

Subdivision Regulations

Warren County
Bowling Green
Oakland
Plum Springs
Smiths Grove
Woodburn

May 18, 2023

City-County Planning Commission

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ARTICLE 1

GENERAL PROVISIONS

SECTION 1.1 Title

The full title of these regulations shall be the Subdivision Regulations of Warren County, Kentucky. As a short title, these regulations shall be known and cited as the Subdivision Regulations.

SECTION 1.2 Authority and Administrative Agency

The City-County Planning Commission of Warren County, Kentucky has been empowered to prepare rules and regulations governing the subdivision of land within Warren County and the cities of Bowling Green, Plum Springs, Oakland, Smiths Grove and Woodburn under the authority of Section 100.273 of the Kentucky Revised Statutes. The Planning Commission shall be the administering agency for the Subdivision Regulations. The Planning Commission delegates the power to approve Subdivision Plats to the Executive Director or his designee in accordance with these regulations. (KRS Section 100.281)

SECTION 1.3 Area of Jurisdiction

All persons, firms, or corporations laying out, subdividing, or platting lands within Warren County and the cities of Bowling Green, Plum Springs, Oakland, Smiths Grove and Woodburn shall comply with these Subdivision Regulations.

SECTION 1.4 Purpose

The Subdivision Regulations of Warren County, Kentucky are the adopted rules and regulations relating to the Subdivision of property within all applicable jurisdictions as stated in Section 1.3. These regulations are designed for the following purposes:

- A. To guide the development of aesthetically, and economically stable residential, commercial, and industrial areas;
- B. To provide safe and efficient traffic flow;
- C. To coordinate developments and provide for efficient provision of adequate public services;
- D. To protect environmentally and geologically sensitive areas;
- E. To maximize fire and police protection;
- F. To minimize flooding hazards; and,
- G. To comply with the Comprehensive Plan and the Zoning Ordinance(s) of Warren County, Kentucky in order to promote the public health, safety and general welfare of the citizens of all applicable jurisdictions.

SECTION 1.5 Exceptions

Where it can be shown that there are extraordinary hardships in the way of compliance with these regulations, the City-County Planning Commission shall have the power to waive these regulations if the original intent of the regulations is maintained and no other ordinances of local government are violated. Financial disadvantage to the owner is not proof of hardship within the purpose of this regulation.

SECTION 1.6 Amendments

The City-County Planning Commission may from time to time revise, modify or amend these regulations by appropriate action after a public hearing has been held.

SECTION 1.7 Separability and Previous Regulations

Should any section, subsection, paragraph or provisions of these regulations be held invalid or unenforceable by a court of competent jurisdiction, such decision shall in no way affect the validity of any other provision of these regulations. It is the intention of the City-County Planning Commission to adopt each provision of these regulations separately. Any previous subdivision regulations adopted by the City-County Planning Commission are hereby repealed.

SECTION 1.8 Effective Date

Any subdivision in which the application has been properly submitted and accepted by the Planning Commission on or after the effective date of these Subdivision Regulations shall comply with all provisions herein. Any subdivision that has received Preliminary Plan Approval, or preliminary approval based on the review of a Site Development Plan, prior to the effective date of these Subdivision Regulations shall continue to comply with the previous Subdivision Regulations, and all provisions therein, that were in effect as of the date of the plan approval WITH ONE EXCEPTION: As of the effective date of these Subdivision Regulations, ALL subdivisions with Site Development Plan Approval that have not been completed will be allowed to continue under the previous version of the regulations in which it was approved for the timeframe of the signed construction contract. The Planning Commission Executive Director may give special consideration, which may include a time extension, for large scale projects that have demonstrated continuous construction progress throughout the approval period.

SECTION 1.9 Relationship to Zoning Ordinance and other Ordinances

Plans filed pursuant to these Subdivision Regulations shall be required to comply with applicable Zoning Ordinances or other regulations, rules, ordinances or laws established by all applicable jurisdictions. In case of conflict between this ordinance or any part thereof, and the whole or part of any existing or future ordinance of the applicable jurisdictions or the whole or part of any existing or future private covenants or deeds, the most restrictive shall apply in all cases.



SECTION 1.10 Land Sold in Violation of Subdivision Regulations

When it has been discovered that land has been sold or transferred, or that a contract has been entered into for the sale or transfer of land in violation of the provisions of these regulations, the owner or owners of record shall file plats of the land in accordance with these regulations. When land is sold or transferred, or a contract has been entered into for the sale or transfer of land in violation of these regulations, the land shall be governed by the subdivision regulations both prior to and after the platting of the land by the owner of record as if a plat had been filed in accordance with the provisions of these regulations. Plats filed pursuant to these regulations may be filed by the last transferee in the chain of title including holders of deeds, which may otherwise be void under KRS 100.277(2).

SECTION 1.11 Penalties (KRS 100.991)

- A. Any person or entity who violates any of the provisions of KRS 100.273 to 100.292 or any of these subdivision regulations adopted pursuant thereto for which no other penalty is provided shall, upon conviction, be fined not less than ten dollars (\$10) but not more than five hundred dollars (\$500) for each conviction. Each day of violation shall constitute a separate violation.
- B. Any person, owner or agent who violates these regulations shall, upon conviction, be fined not less than one hundred dollars (\$100) nor more than five hundred dollars (\$500) for each lot or parcel which was subject of sale or transfer, or a contract for sale or transfer.
- C. The Planning Commission may appoint enforcement officers who shall have authority to issue citations for violations of these regulations, which the officer has observed, but shall not have powers of peace officers to make arrests or carry deadly weapons. The defendant shall appear within a designated time pursuant to the citation. The procedure for citations issued by an enforcement officer shall be as provided in KRS 431.015.

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ARTICLE 2

CLASSIFICATION OF SUBDIVISION PLATS

SECTION 2.1 Classification

The Planning Commission Executive Director or his designee shall classify all proposed subdivisions as either a "Subdivision," "Non-Conforming Lot of Record," "Large Tract Plat" or "Conservation Subdivision Plat" as set forth in these regulations.

SECTION 2.2 Subdivision of Land

Before any owner or his agent contracts for the sale of or offers to sell any land or lot within a proposed subdivision, he shall apply to the Planning Commission for the approval of said subdivision. The application for a subdivision shall be accompanied by the necessary prints, maps and/or digital information prepared in accordance with these Subdivision Regulations. Such fees as are established by the Planning Commission shall also accompany the application. Further, no sale of such subdivided land shall be completed until the recording plat of said subdivision shall have been accepted and approved by the Planning Commission or its designee and shall have been recorded in the Warren County Clerk's office. The division of land in parcels of more than twenty (20) acres not creating new improvements shall not require a plat. The platting of large tract plats of at least twenty (20) acres is voluntary. Any tract of land involved in the development of a conservation subdivision shall be required to plat all portions of the proposed subdivision.

No lot shall be created and land subdivided which is determined to contain areas within the Flood Plain District until a verification of the flood plain boundary has been conducted. After review of the flood plain boundary, the Planning Commission staff may request a drainage plan if areas of concern are identified.

SECTION 2.3 Non-Conforming Lots of Record

The Planning Commission Executive Director is vested with the authority to approve the recordation of non-conforming lots of record for information purposes only and shall follow the same procedure as listed in Section 3.1 of these regulations under the following conditions:

- A. The recordation of a plat under this section shall in no manner alter the legal status of a non-conforming lot of record; following recordation of a plat under this section, a non-conforming lot of record contained thereon shall remain a non-conforming lot of record for all purposes.
- B. No additional development of the property described in the plats recorded in this section shall be allowed except as set forth in the Zoning Ordinance.
- C. Under this section, no plat shall be approved which reduces the area or width of any non-conforming lot of record.

D. All plats to be recorded under this section shall contain the following or similar statement conspicuously placed thereon:

NOTICE

This plat is being filed for informational purposes only, and the non-conforming status of the lots shown thereon are not altered. No additional development of this property shall be allowed except as set forth in Article 6 (Non-Conforming Lots of Record) in the Zoning Ordinance as of the date of this recording.

SECTION 2.4 Large Tract Plats

The owner of property consisting of at least twenty (20) acres, where no improvements are being proposed, may voluntarily record a plat of the property for informational and financing purposes. Procedures for the filing of plats are listed in Section 3.1. All plats to be recorded under this section shall contain the following or similar statement conspicuously placed thereon:

LARGE TRACT PLAT NOTICE

This plat is being filed for informational purposes only. The Planning Commission has reviewed this plat solely to determine that the property contains a minimum of twenty (20) acres. All other information contained on this plat is the sole responsibility of the surveyor.

SECTION 2.5 Conservation Subdivision Plat

The owner of property consisting of at least forty (40) contiguous acres that is zoned Agriculture and otherwise meets the requirements of the Zoning Ordinance of Warren County and these regulations may file a conservation subdivision plat. Conservation subdivisions shall follow the same procedure as all plats listed in Section 3.1 of these regulations. Any tract of land involved in the development of a conservation subdivision shall be required to plat all portions of the proposed subdivision, including the portion to be conserved, and designate at least fifty percent (50%) of the land as a conservation area. The conservation area shall remain in a shared ownership agreement in similar fashion as a condominium regime, neighborhood association, or similar entity created at the time of development. After a period of twenty (20) years, the owners of the conservation area may transfer ownership of the conservation area to a third party upon the consent of all of the owners of the development, and a plat shall be filed with the Planning Commission removing the conservation area. All plats to be recorded under this section shall contain the following or similar statement conspicuously placed thereon:

CONSERVATION SUBDIVISION PLAT

This plat is being filed as a Conservation Subdivision Plat. The owner(s) and/or developer(s) stipulate that there shall be no development on the portion of the property listed on the plat as conservation area for a twenty (20) year period from the date of filling this plat. After the twenty (20) year period has expired, ownership of the conservation area may be transferred upon consent of all of the owners.

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ARTICLE 3

PROCEDURES AND REQUIREMENTS

SECTION 3.1 Subdivision Plats

The purpose of this section is to set forth procedures for the preparation, review and approval of subdivisions classified under these regulations.

- A. **PRE-APPLICATION** – Any developer desiring to subdivide property should contact the Planning Commission to discuss compliance with the Zoning Ordinance, Subdivision Regulations and any Development Plan Conditions, fees, requirements and procedures related to the development of the property.
- B. **APPLICATION** – The developer must submit an application for a subdivision. The application shall be in the form as prescribed by the Planning Commission. Fees must be paid at the time of application. The preliminary plat should conform to the content requirements set forth in these regulations.
- C. **NOTIFICATION** – If deficiencies are found in the application, notice will be given to the applicant outlining the deficiencies. Preliminary plats will be posted on the planning commission website at warrenpc.org for five (5) days following the submittal.
- D. **STAFF PRELIMINARY PLAT REVIEW AND ACTION** – The Planning Commission Executive Director or assigned subdivision review staff will review the preliminary lot layout based on the checklist found in Appendix H. The Commission staff shall take one of the following actions on each application:
 - 1. **PRELIMINARY STAFF PLAT APPROVAL** – After the Planning Commission has given preliminary plat approval, one (1) set of the required materials will be returned to the developer along with a written notice of the action, and a land use certificate will be recorded at the County Clerk’s office by the Planning Commission. Preliminary plat approval grants the developer three (3) years to submit construction plans (if required) and the recording plat for all property shown on the preliminary plat layout. If the three (3) year period for filing the recording plat elapses, the developer must resubmit the preliminary plat layout and fees for preliminary plan re-approval. The Planning Commission Executive Director may give a time extension, for projects that have had extenuating circumstances as determined by staff.
 - 2. **CONDITIONAL PRELIMINARY PLAT APPROVAL** – The developer must make all corrections to the preliminary lot layout as requested by the Planning Commission. After corrections are made, preliminary plat approval shall be granted as outlined in item D.1 above.

3. **STAFF DISAPPROVAL** – The preliminary plat is not acceptable. For further action, the developer must make all changes and resubmit the preliminary lot layout.
- E. **PLANNING COMMISSION PLAT REVIEW AND ACTION** – The Planning Commission Executive Director, any citizen or the developer may request a public review and approval by the Planning Commission at one of their regularly scheduled meetings within thirty (30) days of the request.
- F. **PLAT REVIEW, RECORDATION AND ACTION** – The recording plat will be reviewed for compliance with the approved preliminary plan. The plat of record contains such information as is necessary for the public recording and transfer of land including but not limited to required signatures, lot lines, easements, any recorded development plan conditions and other restrictions.

The developer and/or surveyor shall distribute the preliminary lot layout to all required agencies, and will solicit comments on the proposed subdivision containing public infrastructure. The appropriate local government will be determined through approval and recordation of the plat if dedications of any public lands, streets, alleys, etc. would be beneficial to the public interest and suitable future acceptance if constructed to current standards. In subdivisions with public infrastructure, as-built plans shall be required prior to recordation of the final plat. Prior to recordation of the final plat, public infrastructure shall be constructed in accordance with approved plans and be in properly functioning order including, but not limited to the following:

1. An appropriate drivable surface.
2. Finish lot grading where applicable.
3. Properly functioning stormwater and drainage facilities.
4. All rights-of-way, drainage easements shall be stabilized with grass or appropriate ground cover.

