

CHAPTER IV. SUBDIVISION DESIGN STANDARDS

Article 1. General Provisions

ARTICLE 1. GENERAL PROVISIONS

4-101. **APPLICABILITY.** All subdivisions of land subject to these Regulations shall conform to the following minimum design standards. Such design criteria shall govern the approval of the subdivision plats by the Planning Commission and the Governing Body. All plats shall be designed under the direct supervision of a registered Professional Engineer of the State of Kansas and all submittals shall bear the seal of said Professional Engineer. All plats shall be prepared under the direct supervision of a registered land surveyor of the State of Kansas and all submittals shall bear the seal of said registered land surveyor.

All subdivisions shall be platted with due consideration toward sound traffic engineering principals, safe accessible building sites, adequate methods of storm water drainage and provisions for a sanitary water supply, and effective sewage disposal system, and an effective gas distribution system. All subdivision plats shall be consistent with applicable City of McLouth, Kansas development plans and policies and shall be coordinated with existing, planned or committed public improvements. All subdivision plats shall comply with all local, state and federal laws and regulation.

4-102 **STREET STANDARDS.**

1. **COMPREHENSIVE PLAN COMPLIANCE.** The arrangement, character, extent, and location of all streets shall conform to the Comprehensive Plan or other plans and standards as adopted.

2. **EXTERNAL STREET CONSIDERATIONS.** The arrangement, alignment, and width of streets in new subdivisions shall be properly integrated with the existing principal street or road system, and where appropriate shall provide for the continuation of existing principal streets in adjoining subdivisions or their projection where adjoining property is not platted. In no case shall the width of streets in new subdivisions be less than the minimum street widths established in this Article.

3. INTERNAL STREET LAYOUT, GENERAL. The location, arrangement, character and type of all streets shall be designed in relation to topographical conditions, the extent and impact of storm water runoff, the safe and convenient circulation of traffic within the subdivision, and the uses of the land to be served by such streets. When possible, local streets shall be planned so as to discourage through traffic and to conveniently channel traffic onto collector and arterial streets.

4. INTERNAL STREET LAYOUT, RESIDENTIAL DEVELOPMENT. The use of curvilinear streets, cul-de-sacs, u-shaped streets, or cluster developments shall be encouraged in residential areas when appropriate. However, the excessive use of cul-de-sacs shall be discouraged. No streets shall be laid out so as to intersect with themselves, unless topographic conditions warrant.

5. INTERNAL STREET LAYOUT, NON-RESIDENTIAL DEVELOPMENT. In commercial or industrial developments, the streets and other access ways shall be planned in connection with the grouping of buildings, location of rail facilities, the provision of alleys, truck loading and maneuvering areas, walks, and parking areas to as to minimize conflict of movement between the various types of traffic, including pedestrian.

6. STREET INTERSECTIONS. Streets shall be designed to intersect as nearly as possible at right angles, except where topography or other natural conditions justify a variation. However, in no instances shall two local streets intersect at an interior angle of less than 75 degrees without the written consent of the City Engineer.

7. MULTIPLE INTERSECTIONS. Intersections involving the junction of more than two (2) streets shall be avoided whenever possible.

8. INTERSECTON CURVATURE. When connecting streets deflect from each other with an interior angle of less than 75 degrees, they shall be connected by a curve with a radius adequate to ensure a sight distance of not less than two hundred (200) feet for local and collector streets, and of such greater radii as the City Engineer shall determine for arterial streets.

9. INTERSECTION PAVEMENT RADII. Street pavement at intersections shall be rounded by the following minimum radii:

<u>Street Classification</u>	<u>Intersection with</u>	<u>Minimum Curb Radii</u>
Arterial or Collector	Arterial or Collector	50 feet
Local	Arterial	30 feet
Local	Collector or Local	25 feet

The Planning Commission may set specifications for intersection pavement radii, upon advice of the City Engineer, greater than the minimum standards herein.

10. **OFFSET STREETS.** Offset streets whose centerlines are separated by less than 150 feet shall be avoided, except where topography or other conditions justify a variation.

11. **RESERVE STRIPS.** There shall be no reserve strips controlling access to streets. The subdividing of land shall be such as to provide each lot with satisfactory access to an existing public highway or street.

12. **PRIVATE STREETS.** There shall be no private streets platted in any subdivision.

