

CHAPTER 156: SUBDIVISION REGULATIONS AND MINIMUM STREET REQUIREMENTS

Section

- 156.01 Purpose; authority; definitions
- 156.02 General requirements; minimum design standards
- 156.03 Advisory meeting with Planning and Zoning Administrator
- 156.04 Preliminary plat approval
- 156.05 Final plat approval
- 156.06 Enforcement; penalties for violations
- 156.07 Concrete subdivision streets
- 156.08 Minimum street requirements

Cross-reference:

Streets and sidewalks, see Ch. 91

§ 156.01 PURPOSE; AUTHORITY; DEFINITIONS.

(A) Purpose.

(1) Once land has been divided into streets, blocks, lots and open spaces, a pattern has been developed which may determine how well the community needs for residence, business and industry are to be met. It will also determine how the city can handle traffic problems, its need for home sites, and how economically it can provide the many services demanded of it. The guidance of this development in harmony with community objectives is therefore a matter of serious public concern.

(2) The Benton Comprehensive Plan, and the following regulations are designed to provide for:

- (a) The proper arrangement of streets;
- (b) Adequate and convenient open spaces for traffic;
- (c) Utilities;
- (d) Access of firefighting apparatus;

- (e) Recreation;
- (f) Light and air;
- (g) The avoidance of congestion of population, including minimum width and area lots;
- (h) Adequate provisions of water, drainage, freedom from flood, sewer and other sanitary facilities.

(B) *Authority; jurisdiction.*

(1) The subdivision regulations are adopted under the authority granted by the Kentucky Revised Statutes. The Planning and Zoning Commission, established under the Kentucky Revised Statutes, has fulfilled the requirements set forth in the acts as a prerequisite to the adoption of such regulations.

(2) The regulations govern all subdivision of land within the corporate limits of the city as now or hereinafter established, and within the unincorporated area in a three-mile radius of the Marshall County Courthouse located on Main Street in the City of Benton.

(C) *Definitions.* For the purpose of these regulations which shall be known and may be cited as “Subdivision Regulations of Benton, Kentucky”, certain words used herein may be defined as follows:

FLOODWAY. The channel of a river or other water course and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot. Also referred to as the **REGULATORY FLOODWAY**.

STREET. A way for vehicular traffic, whether designated as a street, highway, thoroughfare, parkway, throughway, road, avenue, boulevard, land, place, or otherwise designated.

(a) **ALLEYS.** Minor ways which are used primarily for vehicular service access to the back or the side of properties otherwise abutting on a street.

(b) **ARTERIAL STREETS AND HIGHWAYS.** Those which will be used primarily for high vehicular speeds or high volumes of traffic.

(c) **COLLECTOR STREETS.** Those which will carry intermediate volumes of traffic from minor streets to arterial streets.

(d) **MARGINAL ACCESS STREETS.** Minor streets which are parallel to and adjacent to arterial streets and highways, and which reduce the number of access points to the arterial street for the purpose of increases traffic safety.

(e) **MINOR STREETS.** Those which are used primarily for access to the abutting properties and which will carry limited volumes of traffic.

SUBDIVISION. The division of a tract of land into three or more lots or parcels for the purpose, whether immediate or future, of sale, lease, or building development. Any division of land for agriculture use not involving a new street shall not be deemed a **SUBDIVISION**. The term **SUBDIVISION** includes re-subdivision and where appropriate to the context, shall relate to the process of subdivision or to the land subdivided. Any division or re-subdivision of land into parcels of less than one acre occurring within 12 months following a division of the same land shall be deemed a **SUBDIVISION** within the meaning of this regulation.

(Ord. passed 8-18-69; Am. Ord. passed 6-20-78; Am. Ord. passed 7-17-84; Am. Ord. passed 10-16-84; Am. Ord. 10-04-02, passed 4-19-10; Am. Ord. 17-07-02, passed 7-17-17; Am. Ord. 22-07-02, passed 7-18-22)

§ 156.02 GENERAL REQUIREMENTS; MINIMUM DESIGN STANDARDS.

(A) *Suitability of the land.*

(1) Land which the Planning and Zoning Commission has found to be unsuitable for subdivisions due to flooding, bad drainage, steep slopes, rock formation, or other features likely to be harmful to the safety, health, and general welfare of the future residents shall not be subdivided unless adequate methods approved by the Planning and Zoning Commission are formulated by the subdivider for meeting the problems created by the subdivision of such land.

