standards, workable street systems must be established. When a pattern of widths based on function for a given area has been established, the pattern shall be followed until another system can be established or ties into a collector or arterial system. Access control and acceleration and deceleration lanes may be required to properly handle traffic flow and to protect the carrying capacity of the street.

- G. Arterial right-of-way widths shall be as shown in the Comprehensive Plan and where not shown thereon shall be between 80-100 feet.
- H. For streets and roadways on the Functional Classification System of the County, prevailing design standards shall apply.
- I. Wherever possible, there shall be an inside tangent at least 100 feet in length introduced between reverse curves on arterial and collector streets.

- J. Streets shall be laid out so as to provide for horizontal sight distances on all curves depending upon design speed. These distances shall be:

Arterial Streets: 500 feet  
 Collector Streets: 300 feet  
 Local Streets: 200 feet

The sight distance shall be measured within street rights-of-way from a height of four and one-half feet above the proposed pavement surface in the right-hand lane of the roadway.

- K. Streets shall be laid out so as to intersect as nearly as possible at right angles, and no street shall intersect any other street at less than 80 degrees.
- L. Street jogs are to be avoided on arterial and collector streets. On local streets, center line offsets of less than 150 feet should be avoided.
- M. Roadway grades, wherever feasible, shall not exceed the following with due allowance for reasonable vertical curves:

<u>Roadway Type</u>	<u>Percent Grade</u>
Arterial	3%
Collector	4%
Local	5%
Marginal Access	5%

- N. No roadway grade shall be less than 0.32 of one percent, unless approved by the applicable engineer. Greater percentages of grade may be required where necessary to provide adequate drainage.

- O. Roadway pavement at intersections shall be rounded by the following minimum radii:

<u>Type of Roadway</u>	<u>Intersection Width</u>	<u>Minimum Curb Radii</u>
Local Residential	Local Residential	20 feet
Local Residential	Collector	30 feet
Local Residential	Arterial	30 feet
Commercial/Industrial	Commercial/Industrial	50 feet
Collector or Arterial	Collector or Arterial	50 feet

- P. Half-streets shall be avoided, except for arterial streets and collector streets where applicable, or where they are essential to the reasonable development of the subdivision in conformity with the other requirements of these regulations; or, when the Planning Commission finds that it will be practicable to require the dedication of the

other half of the street when the adjoining property is subdivided. Whenever a half-street, or portion thereof, exists and is adjacent to a tract to be subdivided, the other half of the street shall be platted within such tract. No construction of the roadway shall occur until the full right-of-way is provided.

- Q. The length of cul-de-sacs and the dimensions of the turnaround shall be determined as follows:
1. Cul-de-sacs in single-family areas should not generally be longer than seven times the average lot width or 500 feet, whichever is less. In multiple-family residential areas, such streets shall not exceed 300 feet.
  2. Turnarounds shall have a turn diameter of at least 70 feet and a street property line diameter of at least 100 feet, or shall have an alternate turnaround area such as hammerheads, etc., as providing service equal to the foregoing requirement.
- R. Subdividers are encouraged to consider projects designed to maximize solar access when not in conflict with existing contours or drainage. When the long axis of individual structures is parallel to the street, streets should be oriented as nearly as possible in an east/west direction. If the long axis of structures is perpendicular to the street, north/south street orientation is preferable for solar access purposes.

#### 108 Alleys.

- A. Alleys shall be provided in commercial and industrial areas, except that the Planning Commission may waive this requirement where other definite and assured provision is made for service access, such as off-street loading, unloading and parking spaces consistent and adequate for the uses proposed. Alleys in residential districts are to be discouraged.
- B. When provided, the minimum right-of-way of an alley shall be 20 feet.
- C. Alley intersections and sharp changes in alignment shall be avoided, but where necessary, a turning radius shall be provided to permit safe vehicular movement.
- D. Dead-end alleys shall be avoided where possible, but if unavoidable, such alleys shall be provided with adequate turnaround facilities at the dead end.

#### 109 Blocks and Pedestrian Ways.

- A. The lengths, widths and shapes of blocks shall be determined with due regard to:
  1. Provision of adequate building sites suitable for the special needs of the type of use contemplated.
  2. Zoning requirements as to lot sizes and dimensions, off-street parking and loading, etc.