The recording plat shall be prepared in accordance with these regulations. The Planning Commission shall record the subdivision plat at the Warren County Clerk's office (which authorizes the property owner or developer to offer lots for sale). A certification of approval shall be stamped on the recording plat and affixed with the signature of the Planning Commission Chairman, or Vice Chairman, and the Executive Director or assigned staff.

3.2 SITE DEVELOPMENT PLANS/CONSTRUCTION PLANS – The developer shall submit construction plans to the Planning Commission for the entire project depicted on the preliminary development plan. All construction plans shall be prepared in accordance with these regulations and any applicable sections of the Zoning Ordinance.

The construction plans consist of a joint agency plan sheet and any other supporting drawings that show the location and general construction details for all public improvements. The plan must contain completed signoff blocks for all affected utilities



(public and private) that will be using easements on the property. The construction plans shall include detailed improvements to be developed within the subdivision, such as streets (private or public), storm drainage, post construction stormwater management, erosion control, gas, sanitary sewers or septic systems, water supply, electrical distribution, telephone, communications and any other public facilities.

All construction sections shall substantially agree with any filed preliminary development plans and shall function within the original concept of the subdivision or a new preliminary approval must be obtained.

- A. **SITE DEVELOPMENT PLAN/CONSTRUCTION PLAN REVIEW AND ACTION** – Plans will be reviewed for compliance with all applicable codes, standards, and requirements. Upon submission of a complete set of plans, the Planning Commission Executive Director or assigned staff shall take one of the following actions on the construction plans within fourteen (14) days:
1. **FINAL APPROVAL** – The developer is permitted to proceed with the construction process after complying with items B, C, D and E (listed below).
 2. **CONDITIONAL FINAL APPROVAL** – The developer must make all corrections to the construction plans as requested by the Planning Commission Executive Director or assigned staff. After corrections are made then final approval to proceed shall be granted as outlined above.
 3. **DISAPPROVAL** – The construction plans are not acceptable. For further action, the developer must make all changes and resubmit the construction plans.
- B. **PRE-CONSTRUCTION CONFERENCE** – After Comprehensive Development Review approval (if required), construction plan approval and receipt of a Notice of Coverage (NOC) from the Kentucky Division of Water, the developer and his contractor shall be required to schedule and attend a mandatory pre-construction conference with the Planning Commission. The developer or contractor shall be prepared to outline all proposed construction operations and procedures as presented in the construction plans. If the construction plans were given conditional final approval, the developer must show that the conditions have been met. The developer will be informed of other regulations applicable to the proposed subdivision. An appropriate bond or surety must be posted prior to the Pre-Construction Conference.
- C. **NOTICE TO PROCEED** – After attending the required pre-construction conference, the developer is permitted to proceed with the construction process

after complying with items D and E (listed below) and receiving a "Notice to Proceed" from the Planning Commission.

- D. **CONTRACT** – The contract, signed by the developer and property owner, shall specify a surety in an amount that will be sufficient to pay the entire cost of installing the public improvements set forth in the construction plans and related documents as determined by the Planning Commission. All required Planning Commission construction review fees shall be paid at the time of the Pre-Construction Conference.
- E. **ACCEPTABLE SURETIES** – To secure the proper completion of all public improvements shown on the approved construction plans, the developer shall provide, subject to the approval of the Planning Commission, one of the following sureties in an amount equal to the cost of the public improvements plus ten percent (10%), as set forth in the construction contract and in compliance with the Bonding Policy set forth in Appendix G.
1. **CORPORATE SURETY BOND (PERFORMANCE BOND)** – If the developer chooses to provide a corporate surety bond, then it shall be from an insurance company authorized to do business in the Commonwealth of Kentucky. The bond shall be in the form of a payment and performance bond satisfactory to the Planning Commission. If the developer has employed a contractor to construct all improvements as provided herein, the Planning Commission may accept the payment and performance bond of such contractor as surety for the performance of the construction contract and shall require the construction contractor to sign the construction contract as a co-developer.
 - A. The corporate surety bond shall provide the Planning Commission as a named obligee. The bond should clearly establish that it acts as a surety for the construction contract, signed by the developer or property owner. The corporate surety bond shall state that the amount is equivalent to the construction project estimate. The corporate surety bond shall also state that upon the failure by the developer to complete the improvements within the required time period, the insurance company shall pay the Planning Commission, immediately, and without further action, such funds as are represented, in the corporate surety bond. The original corporate surety bond will be for a three (3) year period to coincide with the dates of the construction contract and shall continue through any approved extensions until the bond is released by the Planning Commission. The Planning Commission will provide one (1), non-certified notice of intent to call the corporate surety bond to the developer and to the insurance company which issued the corporate surety bond. Any corporate surety bond which has not been released, nor had documentation submitted for an extension prior to the morning of the expiration date of the construction contract, shall be called and converted to a cash surety in the amount of the Planning Commission

staff's estimate of the remaining work to be completed or twenty percent (20%) of the initial construction bond estimate, whichever is greater.

- B. The performance bond shall contain a provision stating the bond may not be revoked except upon written notice by the Planning Commission. The expiration date, if the bond is revoked, shall be at least thirty (30) days after receipt of the notice from the Planning Commission. It shall be understood and agreed, however, that the maker of the performance bond will be liable for any and all unpaid bills up to the amount of the performance bond accruing up to the expiration date thereof, and a provision stating such shall be set forth in the performance bond.
 - C. All performance bonds shall be drafted that the only requirement for the Planning Commission to draw upon such bond is to notify the financial institution that the applicant/developer/owner has failed to complete construction of their project in accordance with the approved construction contract, subdivision plans and these rules and regulations. The Planning Commission shall have the right, at its discretion, and upon fourteen (14) days' notice to the subdivider, to draw any amount necessary to complete the project up to the remaining balance. The amount drawn, which may be more than required to complete the project, will be held in a segregated account until the work can be bid competitively and awarded and paid for or until the contract for the work is otherwise let and paid for or until the contract for the work is otherwise let and paid for. In no instance shall the Planning Commission or local government agency incur any liability for repayment of these funds. Any excess over the cost of completing the work will be returned to the grantor. Release of the funds will be made only with the prior written consent of the Planning Commission and in consultation with the local governing body.
 - D. The performance bond shall contain a provision that requires, in the event of a change to the bond, thirty (30) days written notice prior to the change taking effect.
- 2. **CASH SURETY** – If the developer chooses to provide a cash surety, then cash shall be deposited in a separate subdivision surety account of the Planning Commission. The cash surety shall be used by the Planning Commission to pay for the timely and satisfactory completion of all public improvements called for in the subdivision or shall be refunded to the developer if he satisfactorily completes the project.
 - 3. **LETTER OF CREDIT** – The Planning Commission will accept the posting of an approved letter of credit as surety for the timely and satisfactory completion of public improvements in a subdivision in order that the subdivision may be

recorded in an expeditious manner. The developer may provide, as surety for the performance of the contract, a letter of credit from a financial institution acceptable to the Planning Commission. The letter of credit shall be delivered in a form acceptable to the Planning Commission. The letter of credit shall state that the amount is equivalent to the construction project estimate. The letter of credit shall also state that upon the failure by the developer to complete the improvements within the required time period, the financial institution shall pay the Planning Commission, immediately and without further action, such funds as are represented in the letter of credit. The original letter of credit will be for a one (1) year period. Extensions of up to two years may be granted to coincide with the dates in the construction contract.

The Planning Commission will provide one (1), non-certified Notice of Coverage (NOC) to call the letter of credit to the developer and to the institution which issued the letter of credit. Any letter of credit which has not been released nor had an approved extension prior to the morning of the expiration date shall be called and converted to a cash surety in the amount of the Planning Commission staff's estimate of the remaining work to be completed or twenty percent (20%) of the initial construction bond estimate, whichever is greater. The developer or the institution must submit the new letter of credit to the Planning Commission by 4:00 p.m. on the last working day at least one (1) week prior to the expiration date on the face of the original letter.

F. REDUCTION OF CONTRACT SURETIES – The developer may request a reduction of the surety. If progress has been made on the completion of improvements, the Planning Commission Executive Director or assigned staff may at his sole discretion authorize the reduction of the surety. The construction must be completed as provided in the construction contract and the Subdivision Regulations and in a manner satisfactory to the Planning Commission. The following conditions must be satisfied for contract surety reduction:

- 1. MINIMUM AMOUNT OF SURETY** – No surety shall be for an amount less than ten thousand dollars (\$10,000.00) or twenty percent (20%) of the original construction bond estimate, whichever is greater.
- 2. VERBAL OR WRITTEN REQUEST** – The Planning Commission shall require a request for a reduction. The request must include certification from Planning Commission staff that the detailed improvements have been completed, and for which the reduction of the contract surety is requested, in accordance with the approved subdivision plan specifications.
- 3. DETERMINATION OF SURETY REDUCTION** – If the Planning Commission staff authorizes the reduction of the amount of the contract surety, the reduction shall be based upon the following formula: $\text{New or Revised Bond Amount} = \text{Total Value of Uncompleted Work} + \text{Ten Percent (10\%)}$. Under no circumstances shall the total amount of any reduction approved by the Planning Commission reduce the contract surety to an amount below twenty percent

(20%) of the initial construction bond estimate (bonded amount set forth in the construction contract).

4. **PROJECTS IN DEFAULT** – If the improvements are not completed within three (3) years from the date of the signed and executed construction contract as provided in this Article, said contract shall be in default and shall not be eligible to be reduced. Once a project is deemed in default, any remaining Letter of Credit or Corporate Surety must be converted to a cash surety unless and extension is granted. Inspection fees may be re-assessed for projects in default based on all or a portion of the original contract.

G. **DEFAULT / COMPLETION OF PUBLIC IMPROVEMENTS** – As provided for in this Article, if the improvements are not completed within three (3) years from the date of the signed and executed construction contract, including any approved extensions, the development shall be in default. Within one hundred twenty (120) days of default, the Planning Commission may proceed with actions against the developer and its surety for performance unless another course of action is approved. Any project in default may not start a new phase of construction without first correcting the deficiencies in the defaulted phases and be recommended for approval of acceptance by the local government.

H. **ACCEPTANCE AND MAINTENANCE OF IMPROVEMENTS** – Any street or other public land dedicated by plat shall be accepted for maintenance by the appropriate legislative body after it has received approval by the Planning Commission and formally adopted for acceptance by the legislative body. Any street built in accordance with specific standards set forth in these regulations or by ordinance shall only be accepted for maintenance by the appropriate legislative body after inspection, final approval, submission of “as-built” plans and adoption of an ordinance to accept public improvements.

Sidewalks or other improvements not completed at the time of acceptance may be allowed at the discretion of the appropriate public agency. These items will be considered part of a conditional acceptance and a separate cash surety will be required prior to release of the original surety/bond and construction contract. The amount and terms of the contract and the conditions will be determined prior to acceptance and release of the original surety and contract.

I. **WARRANTY** – As a material part of the developer’s duty to construct in accordance with the plat, plans and specifications, as set forth above, the developer shall warranty that the work performed and the products installed under these regulations, have been performed in a good and workmanlike manner and are free from defects. The minimum warranty period shall be twenty-four (24) months starting at the time of acceptance by the appropriate legislative body. In the event the developer(s) breaches their warranty, the appropriate legislative body shall be entitled to recover its damages and costs, including reasonable attorney’s fees.



- J. **RELEASE** – Upon completion of the improvements as provided in these regulations, the Planning Commission shall terminate the construction contract and release its surety.

ARTICLE 4

CONTENT REQUIREMENTS FOR SUBDIVISION PLATS

SECTION 4.1 PURPOSE

The purpose of this Article is to describe the minimum required content of subdivision plats.

SECTION 4.2 PLAT REQUIREMENTS

The plat for any subdivision shall meet the following requirements for approval:

- A. **AUTHORIZATION TO PREPARE PLANS** – Preliminary plats shall be prepared by a Kentucky licensed Professional Land Surveyor. The division of work to be performed by each surveyor shall be governed by state statutes and regulations, which regulate the profession including 201 KAR 18:150.
- B. **SURVEYING AND MONUMENTATION STANDARDS** – The subdivision must be surveyed meeting KAR property survey requirements. The following monument standards shall be applicable to all subdivision plats:
 - 1. Type – Monuments shall comply with 201 KAR 18.150 as a minimum. Monuments should be a minimum of an eighteen (18) inch long ferrous iron pin.
 - 2. Location of Monuments and Markers – Monuments and markers shall be placed so as to coincide with the intersections of the lot or property line in the following general locations: at the intersection of all angles in the boundary line of the survey, at the intersection of street property lines and at the beginning and ending of all curves in streets and alleys and at all points where lot lines intersect such curves. All monuments and markers shall meet the Kentucky minimum standards.
 - 3. Control Monuments – At a minimum, two (2) permanent control monuments shall be placed within each subdivision that requires any street improvements and within each subdivision more than four (4) lots. Such monuments shall have horizontal coordinates and vertical elevation shown on the recording plat. The monument should be placed to third order accuracy or better using the North American Datum Kentucky Single Zone or Kentucky South Zone 1983 (NAD 83) for horizontal control and National Geodetic Vertical Datum of 1988 (NGVD 88) for vertical control. Monuments shall be located within the right-of-way in protected locations approved by the Planning Commission. The plat shall show the accurate location, description and material of all permanent control monuments.