(2) Land within the floodway shall not be platted for residential occupancy or building sites. Fill may not be used to raise land within the floodway except where express permission has been granted by the Planning and Zoning Commission. In other areas subject to flood, fill may be used providing the proposed fill does not restrict the flow of water and unduly increase flood heights. For the purpose of these regulations, the limits of the floodway shall be determined pursuant to applicable federal and state regulations, specifically the Federal Emergency Management Agency's (FEMA) regulations.

(B) *Streets.*

(1) **Conformity to the Benton Comprehensive Plan:** The location of all streets in a proposed subdivision shall conform in general alignment to the Benton Comprehensive Plan.

(2) *Street extensions.*

(a) The street layout of the proposed subdivision shall provide for the continuation or projection of streets already existing in areas adjacent to the area being subdivided unless the Planning and Zoning Commission deems such continuation or extension undesirable.

(b) Proposed streets shall be extended to the boundary lines of the tract to be subdivided unless prevented by topography or other physical conditions, or unless in the opinion of the Planning and Zoning Commission, such extension is not compatible with existing or future development of adjacent tracts.

(c) A cul-de-sac turnabout shall be provided at the end of a permanent dead-end street, in accordance with the requirements set forth herein.

(d) The street system for the proposed subdivision shall provide extending existing streets at the same or greater width, but in no case shall a street extension be of less width than the minimum width required in these regulations for a street in its category.

(e) The Planning and Zoning Commission may require the reservation of an appropriate easement to accommodate drainage facilities, pedestrian traffic, or utilities.

(3) *Dedication of right-of-way—new streets.*

(a) The dedication of right-of-way, for new streets measured from lot line to lot line, shall meet the following minimum standards:

<i>Street Type</i>	<i>Minimum Dedicated Right-of-Way Width</i>
Arterial	80 feet
Collector	60 feet
Minor	50 feet
Marginal Access	50 feet
Alley	20 feet

(b) Through proposed business areas, street widths shall be increased ten feet on each side if, in the discretion of the Planning and Zoning Commission, such is needed to provide parking without interfering with normal traffic movement.

(c) In cases where topography or other physical condition make a street of the required minimum width undesirable, in the discretion of the Planning and Zoning Commission and for the furtherance of public purposes, the Planning and Zoning Commission may modify these requirements.

(d) Right-of-way widths in excess of standards designated in these regulations may be required where topography indicates excessive earth slope. A slope of not greater than three to one shall be maintained on all right-of-way.

(4) *Dedication of right-of-way—existing streets.*

(a) The entire minimum right-of-way shall be dedicated where the subdivision is on both sides of an existing street.

(b) Dedications of one-half, or any other portion less than all of the right-of-way for proposed streets along the boundaries of land proposed for subdivision, shall be prohibited.

(c) Where a subdivision borders an existing, substandard narrow street, the applicant shall be required to dedicate additional right-of-way for the improvement of the existing street to meet the requirements of these regulations.

(5) *Intersections.*

(a) The developer shall make a good faith effort to provide that the streets intersect at right angles.

(b) Street curb intersections shall be rounded by radii of at least 20 feet. The Planning and Zoning Commission may require curb radii of greater length for intersection angles less than 90 degrees. Intersection angles less than 60 degrees are prohibited.

(c) No more than two streets shall intersect at any one point unless specifically approved by the Planning and Zoning Commission.

(d) Except where the intersected street is of divided design without median breaks at intersections, proposed intersections along one side of an existing street shall, unless expressly exempted by the Planning and Zoning Commission upon a specific finding of hardship, coincide with existing intersections on the opposite side of the street. Off-set street intersections with centerline offsets of less than 125 feet are prohibited.

(e) No lot or other parcel of land which abuts on and has access to either a collector or minor street shall have a service drive, curb cut, or other means of access to an arterial street within 75 feet of the right-of-way of any street which intersects such arterial street on the side on which such lot or parcel is located. This requirement can be reduced to 50 feet with regard to intersections with collector streets; and 25 feet with regard to intersections with minor streets.

(f) Where street intersections involve earthen banks or areas where vegetation would create a traffic hazard by limiting visibility, the developer shall cut ground, and/or vegetation, in the grading or public rights-of-way to the extent of providing an adequate sight distance, as determined advisable by the Planning and Zoning Commission.

(6) *Access to arterials.* Where a subdivision borders or contains an existing or proposed primary arterial street, the Planning and Zoning Commission may, in its sole and absolute discretion,

require modifications to the proposed subdivision design in order to discourage direct access to residential lots.

(7) *Curves in streets—horizontal and vertical.*

(a) A tangent at least 100 feet long shall be introduced between reverse curves on arterial and collector streets.