3. Need for convenient access, circulation, control and safety of street traffic.
  4. Limitations and opportunities of topography.
- B. A block should not exceed 1,340 feet in length, unless the previous layout or topographic conditions justify a modification. In general, blocks shall not be less than 400 feet unless necessary because of existing street patterns.
  - C. All blocks shall be so designed so as to provide two tiers of lots, unless a different arrangement is required in order to comply with or be permitted by other sections of these regulations.
  - D. Blocks may be irregular in shape, provided they are harmonious with the overall pattern of blocks in the proposed subdivision.
  - E. In extra long blocks, a public pedestrian way may be required to provide access to public or private facilities such as schools or parks. (See 2-102 for definition of PEDESTRIAN WAY [CROSSWALK].)

#### 110 Lots.

- A. The lot size, width, depth, shape and orientation, and the minimum building setback lines, if any desired, shall be appropriate for the location of the subdivision and for the type of urban and rural development and use contemplated. (See Section 6-106 for flag lots.)
- B. Lot dimensions shall conform to the minimum requirements of City Zoning Regulations.
- C. All subdivisions shall be connected to public water supply and sewage disposal systems.\*
- D. As a general guideline, the maximum depth of all residential lots shall not exceed two and one-half times the width thereof. For all other types of lots, the depth shall not exceed three times the width.
- E. The area of the street right-of-way shall not be included and calculated in the size of the lot with respect to minimum lot size requirements of these regulations or of City Zoning Regulations.
- F. There shall be no double frontage lots for individual dwellings (e.g., single and two-family units), except where the lots abut upon a limited access highway or arterial street or where the topography of the land prevents reasonable subdivision in small units. Double frontage lots shall not have vehicular access between such lots and an abutting limited access highway or arterial street.

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\* NOTE: All public sanitary sewer systems and sewage treatment plants are further subject to the regulations of the Kansas Department of Health and Environment.

- G. Reversed frontage lots shall be avoided except where such are essential to provide a separation of residential development from limited access highways and arterial streets or to overcome specific disadvantages of topography and orientation.
- H. Corner lots for residential use shall have extra width, if necessary, to permit appropriate building setback from and orientation to both streets.
- I. Side lines of lots shall be at right angles or radial to the street line or substantially so.

#### 111 Easements.

- A. Utility easements shall be provided where necessary and centered on rear or side lot lines. Such easements shall be at least 20 feet wide along rear lot lines and 10 feet wide along side lot lines, except that easements for street lighting purposes shall not in any event be required to exceed 10 feet. Side lot easements, when needed for other than street lighting purposes such as drainage, may exceed 10 feet.
- B. Drainage Easements. If a subdivision is traversed by a watercourse, drainage way or channel or a detention pond is constructed, then a storm water easement or drainage right-of-way shall be provided. Such easement or right-of-way shall conform substantially to the lines of such watercourse and location of a detention pond and shall be of such width or construction, or both, as may be necessary to assure adequate storm water drainage and for access for maintenance thereof. All drainage easements shall be vegetated with perennial grasses or otherwise stabilized to prevent soil erosion and sediment movement by wind or water. Parallel streets or parkways may be required in connection therewith. (See Section 2-102 for definition of DETENTION POND.)
- C. Vision triangle easements may be required on any corner lot to provide an open and usable vision path for drivers of vehicles approaching the intersection. The extent of vision triangle easements shall be based on the type of intersection (3-way, four, protected, unprotected, etc.); the type of street (local, collector, arterial, commercial or industrial); topography; proposed street grades (if any); and the design speeds contemplated for such roadways. (See Section 2-102 for definition of VISION TRIANGLE.)
- D. Wherever a lot or group of lots side or back on to an existing high pressure oil or gas transmission line, a building setback easement shall be established on each side of such line to the minimum safe standards as provided by the applicable oil or gas company to the subdivider or to such standards as may be adopted by the City, state or federal governments, whichever provides the most setback distance. The easement shall be provided on that part of the lot which abuts the oil or gas line and no principal buildings or structures shall be located or constructed within such an easement.

- E. A screening easement may be required to provide for fencing and/or an adequate area for the mature growth of landscaping with appropriate maintenance. (See Section 2-102 for definition of SCREENING.)

112 Commercial and Industrial Subdivisions.

- A. Streets. Notwithstanding the other provisions of these regulations, the minimum width of streets adjacent to areas designed, proposed or zoned for commercial or industrial use may be increased by the Planning Commission to such extent as may be deemed necessary to assure the free flow of through traffic without interference from parked or parking motor vehicles.
- B. Blocks and lots intended for commercial or industrial use shall be designed specifically for such purpose with adequate space set aside for off-street parking and loading.
- C. Marginal Access Street. When lots or blocks in a proposed commercial or industrial subdivision front on any limited access highway or arterial street, the subdivider may be required to dedicate and improve a marginal access street to provide ingress and egress to and from such lots or blocks.