13. **HALF STREETS.** Half streets shall be prohibited, except where essential to the reasonable development of the subdivision in conformity with the other requirements of these Regulations and where the Planning Commission finds it will be practicable to require the dedication of the other half when the adjoining property is subdivided. Whenever a half street is adjacent to a tract to be subdivided, the other half of the street shall be platted within such tract.

14. **VISIBILITY.** Clear visibility, measured along the centerline of a street, shall be provided for at least two hundred (200) feet on all streets.

15. **ACCESS TO MAJOR STREETS.**

a. Where a proposed commercial or industrial subdivision borders on or contains an existing or proposed limited access arterial, the Planning Commission may require a street system design which affords separation of through and local traffic. This may be accomplished through reverse

frontage lots with access control provisions along the rear property line, deep lots with rear service area, frontage roads, or other similar means.

b. Where a residential subdivision borders on or contains an existing or proposed major street, the Planning Commission may require that access to such streets be limited by any of the following means:

(1) The subdivision of lots so as to back onto the major street and front onto a parallel local street. No access shall be provided directly to any lot from the major street, and screening may be required of the developer in a screening easement along the rear property lines of such lots.

(2) A series of cul-de-sacs, u-shaped streets, or short loops entered from and designed generally at right angles to such a parallel street, with the street lines of their terminal lots backing onto the major street. No direct access to the major street shall be allowed.

(3) A frontage road having access to the major street at suitable points.

16. **RAILROAD RIGHT-OF-WAY.** Where a subdivision borders on or contains a railroad right-of-way, the Planning Commission may require a street approximately parallel to and on each side of such right-of-way at a distance suitable for the appropriate use of the intervening land, such as for park purposes in residential districts, or for commercial and industrial purposes in appropriate districts. Such distances shall also be determined with due regard for the requirements of approach grades and future grade separations.

17. **DEAD-END STREETS AND CUL-DE-SACS.** Permanent dead-end streets shall be cul-de-sacs. A cul-de-sac shall be no longer than 528 feet in length, measured along the centerline of the cul-de-sac from the centerline of the intersecting street to the radius point, and shall have an adequate turnaround with a minimum 75-foot radius right-of-way at the closed end. Temporary dead-end streets longer than 100 feet intended to be continued for access to adjoining property shall have a temporary turnaround area to provide service equal to the cul-de-sac requirements stated above.

18. **RIGHT-OF-WAY AND STREET WIDTHS.** In order to provide for streets of suitable location, width and improvements to accommodate future

traffic, afford satisfactory access to emergency and service vehicles (particularly fire trucks and school buses), and to coordinate streets so as to develop a convenient system that avoids undue hardships to adjoining properties, the following design standards are hereby required. Street classifications may be indicated on the Comprehensive Plan or other plans or standards as adopted, or shall be as determined by the Planning Commission and/or City Engineer.

IMPROVEMENT

Minimum Right-of-Way (in feet)

Major Arterial	*
Minor Arterial	120
Major Collector	100
Minor Collector	80
Local	70
Cul-de-sac	70
Cul-de-sac Turnaround Radius	75

*Per KDOT

	<u>Minimum Roadbed and Surface Width (in feet)</u>	<u>Driving Surface Width</u>
Major Arterial	*	*
Minor Arterial	**	**
Major Collector	**	**
Minor Collector	**	**
Local	**	**
Cul-de-sac	**	**
Cul-de-sac Turnaround Radius	**	**

*per KDOT

**per American Public Works Association Design Standards for General Street Design Criteria

19. STREET WIDTHS. In front of areas designated and zoned for a commercial or industrial use, or where a petition for a change in zoning is

contemplated for a commercial or industrial use, to permit such use, the street width shall be increased by such amount on each side deemed necessary by the Planning Commission after review and recommendation of the City Engineer to assure the free flow of through traffic without interference by parked or parking vehicles, and to provide safe parking space for such commercial or industrial districts.

20. **CENTERED IMPROVEMENTS.** The improved portion of streets shall be centered within the right-of-way, except in the cases where the Planning Commission, after review and recommendation of the City Engineer, may allow.

21. **VERTICAL CURVES.** Vertical curves are required for changes in grade.

22. **REVERSE CURVES.** A tangent shall be provided between all reverse curves of a sufficient length, as related to the radius of the curves, so as to provide for a smooth flow of traffic.

23. **ROAD GRADES.** No street grade shall be greater than seven percent (7%) nor less than four-tenths of one percent (0.4%).