- C. **NUMBER AND TYPE OF COPIES** – Each application for the approval of subdivision shall be accompanied by the following, depending on type of subdivision:
1. Major Subdivision
 - a. Preliminary Plat – Two (2) 18" X 24" drawings and two (2) 8-1/2" x 11" or 11" X 17" drawings and one digital copy in .pdf format.
 - b. Recording Plat – The recording plat shall be on 18" X 24" mylar material along with a digital copy (see Section 4.2.O for electronic submittal requirements). Obtaining signatures is the responsibility of the owner or surveyor.
 2. Minor Subdivision
 - a. Preliminary Plat – Two (2) copies of 8-1/2" x 14" drawings and one digital copy in .pdf format.
 - b. Recording Plat – One (1) recording copy of 8-1/2" x 14" drawing submitted on linen bond paper and one (1) digital copy (see Section 4.2.O for electronic submittal requirements).
 3. The scale of these lot layouts shall be one hundred (100) feet to the inch or less. A larger scale may be approved in consultation with Planning Commission staff in instances where large tracts of land or other special circumstances exist.
- D. **TITLE BLOCK** – The title block shall contain the name of the subdivision; the date and scale; the names and addresses of the owner(s); name, address and phone number of the person or firm preparing the plans; and any other appropriate information.
- E. **VICINITY MAP** – The vicinity map shall show the area sufficient to locate the subdivision in all directions. The vicinity map shall be at an appropriate scale and have clearly legible roads and labels that can be clearly read upon copying.
- F. **LOTING SCHEME** – The lotting scheme shall be drawn one hundred (100) feet or less to the inch with north oriented to the top of the sheet, if possible, or at another scale and/or orientation that permits clear and legible presentation of the following information.
1. **Bearings and Distances** – The plat shall show the true bearings and distances to the nearest existing monument of the state plane coordinates (Kentucky Single or Kentucky South zoned NAD 1983, feet) and National Geodetic Vertical Datum of 1988 (NGVD 88) for horizontal and vertical control. The type of monumentation shall be accurately described on the plat.

2. **Boundary Lines** – The plat shall show the names of adjacent property owner(s) or lot number(s) and plat book and page number(s) and the footprint of all existing building(s). The plat also shall have all corners marked and show the calls and distances.
3. **Streets** – The plat shall show the right-of-way and pavement width of existing or proposed streets or roads and the locating distance to nearest centerline of streets, roads or railroads. See Section 6.5 for street design standards and street naming regulations.
4. **Lot Numbering** – The plat shall show the address of lot(s), if applicable, the lot number(s), each building setback line, square footage or acreage of lot(s) and total acreage. The lot number(s) shall be shown in a systematic order.
5. **Setbacks** – The plat shall show each building setback line on all sides, square footage or acreage of lot(s) and total acreage. The lot number(s) shall be shown in a systematic order.
6. **Easements** – The plat shall show the size and location and bearings and distances of cross-hatched drainage easements. All other easements shall be shown and clearly labeled as to their width and purpose. Minimum finish floor elevations (FFE) of proposed structures and the 100 year flood elevation shall be identified.
7. **Utilities and Utility Easements** – The plat shall show all existing and proposed utilities across or adjacent to the subdivision including but not limited to: gas lines, communication lines, electric lines, water lines including hydrants, sanitary sewer lines, and storm water lines.
8. **North Arrow** – The plat shall show the north arrow.
9. **Other Required Information** – The plat shall also show the following miscellaneous information if applicable:
 - a. Location of any cemeteries
 - b. Existing zoning designation
 - c. Flood hazard information and/or certification
 - d. Non-conforming structures and/or lots of record per Article 6 of the Zoning Ordinance
 - e. Any informational or restrictive notes numbered in sequential order and grouped together as one list

G. **LOT AND BLOCK STANDARDS** – The following standards for lots and blocks shall be the minimum required by the Planning Commission:

1. **Block Standards** – In general, intersecting streets that determine block length shall be provided at such intervals as necessary to meet existing street patterns, topography and requirements for safe and convenient vehicular and pedestrian circulation. A residential block should conform to the following dimensions:

- a. Guide Length: Minimum five hundred (500) linear feet to maximum fourteen hundred (1,400) linear feet
- b. Guide Width: Minimum two hundred (200) linear feet

Subdivision layout shall be as necessary for the prospective use, including adequate provision for off-street parking, truck loading and unloading, buffer areas, pedestrian movements, proper vehicular access to adjacent streets and cemetery access if located on the property.

2. **Lot Shape** – Pointed or very irregular shaped lots should be avoided where possible. Depth and width dimensions shall be taken perpendicular to each other.

- a. Maximum Depth to Width Ratio: 2.5 to 1 (ex. two hundred fifty feet (250') deep to one hundred feet (100') wide).
- b. Unacceptable Ratio for twenty (20) acres or less: 10 to 1 (ex. one thousand feet (1,000') deep to one hundred feet (100') wide).

3. **Narrow Border Strips** – Narrow border strips shall be prohibited. No lot shall be configured for the sole purpose of preventing access to public ROW from adjacent landowners.

4. **Lot Frontage and Access** – Minimum lot frontage and access standards are set forth in the Zoning Ordinance/Resolution as well as City ordinances.

5. **Lot Lines** – Lot lines should generally be at right angles to straight street centerlines and radial to curved street centerlines. Rear of lines should consist of straight-line segments with a minimum number of deflections.

6. **Lot Area and Minimum Building Setback Lines** – Lots for residential or non-residential use shall meet the minimum standards required by the Zoning Ordinance.

7. **Land Remnants** – If remnants of land exist after subdividing and have no apparent future use that can be properly controlled, they shall be incorporated into the proposed lotting scheme.



- H. **STREET ADDRESSES** – Street address numbers shall be assigned to each lot by the designated official addressing agency to provide a separate and distinct address for each lot. Street addresses may be available to the public after the plat is recorded.
- I. **RECORDATION INFORMATION** – The plat shall show the previous recording (book and page number(s)), if applicable, the source of title (deed book and page number), and any recorded development plan conditions formerly known as binding elements (book and page number).
- J. **SURVEYOR’S STAMP/SIGNATURE** – The plat shall show the surveyor’s stamp and signature.
- K. **PRIVATE RESTRICTIONS** – The plat shall show all private restrictions placed on the land.
1. Private/Deed – Referred to and included in the deed at the time of sale or transfer of the property, or a restriction placed on a piece of property without a plat.
 2. Plat Note – Refer to restrictions placed on a particular plat of land voluntarily by the owner and/or developer.
 3. Development Plan Conditions or Binding Elements – Refer to adopted land use restrictions that are agreed upon at the time of a zone change.
- L. **OPEN SPACE/COMMON RECREATIONAL SPACE/OPTIONAL PUBLIC PARK LAND** – The plat shall show all areas of land intended to be dedicated to open space, common recreational space or optional public park land use within the subdivision.
1. Open Space (OS) Requirements:
 - a. OS shall be defined as the area of a lot open and unobstructed to the sky.
 - b. OS may include, along with natural environmental elements, formal landscaped areas, wooded areas, greenways trails, watercourses swimming pools, tennis courts, playgrounds, Common Open Space and Common Recreational Space.
 - c. OS shall not be deemed to include driveways, travelways, parking lots, or storage areas for vehicles.
 - d. OS is to be maintained by the lot owner or owner’s association.
 - e. Property located in buffer strips and/or public right-of-way (excluding a designated greenway) does not qualify as Open Space.

2. Common Open Space (COS):



- a. COS shall be defined as the area of a subdivision open and unobstructed to the sky which is legally accessible to and useable by all residents of the development.
 - b. COS shall be constructed or developed by the developer.
 - c. COS shall be maintained by the developer until at least fifty percent (50%) of the lots of the subdivision have been sold and developed. The developer shall have the option, at the time, of transferring ownership of the COS to either the local municipality or governing body, or a properly constituted Homeowners Association acceptable to the Planning Commission. Only after the local government or homeowners association voluntarily agree to take possession of the COS area through a transfer of deed, will the developer's responsibility for maintenance any payment of utilities be terminated.
 - d. Any metered utilities, such as electric and water, serving the COS will be paid for by the owner of the COS.
 - e. Property located in buffer strips and/or public right-of-way (excluding a designated greenway) does not qualify as COS.
3. Common Recreational Space (CRS) – Residential developments or subdivisions where the density of the development or subdivision exceeds six (6) units per acre, the developer is encouraged to provide three percent (3%) of the total land area as Common Recreational Space. Common recreational space may include but not be limited to wooded areas, watercourses, greenway trails and recreational facilities (i.e. community gathering spaces, swimming pools, golf courses, playgrounds, soccer practice fields or picnic or passive play areas).
- a. CRS shall be defined as the area of a subdivision open and unobstructed to the sky which is legally accessible to and usable by all residents of the development.
 - b. CRS shall be constructed or developed by the developer.
 - c. CRS shall be maintained by the developer until at least fifty percent (50%) of the lots of the proposed subdivision has been developed and sold. The developer shall have the option, at that time, of transferring ownership of the CRS to either the local municipality or governing body, or a properly constituted homeowners association acceptable to the Planning Commission. Only after the local government or homeowners association voluntarily agree to take possession of the CRS area through a transfer of deed will the developer's responsibility for maintenance be terminated.
 - d. Any metered utilities, such as electric and water serving the CRS, will be paid for by the owner of the CRS.
4. OPTIONAL PUBLIC PARK LAND (PP) REQUIREMENTS – Instead of satisfying the standard three percent (3%) common open space requirement, all

residential subdivisions or developments shall have the option of dedicating a land area as "Public Park Land" (PP) within the subdivision. All PP must be shown on the preliminary lot layout and recording plat.

- a. PP shall be defined as the area of a subdivision open and unobstructed to the sky and which is owned by the local municipality or government and is legally accessible to all citizens of Warren County.
- b. PP may include, along with natural environmental elements, formal landscaped areas, wooded areas, watercourses, greenway trails and recreational facilities such as public swimming pools, public golf courses, playgrounds or picnic and passive play areas.
- c. All proposed PP dedications shall be reviewed by the appropriate local government and the Planning Commission for acceptance.

M. **FLOODPLAIN INFORMATION** – The plat shall show the floodplain areas clearly labeled, and where available, the actual computed high water elevation of the regulatory flood with the source of that information. Proposed finish floor elevations of structures shall be noted.

N. **MAINTENANCE NOTE** – The plat shall include a note that notifies potential lot purchasers of their responsibilities for maintaining drainage and other easement areas.

1. The property owner(s) or homeowners association shall be responsible for maintenance of any portion of a drainage easement that is on their property. This maintenance shall be defined as maintaining a substantial stand of grass, to a height no greater than ten (10) inches, repairing eroded areas and removing debris from inlet structures. The property owner or homeowners association is also responsible for maintenance of any drainage infrastructure (not accepted by the local government) contained within this easement.
2. Maintenance of "interpretative" items including but not limited to landscaping on right-of-way, islands, medians, entryways, subdivision signs, traffic control features, traffic circles, roundabouts shall not be the responsibility of the appropriate local government.

O. **CERTIFICATIONS** – The following certifications shall be placed on the plat and shall be properly signed and executed:

1. **LAND SURVEYOR'S CERTIFICATION** – Shall be as follows or similar language:



I hereby certify that this plat represents a boundary survey, made by me, or under my direction, by methods that meet or exceed standards in 201 KAR 18:150. The bearings and distances shown hereon [have been adjusted for closure] OR [have not been adjusted for closure]. This survey and plat meets or exceeds the minimum standards of governing authorities.

(Signature of Land Surveyor, Professional Land Surveyor Number, and Date)

2. **CERTIFICATE OF OWNERSHIP, ACCESS, EASEMENT AND DEDICATION** – Shall be as follows or similar language:

a. For plats with dedicated public infrastructure:

I hereby certify that I am owner of the property shown and described hereon and that I hereby adopt this plan of subdivision with my free consent, establish the minimum building restriction lines and dedicate all streets, alleys, walks, parks and other open spaces to public or private use as noted. The spaces outlined by dashed lines and designated as easements are hereby reserved for the purposes shown, including the right of ingress and egress over all lots to and from the easements and the right to cut down or trim any trees within or without the easements that may interfere with the installation or operation of the lines. The easements shall be kept free of all permanent obstructions. All drainage easements are dedicated for City/County access and storm water management and are hereby established by recordation of this plat. All drainage shall be maintained by the respective owner(s) of the lot(s) over which said easements cross and no drainage easements shall be altered in any way by filling, changing the contour thereof or by building any structure thereon (including fencing), except upon prior written approval of the appropriate governmental authority. This restriction may be enforced by any owner of any lot affected by the drainage over said easement, or by the City, County, Planning Commission or appropriate governmental authority.

(Signature of Owner(s) and Date)

b. For plats with private streets and infrastructure shall have such streets so labeled and shall contain the following signed certification by the owner:



Future Acceptance by Government:

The owners of this property and any successors in title hereby agree to assume full liability and responsibility for any construction, maintenance, reconstruction, snow removal, cleaning or other needs related to the private streets so designed on this plat, and do hereby fully relieve the local government from any such responsibility. In the future should the owners request that the private streets be changed to public streets, the owners do fully agree that, before acceptance of such streets by the local government, the owners will bear full expense of reconstruction or any other action necessary to make the streets fully conform to the requirements applicable at that time for public street prior to dedication and acceptance. The owners also agree that these streets shall be dedicated to public use without compensation to the owners and without the owner's expense in making such streets conform to the requirements applicable at that time for public streets, if at some future date, the local government agency so requests.

