

**DICKINSON COUNTY, KANSAS  
SUBDIVISION PUBLIC ROAD  
DESIGN STANDARDS**

**JANUARY 2007**

**SUBDIVISION PUBLIC ROAD DESIGN STANDARDS  
OF  
DICKINSON COUNTY, KANSAS**

**SECTION 1 - PURPOSE**

1. These regulations constitute the “Dickinson County Subdivision Public Road Design Standards”.
2. It is the purpose of these standards to set forth minimum the standards and requirements for the construction of a public road in a Dickinson County subdivision.
3. These regulations administered by the Dickinson County Planning and Zoning Department, the Dickinson County Planning Commission, the Dickinson County Engineer and the Dickinson County Commission of County Commissioners shall govern the construction of public roads in subdivisions in Dickinson County in accordance with the specific requirements contained herein.
4. Should any section, subsection, sentence, clause or provision of these standards be determined to be unconstitutional or invalid by a court of competent jurisdiction, the same shall not affect the validity of the regulations as a whole or any part thereof other than the part so determined to be unconstitutional or invalid.

## **SECTION 2 – DEFINITIONS**

**AGRICULTURAL USE:** A parcel with a minimum size of 20 acres whose principal use is the production of food or fiber.

**ALLEY:** A dedicated public right-of-way providing a secondary access to abutting property.

**BLOCK:** A place or parcel of land entirely surrounded by public road, other than alleys.

**CU-DE-SAC:** A street that has only one outlet and is permanently terminated by a vehicle turnaround at the other end, as distinguished from a dead end street.

**COUNTY PLANNING COMMISSION:** The agency created and appointed by the Dickinson Commission of County Commissioners, charged with the duties of administering these standards in accordance with the requirements herein and in conformance with the provisions of the Kansas Statutes.

**DICKINSON COUNTY ZONING ADMINISTRATOR:** The person designated by the Dickinson Commission of County Commissioners to carry out the detailed provisions of these standards as specified herein and as directed by the Dickinson Planning Commission.

**EASEMENT:** A grant by a property owner for a particularly described parcel of real estate for a specific use by others or by the public.

**LOT:** A parcel of platted real estate which is to be used, developed or built upon as a single unit.

**MAJOR TRAFFIC WAY:** A county road used primarily for the movement of traffic from one part of Dickinson County to another part and identified as such in the Dickinson County Land Use Plan. (Blacktop)

**MINOR TRAFFIC WAY:** Similar to Major Trafficway but moving traffic of a more local nature. Collects traffic from a particular area and connects to a Major Traffic way. (Gravel)

**PLAT:** A detailed map of a subdivision.

**PLAT, PRELIMINARY:** A map of a proposed land subdivision showing the general details of the proposed development.

PLAT, FINAL: A map of a proposed subdivision suitable for filing in the Office of the Dickinson County Register of Deeds, complete with affidavits, dedications and acceptances, and containing a complete legal description locating on the ground all public roads, alleys, blocks, lots and other aspects of the subdivision.

PUBLIC ROAD: A public thoroughfare providing the principal means of access to adjacent property when in a subdivision.

RIGHT-OF-WAY LINE: The line between the public road right-of-way and the adjacent property.

SECONDARY ROAD: Any road not designated as a Major or Minor Traffic way.

### **SECTION 3 – GENERAL PROVISIONS**

All costs connected with the construction of public roads in a subdivision shall be paid by the developer and/or owner and in no case shall any part or requirement of these standards imply any financial obligation on the part of Dickinson County.