(b) Where there is a deflection angle of more than ten degrees in the alignment of a street, a curve with a radius adequate to ensure safe sight distance shall be made. The minimum radii shall be:

<i>Street Type</i>	<i>Minimum Curve Radius</i>
Arterial	500 feet
Collector	500 feet
Minor	200 feet

(c) All changes in grade for streets shall be connected by a vertical curve of a minimum length necessary to provide adequate sight distance and other safety factors. To calculate the minimum length for the curve connecting changes in grade:

1. Calculate the algebraic difference in grades.
2. Multiply by the appropriate value:

Values for crest curve	Collector streets	50
	Minor streets	28
Values for sag curve	Collector streets	50
	Minor streets	35

(8) *Street grades and elevations.*

(a) Street grades shall conform to the following:

<i>Street Type</i>	<i>Percent Grade Maximum</i>
Arterial	4
Collector	5
Minor	8

(b) All streets shall be designed so as to provide for the discharge of surface water from the pavement and from the right-of-way. For adequate drainage, the minimum street grade shall not be less than 0.5%. Minimal grade of ditches shall be 0.5% and minimum grade of curbs and gutters shall be 0.33%.

(c) Where streets are proposed in flood threatened areas as defined by the National Flood Insurance Program, the Planning and Zoning Commission shall require profiles and elevations of streets in order to determine the advisability of permitting the proposed subdivision activity.

(d) Subject to approval by the Flood Plan Coordinator, and any other applicable regulation, fill may be used in areas subject to flooding in order to provide flood-free streets if such fill does not unduly increase flood heights. Drainage openings shall be designed so as not to restrict the flow of water and thereby unduly increase flood heights.

(9) *Required provisions on minor streets.* Where the proposed subdivision abuts upon or contains an existing or proposed arterial street or highway on which traffic volumes and vehicular speeds warrant special safety considerations, the Planning and Zoning Commission may require that minor streets be provided in order that no lots will front only on such existing or proposed arterial street or highway.

(10) *Dead-end streets (cul-de-sacs).* Dead-end streets or courts shall not be longer than 600 feet from the end to the nearest intersection, and shall be provided at the closed end with a cul-de-sac having a radius of at least 50 feet. The paved area of the cul-de-sac shall have a minimum radius of no less than 35 feet.

(11) *Street names.* When streets are not in alignment no names should be used which will duplicate or be confused with the names of existing streets. Proposed streets in alignment with existing streets should bear the names of these streets.

(12) *Private streets and reserve strips.*

(a) There should be no private streets platted within a subdivision.

(b) There should be no reserve strips except where their control is definitely placed in the city or county or under conditions approved by the Planning and Zoning Commission.

(13) *Street specification.*

(a) The minimum width of pavement for collector streets shall be 24 feet.

(b) The minimum width of pavement for minor streets shall be 20 feet.

(c) The minimum width of pavement for arterial streets shall be determined by the Planning and Zoning Commission. In determining the required width, the Planning Commission shall consider current Kentucky Department of Highways design criteria.

(d) To aid proper drainage of street areas, pavement cross slope shall be one-fourth-inch per one foot.

(e) The pavement design for minor streets within residential areas shall be in compliance with either of the following alternates:

1. Eight inches of dense grade aggregate base, to be constructed in two, four-inch courses; or

2. Six inches of bank gravel along with four inches of dense grade aggregate for the surface course;

3. Another base material approved by the Planning and Zoning Administrator based on the approval of an Engineer, plus three inches of bituminous asphalt material composed of two inches Class I binder - one inch Class I surface course conforming to Kentucky Department of Highways specifications; or

4. A single course of Portland cement concrete having either:

A. Uniform slab thickness of seven inches bar and mesh reinforced pavement,
or

B. A mesh reinforced thickened edge slab having a minimum thickness of six inches; nine inches at the construction joint and seven inches at each edge.

(C) Bridges, entrance pipes, pipe culverts and storm sewers.

(1) Bridges, entrance pipes, pipe culverts, and storm sewers shall be sized and designed by utilizing current Kentucky Department of Highways Design Standards. Design calculations shall be submitted to the Planning and Zoning Administrator for review and approval. The minimum size of entrance pipe or pipe culvert shall be 15 inches.

(2) Materials for bridges, entrance pipes, pipe culverts, and storm sewers shall conform to the requirements set forth in the "Standard Specifications for Road and Bridge Construction," latest edition. Where applicable, construction details shall conform to details included in the "Kentucky Department of Highways Standard Drawings Manual."

(3) Where applicable, concrete, entrances, inlets, and curb and gutters shall conform to details included in the current "Kentucky Department of Highways Standard Drawings Manual."