Government and Utility Access:

The owners of this property hereby agree to grant full rights of access to this property over the designated street, utility, and other easements for governmental and utility agencies to perform their normal responsibilities. All public utility easements are shown on this plat. All public utility easements shall be maintained by the respective owner(s) of the infrastructure over which said easements cross and no easements shall be altered in any way, except upon prior written approval of the appropriate governmental authority.

(Signature of Owner(s) and Date).

MAINTENANCE RESPONSIBILITY – A homeowner's association or other mechanism which provides for equitable common responsibility for private street maintenance and repair shall be required to be established by the developer. The developer's responsibility to create such a mechanism shall be noted on the recording plat of the subdivision. A requirement that each property owner be individually responsible for maintenance and repair of the portion of the street abutting the lot shall not be considered as acceptable for fulfilling the requirements of this section.

- 3. **PUBLIC WORKS/STATE HIGHWAY CERTIFICATION** – Shall be as follows:



I hereby certify that this plat has been reviewed and found to be in conformance with City / County standards. Grading, storm water, and erosion control within the developed area shall be performed in such a manner that complies with an approved site development plan and regulations of the City, County, and State. The same authority certifies that the property has public access to a City or County, or State road, but grants the right to make final access approval at the time of an access permit application.

(City or County Authorized Signature and Date).

STATE OF KENTUCKY DEPARTMENT OF TRANSPORTATION, BUREAU OF HIGHWAYS

Access to Highway _____ will require a permit from the Department of Highways. Lots shown on this plat that abut Highway _____ may be granted access to Highway _____ within the permitted access envelop, provided all conditions and requirements of the Departments Permits Policy Manual, in addition to the City-County Planning Commission Requirements are met. Lot Owners shall contact the Permits Engineer with the Department of Highways at the District #3 Office in Bowling Green at (270) 746-7898.

(KYTC Authorized Signature and Date)

4. **PUBLIC UTILITY CERTIFICATION** – A representative of the applicable public utility company must sign and date the Plat. These public utilities shall include applicable providers of water, sewer, electrical, gas and telecommunications. Utilities may require specific language for signature blocks.

5. **BARREN RIVER DISTRICT HEALTH DEPARTMENT** – A representative of the Barren River District Health Department will certify the following:



BARREN RIVER DISTRICT HEALTH DEPARTMENT

1109 State Street

Onsite sewage disposal system to any proposed residence or other building shall be installed pursuant to the Kentucky onsite sewage disposal system regulations. 902 KAR 10:081 and 902 KAR 10:085, and each individual lot shall stand on its own merit as to approval or disapproval. Sanitary sewer availability may require connection per the local agencies and zoning ordinance.

(Health Department Environmentalist Signature and Date)

6. **FIRE DEPARTMENT CERTIFICATION** – Shall be as follows or similar language:

FIRE DEPARTMENT

I hereby certify the Fire Department has reviewed and approved this plat based on the requirements of the Fire Prevention Ordinance for Water Line(s), Fire Mains, Fire Hydrant(s) and Emergency Access for Fire Apparatus.

(Fire Official Signature and Date)

7. **BUILDING CODE OFFICIAL HORIZONTAL PROPERTY (CONDO) SUBDIVISION CERTIFICATION** – Shall be as follows or similar language:

BUILDING CODE OFFICIAL

I hereby certify that this plat has been reviewed and approved based on the applicable local building code requirements.

(Building Code Official Signature and Date)

8. **CERTIFICATE OF APPROVAL OF RECORDING** – The Planning Commission Chairman and Executive Director shall certify as follows:

I hereby certify that the subdivision plat shown hereon has been found to comply with the Subdivision Regulations of the City-County Planning Commission of Warren County, Kentucky, and that it has been approved for recording in the office of the County Clerk.

(Date, Chairman/Executive Director's signatures).

- P. **ELECTRONIC SUBMITTAL** – In an effort to improve efficiency in review and documentation, the Planning Commission may require an electronic submittal of the final recording plat information. The submittal shall be in a standard CADD format such as AutoCAD (*.DWG) or file format capable of being read by AutoCAD. The submittal shall include the following information on the recording plat as outlined in items A through O above.

SECTION 4.3 HORIZONTAL PROPERTY

- A. **PURPOSE** – The purpose, intent and application of this article is to implement and reaffirm the Horizontal Property Law of Kentucky and to encourage a variety and flexibility in land development and land use for mostly residential areas consistent with the Zoning Ordinance of Warren County, Kentucky; and to provide a framework within which an effective relationship of residential land use and related activities can be planned on a total basis.
- B. **GENERAL PROVISIONS** – All projects shall be subject to all other applicable sections of these regulations in addition to the following:
1. **ZONING COMPLIANCE** – All projects whether referred to as horizontal properties or condominium properties shall be in accord with the Zoning Ordinance of Warren County, Kentucky, and the elements thereof.
 2. **BUILDING CODE COMPLIANCE** – All projects whether referred to as horizontal properties or condominium properties or construction plans shall be in accord with all adopted local building codes prior to recordation.
 3. **MASTER DEED / LEASE** – A master deed or lease that sets forth the particulars enumerated by KRS 381.835 shall not be recorded and established as a Horizontal Property regime without having first been reviewed and approved by the Planning Commission, including floor plans meeting the standards set forth in KRS 381.835(5). The maximum



permitted overall densities and floor area ratios and the minimum outdoor area, living space and recreation area ratios shall be controlled by the zoning district classification in which the project is located.

4. **PERMITTED USES** – The permitted uses will be controlled by the zoning district classification in which the project is located.

- C. **ADMINISTRATIVE PROCEDURE** – The establishment, expansion or diminution of a horizontal property regime shall be subject to review and approval by the Planning Commission. The review shall be in the same manner as set forth in the Zoning Ordinance and any approved development plan as approved or recorded by the Planning Commission.

- D. **CONFLICTS WITH OTHER SECTIONS OF REGULATIONS** – In a case where this Article conflicts with any other provision of the Subdivision Regulations, the provisions of this Article shall take precedence and shall be the controlling provision.

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ARTICLE 5

CONTENT REQUIREMENTS FOR SUBDIVISION PLANS

SECTION 5.1 PURPOSE

The purpose of this article is to set forth the basic and minimum design and improvement standards required as a prerequisite for development or in conjunction with lot, street, utility and/or other physical development in the subdivision. The developer may exceed the standards set forth in these regulations, or in some cases, be required to exceed the standards.

SECTION 5.2 DRAINAGE PLAN REQUIREMENTS

Prior to the submission of a drainage plan for review, a preliminary design meeting with the developer, engineer, and a representative from the City or County Public Works Department may be required. The purpose of this conference is to discuss existing drainage patterns in the area, determine the overall scope of the drainage plan, and decide on the methodology to be used in order to ensure compliance with the Subdivision Regulations.

- A. **AUTHORIZATION TO PREPARE PLANS** – Drainage plans shall be prepared by a licensed Professional Engineer or, to a limited degree, an Architect or Landscape Architect. The division of work to be performed by each profession shall be governed by state statutes and regulations, which regulate each profession.
- B. **NUMBER AND TYPE OF COPIES** – Each application for the approval of subdivision shall be accompanied by two (2) stamped sets of the drainage plan and/or a equivalent official digital copy. The scale of drawings included shall be one hundred (100) feet to the inch or less. A larger scale may be approved in consultation with Planning Commission staff in instances where large tracts of land or other special circumstances exist.
- C. **OTHER PERTINENT INFORMATION** – A drainage plan for all developments shall comply with federal, state and local laws including:
 - 1. Warren County Fiscal Court Ordinances and Resolutions;
 - 2. City of Bowling Green Code of Ordinances;
 - 3. Storm Water Management Manual, City of Bowling Green Storm Water Master Plan and Storm Water Criteria published by the Warren County or Bowling Green City Engineer or Public Works Department in the applicable jurisdiction;



4. Subdivision Regulations of Warren County, Kentucky, as from time to time amended;
5. Kentucky Building Code, as from time to time amended;
6. Kentucky Revised Statutes, Chapter 151, Geology and Water Resources; and,
7. Federal Flood Disaster Protection Act of 1963, as from time to time amended.

D. DRAINAGE PLAN ELEMENTS – A drainage plan should include the following elements:

1. Contours of the project at a minimum one (1) foot interval, including the source of the data.
2. Street horizontal and vertical alignment and street names.
3. Typical street cross-sections, including street paving, pavement drainage, rights-of-way data and proposed slopes.
4. Lot pattern with lot numbers.
5. Location of all drainage structures including stationing when connected to roadway structures or right-of-way or numbered in a logical pattern when not connected with the roadway.
6. All culverts will be terminated with headwalls, if required. Top of headwalls adjacent to the roadway shall not be higher than the roadway elevation. Where culverts exist on lot lines between dwellings, necessary easements and a culvert extending beyond the rear of the dwelling shall be shown, if required.
7. Statement of the criteria used in the drainage design, including the following:
 - a. Rate of precipitation
 - b. Formulas used in sizing drainage structures
 - c. All constants or factors involved
8. Size, invert elevations and percent of grade of all storm drains, catch basins and inlets, and indicate the pipe materials used.
9. Location of easements for access to drainage structures and details of access for maintenance of structures.

10. Total drainage area contributing to each drainage pipe, including off-site area.
11. Design and velocity of drainage ditches and method of erosion control to be used on banks and bottoms.
12. Address potential for surcharge from on-site and off-site areas. Note relation of the on-site area to potential recharge areas.
13. Maximum flood stage elevations on any stream flowing through or adjacent to the property, or whose proximity may affect drainage or access to the property.
14. Establish minimum finished floor elevations (FFE) on all building lots on plans with public improvements. Special consideration will be made in calculating the minimum FFE in relationship to utility requirements, site characteristics and 3-hour 100-year flood levels. For building lots adjacent to drainage basins or easements, minimum FFE shall be set at two feet (2') above the high water elevation of the basin or easement. Elevations shall be based on National Geodetic Vertical Datum of 1988 (NGVD 88).
15. All other required items listed in Section 6.4 – Drainage Standards.

SECTION 5.3 TRAFFIC IMPACT STUDY – Development thresholds requiring the submission of a Traffic Impact Study (TIS) are outlined in Article 3 of the Zoning Ordinance. Any development requiring the submission of a TIS shall illustrate the effect of the proposed project on the surrounding roadways and intersections. Such effect shall be measured against the existing level of service standard and circulation patterns for the roadways affected by the impact of the proposed development. TIS submissions shall meet all applicable criteria as established by the State/City/County roads impacted by the development.

Improvements in lieu of a TIS may considered upon consultation with Planning Commission staff and the appropriate agencies including but not limited to the Kentucky Transportation Cabinet (KYTC) and the appropriate local Public Works Department(s). Any improvements requested by these agencies in lieu of a TIS must be provided to the Planning Commission staff in an official written or electronic form prior to plan approval. Should any of the aforementioned agencies require a TIS, then the study must be submitted prior to plan approval or application for rezoning.

- A. **AUTHORIZATION TO PREPARE PLANS** – Traffic impact studies shall be prepared only by a Kentucky licensed Professional Engineer also certified as a Professional Traffic Operations Engineer (PTOE).
- B. **NUMBER AND TYPE OF COPIES** – Each application for the approval of Subdivision shall be accompanied by one (1) digital copy of the traffic impact study.



- C. **SUBMISSION AND REVIEW PROCEDURES FOR TRAFFIC IMPACT STUDY (TIS)** – The TIS requirements for subdivisions within the City of Bowling Green shall correspond to *City of Bowling Green’s Traffic Management Manual*.

The TIS for subdivisions outside the City of Bowling Green shall correspond to the following guidelines.

1. A preliminary trip generation assessment of proposed development should be conducted to determine if a traffic analysis will be required. If the preliminary assessment indicates that a traffic analysis may be required, the developer should immediately consult with the Planning Commission to verify a development’s projected trip generation, and to confirm whether or not a study will be required. If an analysis is required, the required level can be determined at that time.
2. The Planning Commission shall review the draft traffic study in conjunction with the other elements of the development application. If the draft analysis is not of the proper scope or is executed improperly, the developer shall be notified of the deficiencies and be required to submit corrections on the same schedule that applies to the other elements of the development application. Failure to submit corrections in a timely fashion may lead to a postponement of the application.

- D. **DEVELOPER FUNDED IMPROVEMENTS** – The TIS may take into account the projected timing of City/State/County approved traffic improvements with allocated funding for construction. Any required traffic improvements which have not been funded for construction or otherwise completed by the government agencies shall be completed by the developer prior to the issuance of the building permit. When it can be demonstrated that a development will only partially contribute to the need for additional off-site improvements, the City, County, or State may require a pro-rated contribution according to the percentage of traffic added by the development. The Planning Commission staff will verify that all traffic improvements to be provided by the developer or property owner have been properly bonded prior to building permit issuance and completed before a use and building permit shall be issued.