## **SECTION 4 – PUBLIC ROAD DESIGN STANDARDS**

1. The location and width of all public road rights-of-way shall conform to these standards adopted by the Planning Commission. Unless otherwise approved by the Board of County Commissioners, provisions must be made for the extension of major and minor trafficways and secondary roads to provide efficient circulation within the subdivision.
2. The physical arrangement of public roads shall make provisions for the continuation of the principal existing roads into adjoining areas or their projection thru adjoining land, insofar as they may be deemed necessary by the Planning Commission. The public road and alley physical arrangement must be such as to cause no hardships to owners of adjoining property when such owners plat their own land and seek to provide for convenient access to it. Proposed public roads in alignment with other public roads already existing and named, shall bear the names of those existing public roads. In no case shall the name of proposed public road duplicate existing public names, irrespective of the use of the suffix public road, avenue, boulevard, drive, place or court. The owner shall contact the Zoning Administrator for advice and approval concerning naming proposed public roads.
3. Public roads within the subdivision shall be arranged for the most advantageous development of the tract and in harmony with existing development and the future development of adjoining tracts. Public roads should be laid out so as to intersect as nearly as possible at right angles. No public road should intersect any other public road at less than 60 degrees. Public road centerline offsets less than 150 feet should be avoided.
4. No dead-end public roads, other than cul-de-sac treatments, will be approved unless such dead-end public roads are provided to connect with future public roads on adjacent land. Subdivisions with private roads will not be approved. Each subdivision and each subdivision lot shall be served from a public road.
5. A cul-de-sac may be permitted where size, location or topography of the tract do not permit a thru road pattern. A cul-de-sac should be as level as possible. It shall be provided with a turn-around at its terminus having a right-of-way diameter of at least one hundred 100 feet.

6. Minimum rights-of-way for public roads shall be:

Major Traffic ways (blacktop)	=	90 feet
Minor Traffic ways (gravel)	=	80 feet
Secondary Roads	=	60 feet

7. Subdivisions adjoining or containing existing roads shall dedicate additional right-of-way to meet the above listed minimum public road right-of-way width requirements.

- a. The entire right-of-way shall be provided where any part of the subdivision is on both sides of an existing public road.
- b. When the subdivision is located on only one side of an existing public road, one-half of the required right-of-way, measured from the centerline of the existing roadway, shall be provided.

8. Half-public roads shall be prohibited, except where essential to the reasonable development of a subdivision in conformity with the other requirements of these regulations, and where the Planning Commission finds it will be desirable to require the dedication of the other half when adjoining property is subdivided.

9. Entrances serving any use except "Agricultures Uses" shall not intersect Major Trafficways or Minor Trafficways at intervals less than 1,000 feet except when the owner can show that such restriction denies reasonable access to a part or parts of the subdivision. When a subdivision abuts on or contains an existing or proposed Major or Minor Trafficway, the Planning Commission may require frontage roads be constructed as may be necessary for adequate protection of residential properties and to afford separation of through traffic and local road traffic.

10. Where any public road deflects an angle of 10 degrees or more, a horizontal curve in the horizontal alignment is required.

11. Alley access shall be provided at the rear of all business lots and shall be at least 30 feet in width. An alley in residential areas shall not be less than 20 feet in width. Dead-end alleys shall be avoided.

12. All public road intersections and access to private property shall provide for a minimum stopping site distance as defined in the most recent revision of the "Policy on Geometric Design of Rural Highways" of the American Association of State Highway Transportation Officials.

13. All entrances to subdivisions and to platted lots shall show the required entrance pipe size. Entrance pipe size shall be calculated in accordance with Storm Drainage Master Plan for Dickinson County Kansas. If according to the above calculations, no entrance pipe is needed, this shall be shown. If an entrance pipe is required, the minimum diameter shall be 18" in diameter or a 13" x 22" pipe arch. Minimum entrance pipe length shall accommodate the minimum public road cross section for the flow line elevation encountered.



## **SECTION 5 – PUBLIC ROAD CONSTRUCTION AND DESIGN**

### **1. SPECIFICATIONS FOR PUBLIC ROAD DESIGN AND CONSTRUCTION**

All public roads built within a subdivision platted in the unincorporated area of Dickinson County shall be built in conformance with these standards. Equivalent road cross sections using flyash, geofabrics, geogrids or lime subgrade treatment based on soil tests and designed by a professional engineer licensed in Kansas may be approved. This standard shall constitute a minimum standard. Higher construction standards may be required by resolution as conditions warrant. All paved public roads in residential subdivisions shall be built so as to comply with the AASHTO Pavement Design Manual. Public roads in commercial or industrial subdivisions shall be so designed to carry the anticipated loads for each unique situation using AASHTO Equivalent Single Axle Load theory and the AASHTO Guide for Design of Pavements structural number theory.