24. **STREET NAMES.** Streets which are substantially in alignment with existing streets shall, unless otherwise illogical or due to severe directional change, bear the names of the existing streets. The names of such new streets shall be approved by the Planning Commission.

25. **STREET SURFACING.** Arterials and collectors shall be paved with eight-inch thick asphaltic concrete or seven (7) inches of Portland cement concrete, either meeting the Standard Specifications for Road and Bridge Construction, latest edition. Local streets and Cul-de-sacs shall be paved with four (4) inches of granular rock base and four (4) inches of asphaltic concrete or Portland cement concrete, either per the above Standard Specification. All streets will be built with two-foot wide (minimum width) reinforced Portland cement concrete curb and gutters on each side of the street width listed above.

26. **SIDEWALKS.** Sidewalks with a minimum width of four (4) feet shall be installed on at least one side of the street as near to the property line as possible. The sidewalks shall be constructed out of four (4) inches of Portland cement concrete or another suitable material. Said sidewalks shall be constructed concurrently with the paving of the adjacent streets.

4-103. **BLOCK STANDARDS.**

1. **LENGTHS.** Blocks shall be delineated by intersecting streets at intervals as to sufficiently provide for cross traffic and to furnish access to existing streets adjoining the new subdivision. In residential districts, no block shall be longer than 1,056 feet between centerlines of streets, except variations may be allowed

by the Planning Commission upon review and recommendation of the City Engineer in instances where topography or other conditions prohibit compliance.

2. DESIGN. The configuration of blocks shall be determined with regard given to:

- a. Zoning requirements as to lot sizes and dimensions.
- b. Provision of adequate building sites suitable to the particular needs of the type of use intended.
- c. Topography as it affects storm water drainage and erosion.
- d. Need for convenient circulation, access, safety and control of vehicular and pedestrian traffic.

4-104.

LOTS.

1. FRONTAGE REQUIREMENTS. Every lot shall have frontage on a street at least equal to the requirements of the zoning district in which it is located; except those lots fronting on the end of a cul-de-sac, which shall meet the frontage requirements as measured on a radius at the front yard setback line.

2. SIZE. The size, width, depth, shape and orientation of lots and any minimum building setback lines shall be appropriate to provide safe and adequate building sites based upon the location of the subdivision and for the type of development and use intended. At a minimum, lots shall have dimensions and sizes and provide for space requirements no less than as required by the Zoning Regulations of the City of McLouth, Kansas.

3. SIDE LOT LINES. All side lot lines shall be at right angles to straight street lines and radial to curved street lines where practicable.

4. COMMERCIAL/INDUSTRIAL LOTS. Lots reserved or laid out for commercial and/or industrial purposes shall be of adequate size to provide for the off-street service and parking facilities required by the type of use, zoning district and development contemplated.

5. DOUBLE FRONTAGE. Double frontage lots shall be avoided for single-family residential dwellings except where the lots abut upon a limited-access highway, arterial or major streets, or where the topography of the land prevents reasonable subdivision into additional lots. Double frontage lots shall not have vehicular access between such lots and an abutting limited access highway, arterial or major street.

6. MAJOR STREETS. When possible, lots intended for residential use facing on major streets shall be avoided. It is preferable that the sides or backs of such lots adjoin major streets with the vehicular egress from such lots being oriented to a local street.

7. CORNERLOTS. Corner lots intended for residential use shall have additional width to allow appropriate building setback and orientation to both streets and to provide adequate corner visibility.

8. FLAG LOTS. Flag lots are prohibited.

9. ADDRESSING OF LOTS. House numbers shall be assigned to each lot by the Zoning Administrator, or his designee, and shall be displayed and legible in accordance with City standards.

4-105. EASEMENTS.

1. UTILITY. Permanent easements shall be provided where necessary for the location and servicing of utility poles, wires, conduits, storm and sanitary sewers, water and gas mains and other public utilities. Utility easements located along rear lot lines shall measure at least 20 feet wide and be centered on such rear lot line. Utility easements located along side lot lines shall measure at least 15 feet wide and shall be centered on such side lot line; provided, whenever utility easements are located around the perimeter of the area to be subdivided, they shall be contained wholly within such area. Utility easements located along front lot lines shall measure at least 10 feet wide. No utilities shall be buried within the driving surface of the street.