SECTION 5.4 SITE DEVELOPMENT PLANS/CONSTRUCTION PLANS

The construction plans shall be sufficient to show the proposed locations, sizes, types, grades, and general design features of each facility. The plan shall be based upon reliable field data, use the number of sheets and sheet size as required, contain the title block information as for the preliminary lot layout, and meet the following minimum requirements:



- A. **AUTHORIZATION TO PREPARE PLANS** – All construction plan materials shall be prepared by a licensed Professional Engineer, or, to a limited degree, an Architect or Landscape Architect. The division of work to be performed by each profession shall be governed by state statutes and regulations, which regulate each profession.
- B. **EXPIRATION OF CONSTRUCTION APPROVAL** –A notification will be given to the applicant stating whether or not approval has been issued. Once approval has been issued, it is valid for three (3) years from that date of the approval letter.
- C. **NUMBER AND TYPE OF COPIES** – Each application for the approval of a subdivision shall be accompanied by one (1) digital copy of a stamped set of approved construction plans.
- D. **PHASING** – If the improvements require completing in stages, the area and boundaries of each improvement shall be shown as a separate phase on the preliminary plat. Phases shall be designated with numbers, i.e. Phase 1, 2, 3, 4, etc. If a phase is required to be separated even further, then section letters shall be assigned, i.e. Section A, B, C, D etc.
- E. **STREET DESIGN** – The street design plans shall include the following information:
 1. **STREET PROFILES** – The plan and profile of each proposed street (with elevations and distances for the existing and proposed ground and street grade surface on, and one hundred (100) feet beyond, the tract, or at the beginning of a vertical curve) shall be prepared at a horizontal scale the same as for the approved preliminary plan, and at a vertical scale of one-tenth (1/10) of the horizontal scale. Profiles should be designed at a minimum 0.8% in lieu of a vertical curve. Other designs will be considered on a case by case basis.
 2. **STREET CROSS SECTIONS** – A typical cross section of each proposed street or other construction item, at a scale of ten (10) feet or less to the inch, showing the width and slope of pavement, the location, width and slope of sidewalks, curb and gutter, ditches and rights-of-way shall be submitted.
 3. **STREET CONTINUITY** – All streets shall be designed so that they will create continuity with connecting streets.
 4. **TURN AROUNDS** – All turn arounds shall be paved and located at the end of all stub streets.
 5. **SIGHT DISTANCE TRIANGLE** – The sight distance triangle at intersections shall be determined as a straight line of unobstructed view between two (2) points. Visual clearance must be provided within the sight distance triangle between the height of three (3) feet and ten (10) feet above the average grade of each street, alley or driveway as determined by the appropriate authority (KYTC or Public Works).



6. **STOPPING SIGHT DISTANCE** – Based on design speed, stopping sight distance is the distance needed for a vehicle traveling at or near the designed street speed to stop before reaching a stationary object in its path.
 7. **ACCESS ENVELOPES** – The street design plans and recording plat shall show all proposed access envelopes on all corner lots that designate areas where driveway entrances are to be located on each street frontage. The driveway edge must be no closer to an adjacent property line than five (5) feet and shall not be closer to the intersecting street (edge of pavement) than specified in the City of Bowling Green’s Traffic Access Management Manual or per applicable County standard.
 8. **BUILDABLE LOT GRADING** – All sewer residential subdivisions (RS-1A, RS-1B, RS-1C, RS-1D) shall require lot and building pad grading along with an established finish floor elevation (FFE) prior to recordation of a plat.
- F. **EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) AND POST-CONSTRUCTION STORMWATER MANAGEMENT PLANS** – Approved Erosion Prevention and Sediment Control Plans and approved Post-Construction Storm Water Management Plans shall be considered as a part of the required construction plan set.
- G. **STORM WATER DRAINAGE** – The plans and profiles of proposed storm water drainage system shall be prepared at a horizontal scale the same as the approved preliminary lot layout, and at a vertical scale of one-tenth (1/10) of the horizontal scale, with grades and sizes indicated. If a piped system of sewers is not proposed, then an alternate system shall be properly illustrated. All other required items are listed in Section 5.6 – Drainage Standards.
- H. **UTILITIES** – The design plans shall include the following information:
1. **SEWER** – The plans and profiles of proposed sanitary sewer drainage system shall be prepared at a horizontal scale the same as the approved preliminary lot layout, and at a vertical scale of one-tenth (1/10) of the horizontal scale, with grades and sizes indicated.
 2. **WATER** – The plans and profiles of proposed water lines shall be submitted, along with adequate fire hydrants to provide fire protection, as required by City or County ordinances. The local supplying utility and the Kentucky Division of Water shall approve the plans.
 3. **GAS** – The plans and profiles of proposed gas lines shall be submitted, to provide natural gas as required by City or County ordinances. The plans shall show the proposed alignment and elevation at critical points such as ditches and pipe crossings to provide proper clearance and separation. The local supplying utility shall approve the plans.



- 4. **ELECTRICAL** – The plans and profiles of proposed lines shall be submitted to provide electrical service as required by City or County ordinances. The plans shall show the proposed alignment and elevation at critical points such as ditches and pipe crossings to provide proper clearance and separation. The local supplying utility shall approve the plans.
- 5. **COMMUNICATION/ MEDIA** – The plans and profiles of proposed lines shall be submitted to provide communication and/or media services. The plans shall show the proposed alignment and elevation at critical points such as ditches and pipe crossings to provide proper clearance and separation. The local supplying utility shall approve the plans.

I. **JOINT AGENCY PLAN** – A plan showing the location of all utilities and their relationship with streets and drainage shall be submitted. The locations of all appurtenances including street lighting shall be coordinated with all utilities to assure that no major conflicts will exist. Typical cross-sections will be shown for utility trenches and their relation to drainage and transportation structures. A note describing the intended land use should be included. A representative of the applicable utility company must sign and date the joint agency plan. These utilities shall include applicable providers of: water, sewer, gas, electrical and communications/media. The certification shall state the following:

The utility design represented on this joint agency plan sheet has been developed concurrently with the agencies and engineer of record for the construction plans. The undersigned agency or utility representatives are in agreement with the general layout and concepts shown. All agencies reserve the right to submit revisions to the engineer if changes in the design, or as a result of field conditions, make it necessary to deviate from what is shown on this plan.

Agency	Agent	Date

- J. **CURB AND GUTTER** – Curb and gutter is required along some roadways to be accepted into the City/County road inventory system. (See Table 6.1).
- K. **SIDEWALKS** – Sidewalks shall be shown and noted on the plan view and detail sections. Sidewalks shall be constructed or bonded as outlined in Article 3 of these regulations, prior to final acceptance by the City or County. All sidewalks, drive entrances and handicap



ramps shall comply with ADA standards as well as other City/ County standards. Grading for sidewalks as shown on typical sections shall occur as part of the subdivision construction. Sidewalks crossing graveled or paved drainage and/or utility easements shall be concrete from back of curb to back of sidewalk.

- L. **CONSTRUCTION DETAILS** – The construction plans shall include detail sheets for all sinkhole/drywells, headwalls, curb or yard inlets, curbs, utilities, ADA ramps, pavement thickness and ditches.
- M. **CONSTRUCTION QUANTITIES** – Construction quantities will be calculated by Planning Commission staff.



ARTICLE 6

DESIGN AND IMPROVEMENT STANDARDS

SECTION 6.1 PURPOSE

The purpose of this article is to set forth the basic and minimum design and improvement standards required as a prerequisite for development or in conjunction with lot, street, utility and/or other physical development in the subdivision. The developer may exceed the standards set forth in these regulations, or in some cases, be required to exceed the standards.

SECTION 6.2 SUBDIVISION DESIGN PRINCIPLES

Design principles are those criteria that are used to guide the process of design to achieve specific goals. The principles that shall be utilized to layout subdivisions are:

- A. Circulation patterns laid out to discourage through traffic within the neighborhoods but to provide for connectivity to multiple outlets from the neighborhood.
- B. Right-angle street intersections reduce traffic hazards.
- C. Cul-de-sacs should serve no more than thirty (30) dwelling units nor extend more than thirteen hundred (1,300) feet from the common street intersection.
- D. Major access points to the subdivision are located away from major intersections but lined up with other streets of equal classification in a manner that promotes ingress and egress.
- E. ADA compliant sidewalks will be used to provide pedestrian access within the subdivision and to adjacent areas. If alternate methodology will improve drainage or other significant design elements, such as post construction storm water quality, then alternate designs may be approved in residential developments outside of city limits. In order to be considered for approval to eliminate sidewalks, the development must have thirty (30) foot of street surface, six (6) foot shoulders and adequate drainage swales as described in Section F below. Amenities and infrastructure in adjacent developments will be considered. (See Exhibit 6.1)
- F. Curbs and gutters will be used to enhance the safety of the neighborhood and to convey storm water when appropriate. Curbs and gutters must not conflict with ADA requirements. A residential development not within any city limits may be

able to use grass swales in lieu of curb and gutter, if approved in conjunction with a post construction storm water quality plan. Lot dimensions and ratios shall be subject to approval by the Warren County Public Works Department and Planning Commission review staff, with the minimum street frontage being one hundred (100) feet and lots shall be at least thirty thousand (30,000) square feet. Swales shall be sodded and meet applicable slope and velocity requirements. Other engineered Low Impact Design (LID) will be considered. Amenities and infrastructure in adjacent developments will be considered. (See Exhibit 6.1)

- G. Utilities buried in right-of-ways and easements enhance appearance and shall be in compliance with City and County Ordinances. Utilities must be placed outside of ditches and swales.
- H. Street lighting within developments shall be in compliance with City and County Ordinances.
- I. Access Management. Subdivisions with street improvements within the City of Bowling Green shall comply with City guidelines concerning proper access management. All other areas of Warren County are encouraged to implement the same guidelines in subdivision development. Access management reduces access points on major routes, conflict points for traffic delay, and improves services flows and capacity of the roadways.

SECTION 6.3 ADEQUATE PUBLIC FACILITY STANDARDS

- A. **WATER SUPPLY AND SEWER** – The developer shall provide a water and sewer (when applicable) distribution system adequate to serve the proposed subdivision. The water and sewer mains shall be of adequate size and quality and designed in accordance with applicable City or County Ordinances and standard specifications and design standards of Bowling Green Municipal Utilities or Warren County Water District. The construction plans shall show proposed water and sewer mains adequately sized in accordance with the specifications of the serving utility. Details of construction material and methods shall be provided. See appendix D for more information on fire protection.
- B. **FIRE PROTECTION AND HYDRANT SPACING** – Fire protection shall meet both the current City/County regulations.
- C. **PUBLIC STREETS AND ROADS** – The Planning Commission is responsible for assuring that street development conforms to the standards contained in this document, including any amendments, additions and changes thereto, and in conformity to street or highway plans officially adopted by the applicable jurisdictions. Proposed streets shall be considered in their relationship to existing and planned streets, to topographical and drainage conditions, to public

convenience and safety, and in their appropriate relation to the proposed uses of the land to be served by such streets.

- D. **NATURAL GAS, COMMUNICATIONS AND ELECTRIC SUPPLY** – Every subdivision shall be served by an adequate electric supply. Additionally, proper communications facilities must be made available to all properties (either by landline, cable, fiber or similar means). Natural gas supply may be provided at the developer's option dependent upon the ability of the local supplier to meet the demands of the development.
- E. **UTILITY EASEMENTS** – Easements shall be provided for utilities wherever necessary.

SECTION 6.4 DRAINAGE STANDARDS

Every subdivision and development shall provide satisfactory drainage of storm water by means of underground storm sewer pipes and/or surface ditches. The basic standard for design of drainage systems for subdivisions will be to keep runoff characteristics after development at the same or lower level as existed before development. The "built-out" conditions appropriate to the zoning classification shall be the design basis for control structures. This regulation shall be true for storms of all intensities and durations. To achieve these objectives, storm water retention systems will be required in most cases. Appendix B is provided as a guide for stormwater design and post stormwater quality in areas outside of the City of Bowling Green. For areas incorporated inside City limits, please consult the Bowling Green Public Works Department.

- A. **TOPOGRAPHIC SURVEY** – A topographic survey shall include the quantitative measurement of existing conditions. The existing conditions shall include drainage divides, areas, runoff characteristics and outfall points. The topographic survey shall include existing conveyance methods, including storm sewers, channels, sinkholes/surface depressions and containment areas. The topographic survey for all developments shall comply with the applicable laws for the Commonwealth of Kentucky, federal government and local governments.
- B. **ADMINISTRATIVE REQUIREMENTS** – The following design requirements are applied to all proposed developments. All improvements not previously covered by an approved and implemented drainage plan may be cumulative for purposes of computation.
 - 1. Net change in impervious area less than or equal to seventeen hundred (1,700) square feet (and not in a watershed area): No drainage plan required.



2. Net change in impervious area greater than seventeen hundred (1,700) square feet and less than or equal to thirty-four hundred (3,400) square feet (and not in a designated critical watershed area): drainage plan may be required at discretion of City Public Works, County Public Works or Planning Commission.
3. Net change in impervious area greater than thirty-four hundred (3,400) square feet: drainage plan shall be required.
4. Any construction which is proposed in an area of known hazard: drainage plan shall be required.