### **2. INSPECTION AND APPROVAL FOR MAINTENANCE**

Public roads in subdivisions will be constructed at the expense of the subdivision's developer. There will be no direct or indirect public subsidiary of this construction. The Dickinson County Engineer is responsible for the inspection of the construction. A final inspection of the project is made and is attended by the developer, County and township personnel. If the condition of the project is satisfactory, the County Engineer recommends to the County Commission the public roads be accepted and be turned over to the township in which they are located for maintenance.

### **3. GUARANTEE OF SATISFACTORY PERFORMANCE**

- a. A developer may construct the public roads in a subdivision with or without having posted a performance bond with Dickinson County. If the developer posts the performance bond, the final plat of the subdivision may be filed and building permits issued prior to the public acceptance of the public roads. If the developer does not post the performance bond, the subdivision plat may not be filed nor building permits issued until the roads are accepted. The performance bond shall be in the amount of the cost estimated to Dickinson County to build the public roads as determined by the Dickinson County Engineer.
- b. In case were a developer starts to construct a public road without a performance bond and encounters interest from parties interested in obtaining building permits, the developer will be allowed to a post a performance bond in the amount of the estimated cost of the remaining road construction work. In no case will a public road

project be accepted without the developer having posted a maintenance bond for the project. The maintenance bond is in the amount of fifteen percent of the construction cost of the project and is to remain in force for one year after the public roads are accepted. Performance and maintenance bonds may be issued by a bonding company registered to do business in the State of Kansas, may be a letter of credit or a cashier's check. Personal checks or collateral assignments will not be accepted.

#### 4. CRUSHED STONE BASE COURSE

Crushed stone base courses shall be supplied, constructed and installed in accordance with sections 306.01 through 306.03 of the K.D.O.T. Standard Specifications for State Road and Bridge Construction (1990 edition) with the following exceptions:

- a. Subgrade soil and rock compaction shall be Type B (MR-90)
- b. The Road Mix Method may be used.
- c. The gradation requirements for "Crushed Stone for Backfill" shall be:

<u>Sieve Size</u>	<u>% Retained</u>
3"	0
3/8"	20 – 50
No. 16	50 – 100

#### 5. SURFACING

- a. DESCRIPTION – This work shall consist of the placing of aggregate for surfacing in a windrow and then spreading and compacting of the windrowed material in conformity with the details displayed in Dickinson County Subdivision Public Road Standard unpaved May 2006. The use of a Jersey Spreader may be substituted for the spreading by the "windrow-uniform spreading" method. The crushed stone sub grade shall be proof rolled before placing the surfacing material.
- b. CONSTRUCTION REQUIREMENTS – The aggregate materials to be utilized shall be combined material (AB-3) as described in the K.D.O.T. Specifications for State Road and Bridge Construction. The aggregate material to be utilized shall be approved by the Dickinson County Engineer. No hauling of materials will be permitted when in the judgment of the Dickinson County Engineer, the weather or road conditions are such that hauling operations

cause excessive cutting or rutting of the natural sub grade or the crushed stone sub grade.

The materials approved for delivery to the road shall be uniformly distributed through out the length of the road to be improved.

The rate of application shall be as shown herein for the various materials provided.

## 6. MINIMUM DESIGN DIMENSIONS

Right of way	60'	for Public Road used for land access
	80'	for Minor Traffic ways (gravel)
	90'	for Major Traffic ways (blacktop)
Horizontal Curvature	300'	Minimum Radius for Trafficways
	150'	Minimum Radius for Public Road used for land access
Sight Distance	150'	
Roadbed Width	24'	
Ditch Depth	2'	
Ditch Width	4'	
Shoulder Slope	3:1	
Back Slope	2:1	
Bridge Design Loading	AASHTO HS-20	
Bridge Roadway Width	24'	
Maximum Roadway Grade	12%	

These standards may be recommended for waiver by the Dickinson County Engineer if terrain features and/or safety considerations justify such a waiver. The public shall have an opportunity for input on any waiver proposed by the County Engineer. All waivers must be approved by the Dickinson County Commission of County Commissioners.

## 7. EXTRAORDINARY CONDITIONS

When in the opinion of the Dickinson County Engineer, extraordinary pedological conditions are encountered in a subdivision, a special public road design may be required.