(D) *Blocks*. Except under unusual or special circumstances specifically authorized at the discretion of the Planning and Zoning Commission, blocks shall provide two tiers of lots. Block lengths and widths in residential areas shall not exceed 1,600 feet. Wherever practical, blocks along arterial streets shall not be less than 1,000 feet in length.

(E) *Lots*.

(1) *Relation to streets*. All lots should front upon a public street or road.

(2) *Arrangement*. Side lot lines should be substantially at right angles to straight street lines or radial to curved street lines.

(3) *Dimensions*.

(a) Lot dimensions should conform to the requirements of the zoning ordinance, except residential lots not served by public sewer should be at least 75 feet wide and 12,000 square feet in area.

(b) Where no zoning ordinance is in effect, residential lots served by public sewer should be at least 70 feet wide and 7,500 square feet in area. Residential lots not served by public sewer should be at least 75 feet wide and 12,000 square feet in area.

(c) A greater area than specified above may be required for residential lots if, in the opinion of the Planning and Zoning Commission, there are factors of drainage, soil condition or other conditions to cause potential health problems.

(4) *Building setback lines*. Unless otherwise addressed in the applicable Planning and Zoning Code of Ordinances, the minimum setback line from the right-of-way should be at least one-half of the total width of the street right-of-way on which the building fronts but in no case less than 25 feet.

(5) *Corner lots*. Corner lots for residential use should have sufficient extra width to meet the minimum building set back line established on each street.

6. *Flood hazard*. Each lot in a subdivision shall contain a flood-free building site outside the limits of any easement or building setback line that may be required by these regulations or other applicable laws and regulations.

(F) *Off-street loading and parking facilities*. Unless otherwise addressed in the applicable Planning and Zoning Code of Ordinances, in commercial and industrial subdivisions, space for adequate off-street loading to meet the needs of the proposed use shall be reserved and shall not be used for building purposes. For the purposes of computing the number of parking spaces available in a given area, the ratio of 250 square feet per parking space shall be used. Space for off-street parking shall meet the following minimum requirements:

(1) Industrial plat - one space for each five persons employed or intended to be employed on such lot.

(2) Commercial or business building - Four spaces for the first 1,000 feet of ground floor space and one additional space for each additional 150 square feet of such floor space.

(G) Easements.

(1) Unless otherwise addressed in the applicable Planning and Zoning Code of Ordinances, easements across lots or centered on rear or side lot lines should be provided where necessary for utilities and should be at least 12 feet wide. Above ground utilities should be located within such easements where possible.

(2) A storm water easement for drainage right-of-way may be required by the Planning and Zoning Commission where necessary for proper drainage within or through a subdivision.

(H) Public sites and open spaces. Where a proposed park, playground, school or other public use shown in the Benton Comprehensive Plan is located in whole or in part in a subdivision, the Planning and Zoning Commission may require the reservation of such area as may be deemed reasonable. (Ord. 22-07-02, passed 7-18-22)

§ 156.03 ADVISORY MEETING WITH PLANNING AND ZONING ADMINISTRATOR.

Prior to the filing of an application for conditional approval of the preliminary plat, the subdivider should meet with the Planning and Zoning Administrator for the purpose of ascertaining the location of proposed major streets, parks, playgrounds, schools' sites, and other planned projects which may affect the property being considered for subdivision. The subdivider should review with the Planning and Zoning Administrator the minimum standards of design for the subdivision. Such informal review should prevent unnecessary and costly revisions. This step does not require formal application or filing of a plat with the Planning and Zoning Commission.

(Ord. 22-07-02, passed 7-18-22)

§ 156.04 PRELIMINARY PLAT APPROVAL.

(A) Preliminary plat. After meeting informally with the Planning and Zoning Administrator and prior to the making of any street improvements or installation of any utilities, the subdivider shall cause to be prepared a preliminary plat.

(B) Preliminary plat data. The preliminary plat shall meet the standards of design as set forth in these regulations and shall provide the following information insofar as possible and meet the following requirements:

- (1) The plat shall be no smaller than 18 inches by 24 inches.
- (2) Scale of 200 feet to one inch or larger.
- (3) Name of subdivision, names and addresses of the owner, the engineer or surveyor, and owners' adjacent property.
- (4) Date, approximate north point, and graphic scale.
- (5) Acreage of land to be subdivided.
- (6) Contours at an interval of not greater than five feet of elevation or a lesser interval if deemed necessary by the Planning and Zoning Administrator.
- (7) Boundary lines of area to be subdivided and their bearings and distances.
- (8) Existing and proposed easements and their location, width, and distance.
- (9) If any portion of the land being subdivided is subject to flooding, as defined by these regulations, the limits of such flooding shall be shown.
- (10) Streets on and adjacent to the tract and their names, widths, approximate grades, and other dimensions as may be required.
- (11) Utilities on and adjacent to the tract showing proposed connections to existing utility systems.
- (12) Lot lines and lot numbers.
- (13) Sites, and their acreages, if any, to be reserved or dedicated for parks, playgrounds, or other public uses. Sites, if any, for semipublic, commercial or multi-family use.
- (14) Minimum building setback lines.
- (15) Copies of the proposed deed restrictions, if any, should be attached to the preliminary plat.
- (16) The following certificates shall be noted on the plat:
 - (a) Certification showing the applicant(s) is/are the owner(s) and a statement by such owner(s) dedicating streets, right-of-way and any other sites for public use;
 - (b) Certification from the city Maintenance Supervisor certifying that the plat has been reviewed and approved with regard to availability of city utilities (i.e., gas, water and sewer) and placement of utility easements;

(c) Certification of the Chairman of the Planning and Zoning Commission that the plat has been approved for recording in the office of the County Clerk.

(C) *Procedure.*

(1) One copy of the preliminary plat shall be submitted to the Planning and Zoning Administrator with a written application and application fee for conditional approval of the preliminary plat. In the discretion of the Planning and Zoning Administrator, the filing of a hard copy of the preliminary plat may be waived and an electronic copy of the preliminary plat may be provided for review and consideration.

(2) Within 30 days after the preliminary plat written application and application fee has been received by the Planning and Zoning Administrator, the Planning and Zoning Administrator shall either approve, disapprove, or approve subject to modification the plat. Failure of the Planning and Zoning Administrator to act on this preliminary plat within 30 days shall be deemed approval of the plat, unless the time limit is waived by the subdivider or there is just cause for the delay. If the preliminary plat is disapproved, reasons for such disapproval shall be stated in writing. If approved subject to modifications, the nature of the required modifications shall be indicated.

(3) Approval of the preliminary plat shall not constitute acceptance of the final plat.

(4) The approval of the preliminary plat shall lapse unless a final plat based thereon is submitted within one year from the date of such approval. An extension of time may be applied for and granted by the Planning and Zoning Commission.

(Ord. 22-07-02, passed 7-18-22)

§ 156.05 FINAL PLAT APPROVAL.

(A) *Conform to preliminary plat.* The final plat shall conform substantially to the preliminary plat as approved, and it may constitute only a portion of the preliminary plat which the subdivider proposes to record and develop.

(B) *Procedure.*

(1) Three hard copies of the final plat shall be provided to the Planning and Zoning Administrator who shall check said plats as to computations, applicable signatures on the certifications, plat requirements, zoning requirements, and the like. If found satisfactory, the Planning and Zoning Administrator will schedule the final plat for submission and approval before the Planning and Zoning Commission at the next regular meeting or a special called meeting if in the discretion of the Planning and Zoning Administrator it is determined that a special called meeting is appropriate.

(2) Unless otherwise waived by the subdivider or for good cause, within 90 days after the preliminary plat, written application and application fee has been received by the Planning and Zoning

Administrator, the Planning and Zoning Commission shall approve or disapprove the final plat. Good cause includes, but is not limited to, the failure of the subdivider to timely complete the above steps for submission of the final plat. If the plat is disapproved, the grounds for the disapproval shall be stated in the records of the Planning and Zoning Commission. A copy of the reasons for the disapproval shall be sent to the subdivider by the Planning and Zoning Administrator.

(3) Approval of the Planning and Zoning Commission shall not constitute the acceptance by the public of the dedication of any streets or other public way or ground.

(4) When the final plat has been approved by the Planning and Zoning Commission, two copies shall be returned to the subdivider with the approval of the Planning Commission certified thereon.

(5) It shall be the responsibility of the subdivider to have a copy of the final plat recorded in the records of the County Court Clerk pursuant to the applicable statutory law.
(Ord. 22-07-02, passed 7-18-22)

§ 156.06 ENFORCEMENT; PENALTIES FOR VIOLATIONS.

The Kentucky Revised Statutes (KRS) provide a detailed description of the procedure for the enforcement of subdivision regulations, and the specific penalties for violations of such regulations. The restrictions and penalties for violations of the requirements set forth herein can be found in KRS 100.277 et seq.

(Ord. 22-07-02, passed 7-18-22)

§ 156.07 CONCRETE SUBDIVISION STREETS.