C. **DRAINAGE PLAN** – The drainage plan will show existing and proposed contours of the project, the street layout and street names, lotting pattern with lot numbers and the location of all drainage structures. Street centerline stationing should be indicated. The drainage calculations shall be for built-out conditions based on the zoning classification. All culverts shall be terminated with headwalls. The drainage plan shall include the following elements:

1. **STATEMENT OF CRITERIA** – The plan shall include a statement of the criteria used in the drainage design, including a project description, the rate of precipitation, formula used in sizing drainage structures and any constants for factors involved.
2. **GRADE** – The plan shall show the size, invert elevations and percent of grade of all storm drains, catch basins, outlets and inlets and indicate the pipe material used. All sewered residential subdivisions (RS-1A, RS-1B, RS-1C, RS-1D) shall require lot and building pad grading along with an established finish floor elevation (FFE) prior to recordation of a plat.
3. **DRAINAGE AREA** – Existing and proposed watershed area maps for each drainage pipe, ditch and basin shall be delineated. Areas of off-site watersheds shall be shown.
4. **DRAINAGE DITCHES** – If drainage ditches are used, indicate design, velocity and method of erosion control to be used on banks and bottoms; the plan shall show plan, dimensional, cross-section and flow line profiles of all proposed and existing ditches.
5. **MAXIMUM FLOOD STAGE ELEVATIONS** – The plan shall furnish maximum flood stage elevations on any structure either on or adjacent to the property, or whose proximity may affect the drainage or access to the property.

6. **ELEVATIONS** – The plan shall show elevations that must be based on Mean Sea Level Datum as established using third order accuracy or better using the World Geodetic System 1984 (WGS 84) for horizontal control and National Geodetic Vertical Datum of 1988 (NGVD 88) for vertical control.
 7. **STANDARD DRAINAGE FEATURES** – To the maximum extent possible all drainage features shall be specified as Kentucky Transportation Cabinet (KYTC) standard drawings.
- D. **DRAINAGE DITCHES** – Drainage ditches or swales shall be designed to minimize erosion. Sod materials and method of construction shall be in accordance with the standard specifications for construction in the City of Bowling Green, Warren County or the Kentucky Department of Highways.
1. Ditches shall be designed so that each segment will function without erosion. Maximum velocity 2.5 fps without sod and 5.0 fps with sod.
 2. Channel cross-section will be conducive to maintenance, with a maximum side slope of 3:1, 4:1 may be required.
 3. Channel linings will be required for any velocity greater than 5.0 fps. Channel linings will be chosen that are both functional and maintainable.
 4. Grass linings and low slopes are conducive to stormwater quality treatment.
 5. The minimum slope for open channel ditches shall be 0.8%
 6. Open channel design shall be based on the time of concentration for the 25-year storm and the 100-year high water elevation shall be delineated with a drainage easement.
- E. **STORM PIPE AND CULVERT**- Driveway culvert pipes shall be designed for a minimum 25-yr storm at one (1) hour. Storm sewer pipes within right-of-ways and drainage easements shall be designed based on a 25-yr storm. The minimum freeboard shall be one (1) foot when the maximum headwater is achieved. Calculations for all pipes shall be shown and invert elevations assigned. Use of energy dissipaters may be required as necessary. The minimum velocity of storm pipes shall be 3 fps at full flow conditions. The maximum velocity shall be 15 fps. Storm pipe should be concrete. Aluminized corrugated pipe of a sufficient gage may be used as an alternative as specified by Planning Commission or appropriate Public Works staff. Pipe alternates may only be allowed with the approval of City Public Works Department, County Public Works Department or

the Planning Commission. The minimum slope for storm pipe design shall be 0.8%.

- F. **MANHOLES** – Manholes shall be constructed of pre-cast concrete with a concrete foundation.
- G. **INLETS OR CATCH BASINS** – Inlets or catch basins shall be constructed of concrete with reinforced concrete tops. The type of manholes, inlets and other drainage structures shall be indicated on the plans for the proposed work. The spacing of inlets for curb and gutter sections shall be designed as to not let the spread exceed one-half of the lane width during a 25 year design event. Inlets shall be placed as to not require surface drainage across any public streets. Inlets and catch basins should be placed at lot lines. Construction plans should note the requirement on the plans.
- H. **BOX CULVERTS** – Any box culvert, whether cast-in-place or pre-cast, shall be constructed of reinforced concrete.
- I. **TRENCHING (Street-cut permit will be required in existing roads)** – Drainage shall be constructed according to the approved improvement plans for the proposed work. Any trenching or open cuts after asphalt is placed must be backfilled with flowable fill.
- J. **FLOODPLAINS AND FLOODWAYS** – No construction of roads, principal or accessory structures is permitted in floodplains and/or floodways, except as noted in the Zoning Ordinance. Construction of any kind within the floodplain and/or floodway requires a permit from the Kentucky Division of Water. Floodways of navigable rivers must have the approval of the U.S. Army Corps of Engineers.
- K. **RELATIONSHIP TO SANITARY SEWER SYSTEMS** – No storm water drainage system may be designed, constructed or connected so as to flow into any public or private sanitary sewer system.
- L. **RETENTION AND DETENTION BASINS** – Where required to be included in the subdivision design, retention and/or detention basins shall be provided by the developer. At a minimum, such facilities shall be designed so that they will drain within the timelines established in Section 6.4.L.2 for detention and retention basins after the cessation of a rainfall event and no standing water will remain in the basin during dry weather.

Any proposed drywell shall be installed and flow tested per Article 6.4M prior to plan approval. Should the proposed drywell fail testing, then the developer's engineer shall provide an approved alternate design to appropriately manage the storm water.



If at any point during construction a basin routinely fails to completely drain, the developer may be required to take other actions such as aeration, draining to an alternate site that functions, or creating a permanent pond sufficient to function as a retention basin while providing an attractive open space for the development. Retention basins designed to act as permanent ponds shall have adequate storage above the pool elevation sufficient to contain the runoff of the required design rainfall event. Engineering solutions that adequately control discharge (rate, velocity, spread etc.) will be considered by the City or County Public Works Department.

1. **DESIGN CRITERIA** – Detention areas shall be sized based on a 1-hour, 100-year storm. Retention basins shall be sized based on a 3-hour, 100 year storm. Peak (10 minute) intensity of inches per hour for a 100-year storm may be used to assess the impact on conduits. Volumes for storm events shall be based on the most current NOAA Point Precipitation Frequency (PF) Estimates. Retention basins shall be designed so that they will drain within seventy-two (72) hours, detention basins shall be designed so that they will drain with twenty-four (24) hours, and no free standing water will remain in the basin during dry weather unless a permanent pond is to be constructed to sufficient size that the standing water will not stagnate and present health hazards. Storage basins shall not have slopes exceeding 3:1, (4:1 slopes may be required for stability and safety). All basins/ponds shall be designed to provide a minimum one (1) foot of freeboard (additional retention) above the calculated high water elevation for the 100-year storm. Ditches shall be designed so that each segment will function without erosion.
2. **DISCHARGE POINTS** – The maximum discharge from a detention basin shall not exceed the pre-developed discharge. The drainage plan shall demonstrate that peak discharges from the 2, 5, 10, 25, 50 and 100 year 1-hour storm are preserved or reduced from pre-developed conditions. All discharge points shall have a permanent erosion control measures, energy dissipation, or level spreader installed to minimize erosion. Discharge to areas of known flooding hazards shall be subject to approval of the City Public Works Department, County Public Works Department or the Planning Commission. Sinkhole and drywells located in retention basins shall be assumed to have no outflow for purposes of computation.
3. **EASEMENTS AND FINISHED FLOOR ELEVATIONS** – Calculated 100-year high water elevations shall be recorded on the subdivision plat. In areas where a proposed basin is connected with an existing basin, the recorded high water elevation shall be maintained. The minimum finished floor elevations for structures and associated HVAC systems adjacent to retention and detention basins shall be twenty-four (24) inches above the



3-hour, 100-year high water elevation. An unobstructed ten (10) foot wide vehicular access to the bottom of the basin shall be constructed at a maximum 6:1 slope in the provided easement.

- M. **DRYWELL INSTALLATION** – An injection well (drywell) must provide a connection to subsurface (karst) features that will drain the associated basin within a twenty-four hour period. If testing/size indicates that a single well is insufficient, multiple wells must be constructed and each must be tested. Prior to construction and again prior to acceptance, if deemed necessary, the well (or wells) shall be tested for functionality. The Planning Commission and developer's representatives shall be present for the test. Regardless of the basin's size, the minimum accepted flow rate for any well is the greater of 160 gallons/minute or (Basin Capacity gallons / 4,320 minutes) / (Number of Wells in Basin). Flow must be delivered continuously for a period of ten (10) minutes, with no ponding of water on the surface. An alternate drainage method may be provided or required if testing fails.

The depth of the drywells shall be determined as the depth necessary to intercept a sub-terrain aquifer, solution, fissure, cavity or cave. The drilled bore hole shall extend a minimum of twelve (12) inches into the void area. The unobstructed end of a minimum eight (8) inch steel casing pipe shall be inserted to a minimum three (3) foot depth into the solid rock, measured by the length of drill bit withdrawn. The inlet end of the casing shall be grouted in place allowing a casing pipe stand of three (3) to five (5) feet. The exposed casing shall be perforated by the means of a drill. No cutting below the structure shall be allowed. The drywell inlet shall be constructed per the illustration for a Typical Drywell found in Appendix A.

An inventory form must be sent to the Environmental Protection Agency for all Class V injection wells. Provide copy of this application to the Planning Commission staff for inventory purposes. Existing drywells which are to be utilized by new developments shall be re-tested for functionality, and the developer shall be responsible for ensuring the functionality of each drywell prior to final inspection.

- N. **STORM DRAINAGE EASEMENTS** – On-site and off-site easements shall be a twenty foot (20') wide minimum for storm water drainage systems, and shall be shown on the recording plat. Special notes relating to the maintenance of such easements shall be placed on the recording plat. Drainage easements may be combined with utility and other easements if sufficient widths are provided, however, no drainage easement containing underground storm sewers may be combined with a utility easement containing underground electric or natural gas lines except at necessary crossing points unless sufficient clearance between the facilities is provided. Utilities must be placed outside of ditches and swales. Basin

access must be provided and shall be a gravel or paved surface from the right-of-way to the outlet.

- O. **SOIL EROSION AND SEDIMENT CONTROLS** – Drainage plans and construction plans must include an Erosion Prevention and Sediment Control Plan and Best Management Practices (BMP) plan, developed based on all applicable City/County/State/Federal ordinances and guidelines. If in the City of Bowling Green, please consult the Bowling Green Public Works storm water management standard drawings found in the City’s stormwater guide.

- P. **POST CONSTRUCTION BEST MANAGEMENT PRACTICES** – Bowling Green City Ordinance (21-2) and Warren County Ordinance (Wc11-31) requires post-construction Best Management Practices (BMPs) to be in place for any land disturbance over one (1) acre and land disturbance that includes more than ten thousand (10,000) square feet of impervious cover. Alone or together, BMPs for any development meeting the threshold must reduce total suspended solids by eighty percent (80%). In all cases the most current applicable City/County legislation shall prevail.

SECTION 6.5 STREET STANDARDS

Each subdivision shall be served by public streets or streets for which improvement bonds have been posted. A public street shall be provided for convenient access to each property within the subdivision and each subdivision developer shall furnish proof that the proposed subdivision is afforded proper access by way of a public street. All new public road access to the subdivision and the individual building sites shall be not lower than the regulatory flood protection elevation. Whenever the proposed subdivision contains or is adjacent to a railroad right-of-way or limited access highway, no street shall be planned to intersect such right-of-way, except by prior written approval of the appropriate agency. All streets classified herein as arterials, collectors, frontages or alleys shall conform to the following standards: (See Appendix A)

- A. **RESPONSIBILITY OF STREETS** – The developer shall construct streets and appurtenances including all clearing, grading, laying of subbase, base, pavements, culvert, bridges, storm drainage facilities and other structures. The respective legislative bodies shall not accept any street until it has been inspected by the City or County Engineer or Public Works Department, and it has been determined that such construction is in conformance with the approved plans and adopted standards.

- B. **TRAFFIC IMPACT STUDY (TIS)** Traffic Impact Studies, if required, shall be prepared only by a Kentucky licensed Professional Engineer also certified as a Professional Traffic Operations Engineer (PTOE). Requirements for Traffic Impact Studies are outlined in Section 5.3.



- C. **STREET GEOMETRICS** – All streets shall conform to the applicable geometric, cross-section and sight distance triangle standards.
- D. **STREET CONTINUITY** – The Planning Commission may require consideration for the inclusion of streets based on an overall thoroughfare plan to provide for major routes through the City and County. Streets shall be related to topography and shall provide for the continuation of existing or dedicated streets in adjoining or nearby tracts and provide for connection to tracts, especially those that would otherwise be landlocked.
- E. **STREET NAMES** – The developer shall name the streets in the proposed subdivision but shall avoid the use of street names that closely approximate phonetically or in spelling the name of any existing street, except that the extension of any existing street will carry the same name as the existing street. Further, the Planning Commission should direct that any street be given the same name as an existing street where it is apparent that the proposed street will become an extension of any existing street upon the improvement of an intervening parcel of undeveloped land. The street names should be in conformance with the street naming and property numbering regulations of the Planning Commission. The connection of two differently named streets should be avoided but may be allowed if provisions are made for renaming one or the other of the existing streets. The names of streets at locations where the speed limit exceeds 25 mph shall be limited to fourteen (14) characters total, including spaces. No street name shall be allowed to begin or end with a cardinal direction (North, South, East, or West). The names of streets at locations where the speed limit is less than or equal to 25 mph shall be limited to twenty-eight (28) characters including spaces. The street name suffix will be determined as follows:

Alley: An Alley is a service road, located at the rear of a property. It is usually only wide enough for one vehicle. It may be used as a means to gain access to the rear of a property (garages or dumpsters), but it may not be considered as road frontage and addresses will not be given from it. It may run in any direction.