2. DRAINAGE. A drainage easement may be required for a proposed subdivision which is traversed by a watercourse, drainage way or drainage channel. Such easement shall conform substantially to the lines of such watercourse and shall be of such width as may be necessary to provide adequate storm water drainage and access for maintenance.

4-106. DRAINAGE.

1. DRAINAGE PLANS. The developer shall include a drainage plan, as required by Section 2-103(2)(b)(4) of these Regulations, and shall design the required storm water facilities according to the standards established by the City Engineer. Drainage plans shall include, but are not limited to:

a. A complete drainage-area map showing the natural drainage area boundaries, direction of surface flow, any large impervious areas, existing and proposed streets, man-made or natural obstructions to be avoided for storm drainage locations, runoff calculations for existing and for developed conditions, and proposed inlet locations.

b. A grading design so that drainage from each lot should flow directly to a channel or detention area without crossing more than four (4) adjacent lots.

2. **DETENTION FACILITIES.** The developer shall install detention facilities when the Planning Commission determines that a subdivision provides enough area for runoff control and determines that detention facilities are necessary, and will not adversely affect downstream conditions.

3. **STORM SEWERS.** The dedicated non-pavement street right-of-way may be utilized for storm sewer facilities.

4-107. **WATER, SEWER, AND GAS FACILITIES.**

1. **WATER SUPPLY, SEWAGE DISPOSAL, AND GAS SUPPLY.** The type of water supply system, sewage disposal system, and gas supply system utilized to serve the subdivision shall be subject to the requirements of the Code of the City of McLouth, Kansas. The plans for water supply systems, sewage disposal systems, and gas supply systems to serve the platted area shall give due consideration to the present and/or foreseeable future needs of the subject property and adjoining properties intended to develop, as well as the overall effectiveness of the system based on the characteristics of the land and the nature of the development. The construction of the water supply system and the sewage disposal system shall be subject to the regulations and approval of the Kansas Corporation Commission.

2. **FIRE HYDRANTS.** Fire hydrants shall be located on all streets at least every six hundred (600) feet. The Planning Commission may require the location of hydrants closer than six hundred (600) feet based on the recommendation of the City Fire Chief.

3. **LOCATION.** Water, sanitary sewer, and gas systems may be located within the dedicated non-pavement street right-of-way.

4-108. **LARGE LOT SUBDIVISIONS.** When a proposed subdivision involves lots of one (1) acre or more in area, consideration shall be given in the design and layout of the subdivision to any resubdivision that might take place in the future, with proper provisions being made for such street extensions and utility improvements as may be necessary.

4-109. **PUBLIC SITES AND OPEN SPACES.** Where deemed necessary by the Planning Commission, upon consideration of the particular type of development proposed in the subdivision, the Planning Commission may require the dedication or reservation of such other areas or sites of a character, extent, and location suitable to the needs created by such development for schools, parks, and

other public or open spaces. The requirement of the dedication of such public sites and open spaces by the Planning Commission shall not constitute an acceptance of the dedication by the City.

4-110. BENCH MARKS, CORNER MONUMENTS, AND OTHER MARKERS.

1. BENCH MARKS.

a. All elevations shown on the plats shall be based on USGS datum.

b. The permanent bench mark location and description that is used to extend datum to the project shall be noted on the Preliminary Plat and Final Plat.

2. MONUMENTS. Monuments shall be installed in the subdivision in accordance with the minimum standards established by the Kansas Society of Land Surveyors as adopted by Kansas statutes.

3. U.S. GOVERNMENT CORNERS. Whenever a survey originates from a United States public land survey corner or any related accessory, the land surveyor shall file a copy of the completed survey and references to the corner or accessory with the Department of Archives, Kansas State Historical Society and with the City Engineer. Such survey shall be filed within thirty (30) days of the date the references are made.

a. Any altered, removed, damaged or destroyed corner shall be restored by a registered land surveyor licensed in the State of Kansas.

b. Whenever such a corner or any related accessory is restored, reestablished or replaced due to construction activities, a restoration report shall be filed with the Department of Archives, Kansas State Historical Society as specified in K.S.A. 58-2011, as amended.

4. EXISTING MARKERS. At any time during construction of the subdivision, if a stone marker should be found, the developer shall place an iron disc next to the stone to facilitate the location of the stone in the future.

4-111. COMMUNITY ASSETS. In all subdivisions, due regard shall be given to the preservation of any historical sites, drainage courses, areas of particular aesthetic value, or large and/or valuable trees.