(A) *General requirements.* Concrete subdivision streets shall be plain concrete, no mesh. Pavement may be either:

(1) A minimum of five inches of concrete placed on a minimum of three inches of aggregate base; or

(2) A minimum of six inches of concrete placed directly on a well compacted soil upgrade.

(B) *Concrete quality.* Concrete shall be mixed and delivered according to the requirements of ASTM C 94 "Specification for Ready Mixed Concrete." Concrete shall meet the following requirements:

(1) *Strength.* Concrete shall have a minimum design compressive strength of 4,000 psi in 28 days, with cylinders made in accordance with ASTM C 31 and cured as specified for checking the adequacy of mixture proportions for strength.

(2) *Air content.* The concrete shall be air-entrained with a target air content of 5.5% individual batches may test between 4% and 8% and be considered acceptable.

(3) *Slump.*

(a) If concrete is placed with slip form equipment the slump shall be two inches maximum.

(b) If concrete is placed with equipment other than slip-form equipment the slump shall be five inches maximum, unless a superplasticized concrete is used, in which case the slump may be a maximum of eight inches. When a superplasticized concrete is used, the concrete slump shall be no greater than two inches before the addition of the superplasticizer.

(4) *Material ingredients.*

(a) *Cement, aggregates, and chemical admixtures.* Cement and aggregates shall meet the appropriate ASTM requirements or be from sources approved by the Kentucky Transportation Cabinet, Department of Highways.

(b) *Fly ash.*

1. Fly ash may be used at the discretion of the contractor and ready-mix producer within the following limits:

A. If class "F" fly ash is used, the maximum quantity shall be 20% by weight of the total cementitious content (cement plus fly ash).

B. If class "C" fly ash is used, the maximum quantity shall be 30% by weight of the total cementitious content (cement plus fly ash).

2. All fly ash used shall be supplied from a source currently approved by the Kentucky Transportation Cabinet, Department of Highways.

(C) *Subgrade and base requirements.*

(1) The subgrade shall be brought to a firm and unyielding condition by compacting it to a uniform density. The minimum in place subgrade density shall be 95% of AASHTO T 99 density. Soil should be compacted at or slightly above optimum moisture (as determined by AASHTO T 99).

(2) All soft and unyielding material and portions of the subgrade that will not compact readily when rolled or tamped shall be removed and replaced with suitable material.

(3) Concrete shall not be placed on a soft, spongy, frozen, or otherwise unsuitable subgrade. The subgrade shall be moist when concrete is placed directly upon it.

(4) All utility trenches and structure excavations under the pavement shall be backfilled in a manner to prevent subsequent detrimental settlement. Well compacted granular materials, or controlled low strength material (flowable fill) should be used to within six to 12 inches of final subgrade elevation. The top six to 12 inches should be constructed with the same material as adjacent subgrade.

(5) When an aggregate base design is used, the aggregate may be either a crushed limestone or bank gravel product. The minimum three-inch thickness should be compacted to an unyielding condition and uniform density. The base should be moistened just ahead of the concrete placement.

(D) *Concrete placement and finishing.*

(1) Before placing concrete, freestanding water, snow, ice or other foreign materials shall be removed from the subgrade, or base. All forms shall be clean and secured in position.

(2) Concrete shall be placed, struck off, consolidated and finished to plan grade with a mechanical finishing machine, vibrating screed, or by hand finishing methods when proposed by the contractor in advance of the project and approved by the Inspector.

(3) In lieu of fixed forms (including curb and gutter sections when placed separately in advance of the mainline pavement), the contractor may place concrete with a slip form paver designed to spread, consolidate and screed the freshly placed concrete in one complete pass of the machine. Construction may be half width (with a longitudinal construction joint) or full width at the contractor's option.

(4) Pavement shall be properly sloped to provide for adequate drainage.

(5) After concrete has been struck off and consolidated, a bull float may be used to remove any high or low spots.

(6) A final skid resistant surface shall be provided by means of a burlap drag, broom, or tinting operation.

(E) *Curb or curb and gutter construction.* When pavements include a curb section, the construction may be accomplished in any of a variety of ways at the contractor's option. Construction provisions include the following:

(1) *Integral curb construction with pavement.* Pavement in this case may be constructed half width or full width.

(2) *Separate construction of curb and gutter either prior to or after construction of the mainline pavement.* When placed prior to mainline pavement construction, these sections may be used as forms for pavement.

(3) *Separate construction of header curb.* When this type construction is used the pavement must be tied to the curb (due to cold joint construction) by use of deformed steel bars. Contractor must obtain approval of this procedure from the Inspector with details provided.