Avenue: An Avenue runs primarily northwest to southeast.

Boulevard: A Boulevard may run in any direction, but it must have a median between the lanes for trees, grass or flowers. The median must continue down the entire length of the Boulevard, with exceptions of divisions for interconnected street access.

Circle: A Circle starts and terminates onto the same street.



Court: A Court may extend in any direction, but it must end in a cul-de-sac bulb.

Drive: A Drive runs north-south.

Lane: A Lane usually has a change in direction, so it may run north-south, then turn and run east-west.

Road: A Road runs east-west.

Street: A Street runs southwest-northeast.

Way: A Way runs east-west.

- F. **INTERSECTIONS** – Street curb intersections shall be rounded by a radius of at least twenty-five (25) feet. (See Exhibit 6-1) Where one (1) or more streets involved in an intersection is a highway or thoroughfare, intersection standards shall be increased at the discretion of the Planning Commission upon the advice of the street or highway department or as recommended in *A Policy on Geometric Design of Highways and Streets* by AASHTO. Multiple intersections involving the junction of more than two (2) streets shall be avoided. Centerlines of streets shall intersect as nearly at right angles as possible, but in no case at an angle of less than eighty (80) degrees. Streets intersecting the same street shall be offset at least one hundred fifty (150) feet between centerlines. Minimum safe sight distance at an intersection shall be determined as a straight line of unobstructed view measured in each direction across the corner between points, each fifty (50) feet back along the intersection of the right-of-way lines. Between three and one-half (3 1/2) feet and ten (10) feet above the surface of the pavement no bushes, trees, structures or other obstructions shall block the view.
- G. **ENTRANCES** – Entrances to be located on any other class roadway except local streets shall require the approval and appropriate permit, if required, from the City, County and/or State. Entrances shall be required to meet minimum sight triangle and stopping sight distance requirements.
- H. **STREETS SERVING MULTI-FAMILY USES** – Streets serving these multi-family uses should connect directly to a collector or arterial street so as not to generate large volumes of traffic on local streets
- I. **HALF STREETS** – Dedication of new half streets along tract boundaries shall not be permitted except to complete the other half where such street has been previously platted.

- J. **STUB STREETS** – Stub streets to or from public or private roads are required as part of a continuing street plan, to provide for access to any adjacent undeveloped tract of ten (10) acres or larger. Likewise, connections to existing public or private stub streets in an adjacent development are required. Exceptions to this rule may be approved by the Planning Commission staff if the adjacent use is incompatible or if the project engineer can show substantive geologic, hydrologic or safety issues such as excessively steep grade. In either case, then the stub street or dedicated easement may not be required.

When stub streets extend beyond one lot, a temporary turn-around fifty (50) feet wide and twenty-four (24) feet long, (see detail Appendix A) referenced from the centerline, must be provided. The turn-around shall be paved with the same pavement design as the adjacent street unless the turn-around is expected to be removed in another phase within six (6) months. In such case, DGA is an acceptable temporary surface course. Prior to release of the subdivision bond, a cash bond may be imposed to guarantee paving the turn-around if future development does not occur. The stub street shall extend to the tract boundary approximately twenty-four (24) inches to the existing grade.

Stub streets extending only one (1) lot may require a turnaround that extends to the property line. The name of the stub street must be consistent as it connects or continues.

K. **STREET LIGHTING**

1. Subdivisions in Warren County may have street lights provided in accordance with Warren Fiscal Court Ordinance No. 88-46, (ordinance to provide means whereby existing and proposed subdivisions can obtain the installation of street lights). (See Appendix C)
2. All subdivisions in the City of Bowling Green must be provided with streetlights with the design to be approved by the City. The City will provide street lights to a subdivision, per City Ordinance, to a subdivision after it is fifty (50) percent complete. Only wood poles will be provided without cost. Where underground utilities have been installed, the City will be responsible for the cost of a wood pole installation, with the developer responsible for providing and installing the conduit needed for underground service lines. If decorative poles and poles of an alternate material are desired, the developer will be required to pay the difference between the alternate and the wood pole. Conduit must be installed, and provisions for payment to the City must be made prior to acceptance of the streets for maintenance.

- L. **STREET NAME SIGNS AND TRAFFIC CONTROL DEVICES** – Street name signs shall be placed on diagonally opposite corners of each street intersection in conformance with the street signing plan as approved by the Planning Commission. Traffic control devices, including sign faces and posts, shall be installed in accordance with the current edition of the *Manual on Uniform Traffic Control Devices (MUTCD) of the U.S. Department of Transportation, Federal Highway Administration, current edition*. Construction plans shall be accompanied by a street sign plan showing the proposed location of street signs and traffic control devices. All signage must be installed after the base course is constructed and before the plat is recorded. If within City limits, signs shall be furnished and installed by the City of Bowling Green, and the developer will be billed for the costs of such signs. In all other areas of the County, signs shall be furnished and installed by developer. If within the City limits of Bowling Green, all pavement markings shall be thermoplastic and installed by developer. Subdivisions where parking is prohibited on one side of the street, appropriate curb striping must be in place prior to acceptance.
- M. **DEDICATION OF RIGHT-OF-WAY** – A subdivision platted among existing streets shall dedicate such additional right-of-way to meet the minimum standards set forth in these regulations. When the subdivision is located on only one (1) side of an existing street, only one-half (1/2) of the width, measured from the centerline of the right-of-way, shall be provided.
- N. **SIDEWALK CONSTRUCTION** – Minimum width of sidewalks parallel with the roadway shall be five (5) feet. The sidewalk shall be a minimum thickness of four (4) inches. Sidewalks shall continue to the pavement edge by an ADA-compliant ramp at intersections to facilitate crossing. Forms for sidewalks shall be either steel or wood with flexible forms, which will deflect to conform with radii. Sidewalk cross slopes shall not exceed one-fourth inch (1/4") per foot (1:50) per ADA. The portion of entrances in alignment with sidewalk sections shall also meet ADA compliant cross slope requirements. In all developments, sidewalks must be installed on non-buildable lots of record prior to acceptance by the legislative body. For Industrial and Commercial roadways, all required sidewalks shall be installed prior to acceptance by the legislative body. In developments where sidewalks will be installed, the developer shall have the handicap access ramps installed in conjunction with construction of the curb and gutter. See Appendix A Street Standards Graphics for typical cross sections.
- O. **CUL-DE-SACS** – Commercial and industrial paved cul-de-sacs shall include a turnaround which shall be provided with a right-of-way radius of sixty (60) feet and a paved curb radius of fifty (50) feet minimum. An island may be required in the cul-de-sac with one-way traffic around the island.

Residential paved cul-de-sacs should not serve more than thirty (30) dwelling units or be longer than thirteen hundred (1,300) feet, which shall be provided at the closed end with a right-of-way radius of sixty (60) feet and a paved curb radius of fifty (50) feet. Alternatively a bulb out shaped cul-de-sac may be used with a right-of-way radius of fifty (50) feet and a paved radius of forty (40) feet minimum for RS-1A, 1B and 1C. The bulb out cul-de-sac will consist of a widened roadway at a 7:1 taper (minimum) from the normal roadway cross section to the radius point of the cul-de-sac. For all cul-de-sac designs the entry/exit radius should be at least thirty (30) feet for where the street intersects the cul-de-sac. (See Appendix A)

Transitional curves on all cul-de-sac turnarounds shall have a curve radius as recommended in *A Policy on Geometric Design of Highways and Streets* by AASHTO. Alternate turnaround designs utilizing islands, bulb radiuses or other features shall be approved on a case-by-case basis.

- P. **MEDIANS** – Medians may be permitted in street cross sections when approved by the Planning Commission. Medians shall only be allowed when the street cross section is designed to provide for all necessary traffic movements inherent in the standard cross sections contained in Appendix A. Provision for the maintenance of any median areas and associated plantings shall be noted on the final recording plat of the property. Plantings shall be of a nature that will not conflict with sight distance or other traffic related requirements.
- Q. **PRIVATE STREETS** – Private streets may be permitted by the Planning Commission if gated access is proposed. Plats containing private streets shall conform to all other subdivision regulations, unless different requirements are listed in the following:
1. **NO DISRUPTION TO THROUGH MOVEMENT** – Private streets may be permitted only if they meet the definition of local streets; if they provide absolutely no present or future impediment to necessary through traffic movement in the general area; and if adjoining properties and the general area already have or are capable of providing a proper, efficient and safe street system that will in no way depend upon the private streets. Stub streets to adjacent properties or existing roadways is required.
 2. **RIGHT-OF-WAY AND SETBACK** – Private street rights-of-way and building setback lines shall be shown on the plat and shall meet at least the minimum requirements of these subdivision regulations and the Zoning Ordinance as required for public streets to assure conformance if such streets are ever accepted for public dedication at a later date.

3. **STREET IMPROVEMENT STANDARDS** – Any permitted private street shall conform to standards established for public street sections in these regulations and are subject to all fees and inspections as outlined herein.
- R. **STREET CONSTRUCTION** – In order to provide for roads of suitable location, width and improvement to accommodate prospective traffic and afford satisfactory access to police, fire, sanitation and road maintenance equipment and to coordinate roads so as to compose a convenient system and avoid undue hardships to adjoining properties, the following design standards for roads are the minimum required. Exhibit 5-1 describes the appropriate minimum or maximum standard acceptable for subdivision development.
1. **EARTHWORK (GRADING, EMBANKMENTS, CUT/FILL, EXCAVATION)**
Refer to Section 6.2.E.
 2. **SUBGRADE PREPARATION** – Refer to Section 6.2.I
 3. **AGGREGATE BASE** – Refer to Section 6.2.K
 4. **CONCRETE STREET PAVING** – Refer to Appendix F
 5. **BITUMINOUS CONCRETE (ASPHALT) BASE AND SURFACE** – Refer to Appendix F
 6. **STREET CROWN** – A street crown of one-fourth (1/4) inch per foot of street width from the center of the street shall be required for a standard section. Other non-standard cross slopes may be used if designed and submitted by the developer's engineer and approved by the Planning Commission staff and the City or County Engineer or Public Works Department.
 7. **STANDARD CURB AND GUTTER** – Standard curb and gutter when used for Public streets shall measure twenty-four (24) inches from back of curb to the outer edge of gutter. The back of curb shall be a full fourteen (14) inches in depth. The curb shall be a full eight (8) inches in thickness for its entire width. The gutter shall slope one-half inch (1/2") per foot toward the curb. Subgrade for curb and gutter shall be constructed per Section 6.2.I.
 8. **VALLEY OR MOUNTABLE CURB AND GUTTER** – A concrete valley or mountable curb shall be permitted on residential local public streets. (See Appendix A)

- S. **STREET IMPROVEMENT REQUIREMENTS FOR DEVELOPMENT ADJOINING EXISTING ROADWAY** – Any substantial development of subdivided property may reasonably be anticipated to create a burden on existing public roads, thereby posing a traffic and safety hazard. In order to mitigate that hazard and to advance the interest in having safe and adequate roadways, any proposed subdivision abutting an existing public roadway which does not meet the right-of-way and pavement width standards for the functional classification of that street shall be upgraded by the developer to meet the requirements as outlined in Exhibit 6.1, if required by the Kentucky Transportation Cabinet, City or County Engineer or Public Works Department.
- T. **PROPOSED SUBDIVISIONS WHICH ABUT LOCAL, COLLECTOR OR ARTERIAL STREETS** – Whenever a subdivision is proposed for property which abuts a local or collector street as defined in these Subdivision Regulations, the developer shall be required to dedicate right-of-way necessary to comply with the standards as set out in Exhibit 6.1 of these regulations. It is assumed that the same right-of-way dedication will be required on the opposite side of the roadway at such time as that property develops, thereby providing the full necessary right-of-way width.

See Exhibit 6.1 Next Page for street design standards.