(4) Details for permissible curb or curb and gutter design are shown in the drawing attached Ord. 22-07-02, which is available for public examination at the office of the City Clerk. A roll or header curb design is permitted except where the curb is constructed as a separate operation (cold joint design). In that case, a header curb is required. Other designs, when submitted by the contractor, may be allowed, when approved by the Inspector.

(F) *Curing of concrete.*

(1) Concrete shall be cured by application of a curing compound meeting appropriate ASTM requirements. It shall be applied uniformly at a rate of not less than one gallon per 200 square feet as soon as possible after the water sheen has disappeared from the surface of the concrete.

(2) In cold weather, when the ambient temperature during the first 48 hours after placement is expected to fall below 35 degrees Fahrenheit, plastic sheeting, burlene, or insulated blankets should be used as 49 coverings in lieu of, or in combination with, the curing compound.

(G) *Joints.*

(1) *General.*

(a) Concrete pavement shall include expansion, contraction and longitudinal joints. Transverse joints are expansion and contraction joints which shall be continuous across the pavement lane including the curb. Longitudinal joints are parallel to the pavement lanes. Construction joints are necessary when the placement of concrete is delayed. The location of transverse construction joints may be either planned (coincidental with a contraction joint) or emergency (not coincidental with a contraction joint). Longitudinal joints shall be centered between pavement lanes.

(b) The construction of pavements shall comply with joint details provided as a part of these specifications. Any deviation must be proposed by the contractor for exception approval by the Inspector.

(2) *Expansion joints.* Expansion joints shall be Type 1 as shown in joint details. The filler shall be held accurately in place during the placing and finishing operation by a bulkhead or other approved method. Expansion joints shall be installed at all street intersections at the point of curvature of the turning radii entering the intersection and at cul-de-sacs or turnarounds at the point of curvature of the first turning radii approaching the turnaround. No concrete shall be left above the expansion's material or across the joint at any point. Before the pavement is opened to traffic, the groove above the filler shall be cleaned and sealed with an approved joint sealing material, hot poured or cold applied, manufactured for this purpose.

(3) *Contraction joints.*

(a) Transverse contraction joints shall be Type 2. They may be sawed or grooved with a metal jointing tool, equal to a depth of one-fourth of the pavement thickness. If the soff-cut saw or equal is used, saw cut depth shall be in accordance with manufacturer's recommendation.

(b) The spacing of contraction joints shall be no greater than 12 feet on centers for five-inch pavements and 15 feet for six-inch pavements.

(c) If sawed joints are specified, they shall be sawed early enough to control cracking, but late enough to prevent ravelling. These joints shall be cleaned and sealed with a hot poured or cold applied sealer manufactured for this purpose.

(4) *Construction joints.* Transverse construction joints shall be used wherever the placing of concrete is suspended for such time as to potentially cause a cold joint. A transverse construction joint shall be Type 3, with smooth bars if the joint occurs at any other locations formed in the plastic concrete by a grooving tool manufactured for this purpose.

(5) *Longitudinal joints.*

(a) When half width paving is used and the longitudinal joint becomes a cold joint, the contractor may elect to use one of several types of construction. These include a keyway design with no steel (see joint detail for keyway details); deformed bars one-half-inch or five-eighths-inch diameter, 24 inches long at three-foot centers with or without key way; or smooth bars three-fourths-inch diameter, 12 inches long and 24 inches on center.

(b) When full-width paving is used, or when curb and gutter sections are used as forms and concrete is placed full-width between them in one operation, the centerline of the pavement shall be sawed as for transverse contraction joints. Longitudinal joints shall be cleaned and sealed as required for transverse joints.

(6) *Isolation joints.* These joints are required to adequately separate the pavement at drainage inlets, manholes, and the like. Details are shown in the attachment to Ord. 22-07-02, which is available for public inspection at the office of the City Clerk.

(H) *Protection from use of traffic.* The pavement shall be protected from use of traffic for a period of seven days, or until the concrete has reached a minimum compression strength of 3,000 psi based on cylinder test results where specimens have been cured and handled in accordance with provisions of ASTM C 31 for putting a structure into service, or based on in-place core results.

(I) *Testing.*

(1) Acceptability of concrete for strength shall be based upon cylinder tests where specimens have been prepared, handled, cured, and the like, in accordance with current provisions of ASTM C 31 for a check on the adequacy of the mix design.

(2) Tests for slump and air content are to be made in accordance with current ASTM procedures C 143, C 231 or C 173.

(J) *Warranty.* Any developer electing to install concrete streets must warrant and agree to maintain same for a period of five years from the date of the installation or the date of the acceptance of same by the city, whichever shall first occur.

(Ord. passed 6-21-93; Am. Ord. 22-07-02, passed 7-18-22)

§ 156.08 MINIMUM STREET REQUIREMENTS.

(A) *Petition required.* Any person or entity requesting that an extension of an existing street or street not in the city street system, be accepted and taken into the city street system, shall file an appropriate petition pursuant to KRS 82.400 with the City Council and shall satisfy the following minimum requirements. In all instances, the City Council shall have the sole discretion on whether or not to accept a street into the city street system, taking into the factors set forth in KRS 82.400 and other relevant factors, including, but not limited to, budget concerns, cost-benefit analysis, desires of any and all affected citizens, and feasibility of maintaining a road at that particular location.

(B) *Quit claim deed.* Any existing street or street extension accepted into the city street system shall be deeded to the city by quitclaim deed. Said quitclaim deed shall contain the proper legal description of the street, source of title, signature(s) of the owner(s) and be supplied by the petitioner, at the petitioner's expense, to the city for consideration and acceptance.

(C) *City inspection.* No street shall be presented to the city council by petition for acceptance without first being inspected and approved by the city Maintenance Supervisor to ensure that the street in question meets all the applicable standards and guidelines established herein any other applicable statutes, rules and regulations.

(D) *Minimum standards.* Any existing street, street extension or proposed new street (including proposed subdivision streets), shall meet the following minimum standards and specifications of the city, along with the street requirements for subdivisions set forth above, any other applicable statutes, rules and regulations:

(1) Unless otherwise specifically addressed above, the minimum right-of-way width of said street shall be 50 feet.

(2) Unless otherwise specifically addressed above, the minimum driving surface shall be 20 feet in width.

(3) An "existing road" must have had at least a two and one-half-inch base coat of black top capable of supporting traffic and, unless otherwise waived by the City Council, open to the public for at least the past 15 years with no signs of failing blacktop.

(4) If said road is showing signs of failing blacktop, the petitioner may be required to repair any and all failing sections or areas by rebuilding those failing sections or areas to achieve an adequate gravel base, asphalt base, and final surface coat at the discretion of the city Maintenance Supervisor.

(5) Petitioner may be required to hire a licensed engineer to show proof of thickness of asphalt base.

(6) The gravel base shall be compacted to the satisfaction of the city Maintenance Supervisor before asphalt base is applied.

(7) If said street requires any additional asphalt base coat or asphalt riding surface, the city may elect to install same if the petitioner pays the city in advance and within one year of the filing of the petition for all costs of materials.

(8) The street shall be crowned and have a slope of 2% from center.

(9) Unless waived by the city Maintenance Supervisor, shoulders of the street shall be no less than three feet wide and have a slope of 4%.

(10) A cul-de-sac or turn-around large enough to accommodate a school bus or other large equipment will be required on any dead-end street. If a cul-de-sac is used it must have a minimum radius of 30 feet measured at the edge of the blacktop.

(11) No street shall be taken into the city street system unless the city right-of-way is free from all trees, brush and other obstacles.

(12) All cross culverts must be in good condition, properly sized (diameter/length) and substantially free of rust.

(13) Driveway entrance pipes shall be no less than 15 inches in diameter and 24 feet in length. The city Maintenance Supervisor may allow for variations depending on ground conditions.

(14) Unless otherwise waived by the city Maintenance Supervisor, a minimum two-foot ditch, as measured from riding surface, shall be provided along the roadway on each side. All road ditches must lie in the city right-of-way.

(15) No street shall be accepted into the city street system unless the street banks have been stabilized and have adequate ground cover to prevent erosion of soil.

(16) No person, property owner, developer, or builder may construct any object or structure in the city right-of-way.

(17) No island(s) in the middle of a cul-de-sac or street is allowed.

(18) At the discretion of the city Maintenance Supervisor, a right-of-way may be required to be wider at cuts and fills.

(19) The petitioner shall be responsible for payment to the city for the initial installation of any and all required signs and markers, including, but not limited to, stop signs, road signs, road name signs, speed limit signs, and the like.

(20) The proposed street shall not be subject to water ponding for a prolonged period of time.

(21) All culverts must have a clean out every 50 feet.

(22) The city Maintenance Supervisor may allow for variations as deemed reasonable and/or necessary in his or her discretion.

(E) The petitioner shall pay to the city at the time of filing the petition, the fee required in § 155.140 for “applications or determination to be decided by an administrative official.”
(Ord. passed 6-21-93; Am. Ord. 22-07-02, passed 7-18-22)