Warren County Subdivision Regulations

	EXHIBIT 6-1 STREET DESIGN STANDARDS											
	LOCAL											
	COLLECTORS		RESIDENTIAL - NON SEWER			RESIDENTIAL - SEWER			COMMERCIAL	INDUSTRIAL	FRONTAGE	ALLEY
ARTERIAL	MAJOR	MINOR	ALL STREET TYPES			THROUGH	INTERNAL	LOW VOLUME				
Volume Range ^{NOTE 1} (Vehicle Trips/Day)	<10,000	4,500 TO 10,000	1,000 TO 4,500	<1,000	<1,000	1,000 TO 4,500		<400	<1,000		N/A	N/A
Right-Of-Way Width (Min. Feet)	100 ^{NOTE 2}	80 ^{NOTE 2}	60	50	50	50	50	50	60	60	40	16 ^{NOTE 2}
Number of Lanes (Minimum)	5 ^{NOTE 3}	3 ^{NOTE 3}	2	2	2	2	2	2	2	2	2	1
Lane Width (Min. Feet)	12	12	12	12	12	12	12	12	15	15	12	12
Superelevation (Max. Percent)	8	6	6	NORMAL CROWN	NORMAL CROWN	NORMAL CROWN	NORMAL CROWN	NORMAL CROWN	NORMAL CROWN	NORMAL CROWN	NORMAL CROWN	NORMAL CROWN
Grade (Max. Percent)	5	8	8	10	10	10	10	10	8	8	8	6
Grade ^{NOTE 4} (Min. Percent)	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Stopping Sight Distance (Min. Feet)	400	300	300	250	250	250	250	250	250	250	200	N/A
Radius of Horizontal Curves (Min. Feet)	770	530	300	280	280	280	280	280	300	300	200	200
Length of Vertical Curves (Min. Feet) ^{NOTE 5}	160	130	100	100	100	100	100	100	100	100	100	100
Shoulder Width (Min. Feet)	N/A	N/A	N/A	2 ^{NOTE 6}	2 ^{NOTE 6}	2 ^{NOTE 6}	2 ^{NOTE 6}	2 ^{NOTE 6}	N/A	N/A	2 ^{NOTE 5}	2 ^{NOTE 5}
Sidewalks	5 feet wide BOTH sides	5 feet wide BOTH sides	5 feet wide BOTH sides	5 feet wide on BOTH sides ^{NOTE 7}	5 feet wide on BOTH sides ^{NOTE 7}	5 feet wide on BOTH sides ^{NOTE 7}	5 feet wide on BOTH sides ^{NOTE 7}	5 feet wide on BOTH sides ^{NOTE 7}	5 feet wide on BOTH sides	Optional	Not Required	Optional
Curb/Gutter Required?	Required	Required	Required	Required ^{NOTE 7}	Required ^{NOTE 7}	Required ^{NOTE 7}	Required ^{NOTE 7}	Required ^{NOTE 7}	Required	Required	Not Required	Optional
Interior (Corner) Radius of Pavement (Min. Feet)	50	50	50	25	25	25	25	25	50	50	25	25
Design Speed (mph)	50	40	30	30	30	30	30	30	30	30	N/A	N/A
Intersection Spacing (Min. Feet)	660	500	500	150	150	150	150	150	150	150	200	100
Intersection Spacing (Max. Feet)	N/A	N/A	N/A	1400	1400	1400	1400	1400	N/A	N/A	N/A	N/A
Intersection Approach Tangent (Min. Feet)	300	200	200	100	100	100	100	100	100	100	-	-
Length of Tangent between Reverse Curves (Min. Feet)	240	175	150	130	130	130	130	130	150	150	100	100

^{NOTE 1} Volume range may vary per development. City or County Public Works Department will determine street
^{NOTE 2} Medians and/or shoulders and ditches may increase needed right-of-way width.
^{NOTE 3} Two way left turn lanes may be replaced with medians and dedicated turn lanes.
^{NOTE 4} Minimum grades for roadways with curb & gutter. If roadways with shoulders and ditches are permitted, the minimum grade may be 0.0% provided that minimum required ditch slopes are
^{NOTE 5} Not less than K for each algebraic difference in Grade.
^{NOTE 6} Six (6) foot shoulders required without sidewalks.
^{NOTE 7} In a proposed county residential subdivision where sewer is available, the developer may request that sidewalks and/or curb and gutter be omitted. Refer to Section 6.2.E and 6.2.F for requirements.
^{NOTE 8} In RS-1D and RM subdivisions, in lieu of fifteen (15) foot lanes, twelve (12) foot lanes with properly striped and signed "no parking" on one side of the street may be permitted.

EXHIBIT 6.1

SECTION 6.6 STANDARDS FOR CONSTRUCTION FILL MATERIALS FOR STREETS

Any fill, which is to be utilized for the purpose of construction of any public or private street, shall conform to the following provisions at a minimum. Higher standards may be required where these standards are not sufficient to ensure stability. Refer to Section 6.2.D & 6.2.E for construction requirements.

- A. **FILL SLOPE** – No compacted fill shall be made which creates an exposed surface steeper in slope than three (3) feet horizontal to one (1) foot vertical. A flatter slope may be required for stability and safety.

- C. **SLOPES TO RECEIVE FILL** – Fills shall not be permitted on natural slopes steeper than three (3) feet horizontal to one (1) foot vertical unless a geotechnical analysis proving the stability of the soil is submitted to, and approved by, the Planning Commission staff.

ARTICLE 7

CONSTRUCTION AND INSPECTION PROCEDURES

SECTION 7.1 PURPOSE

The purpose of this article is to set forth the Planning Commission's construction and inspection procedures. These procedures should create a closer continuity between the developer, developer's engineering representative, contractor and/or representatives of the Planning Commission.

The current edition of the *Kentucky Transportation Cabinet's Standard Specifications for Road and Bridge Construction* shall be the primary document to determine whether improvements are acceptable. In the event of conflict between City of Bowling Green Standard Drawings or Subdivision Regulations and engineer's plan, Subdivision Regulations and City of Bowling Green Standard Drawings shall govern. Construction materials and methods for streets, storm sewers and sidewalks shall conform to those of the current edition of the *Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction*, except as herein set forth and described; *Portland* cement concrete for all items of construction shall conform to requirements of Class "A", *Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Current Edition*.

SECTION 7.2 PROCEDURES

The following procedures shall extend to all subdivision construction:

- A. **PRE-CONSTRUCTION CONFERENCE** – The developer, contractor, and engineering representative shall contact the Planning Commission to schedule a pre-construction conference with the Planning Commission staff prior to starting construction. Major items, all appurtenances, and incidental work, which cover the entire scope of work involved, will be discussed. The developer and contractor will be requested to outline their proposed construction procedures and magnitude of operations, covering all work as detailed on approved subdivision plans. The developer's engineer shall have furnished one (1) digital copy and two (2) hard copies of the approved construction plans with all required changes to the Planning Commission prior to the pre-construction conference. The approved copy of the construction plans shall be the only set used by the contractor in the field. The group in attendance shall include the developer, contractor, their engineering representative, Planning Commission staff, City or County Public Works Department and representatives from all utilities to be installed. At the pre-construction conference, it is the intention of the Planning Commission staff to compile sufficient information to prepare an inspection calendar for periodic and routine inspection. At the pre-construction conference, the developer shall provide a preliminary schedule for the

work items discussed herein. The developer shall provide a copy of the encroachment permit from the City/County/State for access to existing roadways.

- B. **NOTICE OF COVERAGE** – The developer or his representative shall file a Notice of Intent (NOI) with the Kentucky Division of Water (KyDOW) and receive a Notice of Coverage (NOC) letter prior to commencing work. Provide a copy of the NOC to the Planning Commission Staff. The NOC shall include an Erosion Prevention and Sediment Control Plan and Best Management Practices (BMP) plan, developed based on all applicable City/County/State/Federal ordinances and guidelines.
- C. **PLANNING COMMISSION INSPECTIONS AND OBSERVATIONS** – Planning Commission staff will provide routine site visits and visual observations of the construction activities throughout the duration of the project. The developer, engineer, surveyor, contractors, third party testing agencies and suppliers (collectively known as External Party agents), shall be responsible for all density testing (soil, aggregate and asphalt), drywell flow testing, concrete testing, utility testing, as-built drawings, asphalt plant, aggregate plant, concrete plant testing, and any other testing and paperwork needed for acceptance. External party agents shall be properly certified by the Kentucky Transportation Cabinet or the appropriate trade organization for the work they are performing. A copy of such certification shall be provided to the Planning Commission prior to performing the work.
- D. **INSPECTION OF INITIAL GRADING OPERATION** – All areas subject to grading operations must have sedimentation and erosion controls in place prior to commencing work. The Planning Commission and developer's representatives shall inspect the erosion controls prior to continuing with grading. The first field inspection will deal with a general review of the area to be graded within the limits of the roadway with emphasis on the subsoil in particular where any embankment is to be placed. The sod and topsoil shall be removed from the roadway grading area and stockpiled for redistribution. Any disturbed areas shall be stabilized and maintained according to appropriate erosion protection and sediment control guidelines. The Planning Commission and developer's representatives will also review the alignment and grade stakes. The grading operations will be inspected periodically throughout its construction period.
- E. **GRADING AND EMBANKMENTS** – The area on which streets are to be constructed should be cleared of all vegetation and disposed of outside of the limits of the right-of-way. Grading shall be done to the extent of the right-of-way or to the back of the sidewalk at a maximum cross slope of one-half inch ($\frac{1}{2}$ ") per foot. Prior to the construction of embankments, any unsuitable material on which the embankment will be superimposed should be removed and the area should be stabilized by conventional methods. Where development is proposed on areas of existing fill where the composition and compaction of fill materials is in doubt test borings may be required by the Planning Commission before development is permitted to occur. As the minimum, the area will be proof rolled with a loaded tandem axle truck to determine suitability of



the base material. The embankments shall be formed by placing material in successive horizontal layers of no more than twelve (12) inches in thickness, loose depth. Densities shall be verified at minimum two hundred (200) foot interval and shall meet or exceed ninety-five percent (95%) standard proctor. No organic material shall be permitted in the embankments. No rock or similar irreducible material with a maximum dimension greater than twelve (12) inches shall be buried or placed in embankments unless approved by the Planning Commission staff. Small boulders or rock layers shall not be deposited within two (2) feet of sub-grade elevation.

- F. **CUT SECTION EXCAVATION** – Cut sections should be excavated to the required typical section and any unsuitable material encountered shall be removed and the area backfilled in six (6) inch horizontal layers and thoroughly compacted before successive layers are placed. Densities shall be run at minimum two hundred (200) foot intervals and shall meet or exceed ninety-five percent (95%) standard proctor.
- G. **SOLID ROCK EXCAVATION** – If solid rock is encountered in connection with the grading operation, the solid rock shall be removed to a depth of twelve (12) inches below sub-grade elevation and backfilled to meet the grading and embankment requirements.
- H. **INSPECTION OF CULVERT PIPE AND OTHER DRAINAGE OPERATIONS** – The Planning Commission and developer’s representatives will inspect or be present when the installation of culvert pipe and retention/detention areas are started. The concrete headwall construction and various other concrete items, such as sinkhole boxes, drywells, etc., will be inspected. The Planning Commission’s representative shall be notified twenty-four (24) hours before backfilling storm pipe so they may inspect the drainage devices before backfill of major items occurs. In general reference, the overall proposed drainage pattern of the subdivision will be reviewed extending from the summit of the drainage area, along the meandering ravines and ditches to their terminus, whether it be to a natural waterway, natural sinkhole or ponding area and drywell to determine if the drainage pattern is substantially in accordance with the approved plans. Drainage operations shall be installed during the initial operations of construction and remain functional (protected from silt and erosion issues) throughout construction. Upon completion of the stormwater drainage system the developer’s contractor shall be required to furnish the Planning Commission a report conducted by an approved and pre-qualified Kentucky Transportation Cabinet certified video and pipe inspection contractor. The video tests shall include the video and written report detailing pipe deformation, pipe deflection, pipe grade, joints and connections in accordance with KYTC pipe inspection specifications. Any deficiencies reported shall be corrected prior to a reduction of the initial bond.
- I. **UTILITY CONSTRUCTION** – Utilities outside of right-of-way shall be installed according to the specification of the individual utility provider.

1. Sewer trench shall be installed according to Bowling Green Municipal Utilities/Warren County Water District specifications including backfilling operations.
2. Water trench shall be installed according to Bowling Green Municipal Utilities/Warren County Water District specifications including backfilling operations.
3. In the event of a conflict between the engineer's plan or Planning Commission's Subdivision Regulations and utilities' specifications, utilities' specifications shall govern.

J. **UTILITY/STORM SEWER TRENCH BACKFILL REQUIREMENTS WITHIN RIGHT-OF-WAYS** – The following requirements shall apply to all utilities, storm sewer, casings and conduits (collectively known as pipes) under pavements within right-of-way, and storm sewer within dedicated public easements outside of right-of-way. References to flexible and reinforced concrete pipe below are for purposes of storm sewer installation.

1. Flexible pipe trenches less than four (4) feet deep (measured from bottom of pipe to subgrade elevation)
 - a) Shall be backfilled with materials and in a manner approved by the Kentucky Transportation Cabinet (KYTC) specifications or approved crusher run stone (crusher run stone must come from the job site during the course of rock excavation) or flowable fill to subgrade elevation.
2. Reinforced concrete pipe trenches under pavements less than four (4) feet deep (measured from bottom of pipe to subgrade elevation) or when the top of the pipe is within one (1) pipe diameter of the subgrade elevation
 - a) Shall be backfilled with materials and in a manner approved by KYTC specifications or approved crusher run stone (crusher run stone must come from the job site during the course of rock excavation) or flowable fill to subgrade elevation.
3. Flexible pipe trenches more than four (4) feet deep (measured from bottom of Pipe to subgrade elevation)
 - a) Shall be backfilled with materials and in a manner approved by KYTC specification or approved crusher run stone (crusher run stone must come from the job site during the course of rock excavation) or flowable fill to an elevation four (4) feet above the bottom of the trench, or;

- b) Shall be backfilled with materials and in a manner approved by KYTC specification or approved crusher run stone (crusher run stone must come from the job site during the course of rock excavation) or flowable fill to an elevation one (one (1) foot above the top of pipe, whichever provides greater pipe cover.
- 4. Reinforced concrete pipe trenches under pavements more than four (4) feet deep (measured from bottom of pipe to subgrade elevation) or when the top of the pipe is not within one (1) pipe diameter of the subgrade
 - a) Shall be backfilled with materials and in a manner approved by KYTC specification or approved crusher run stone (crusher run stone must come from the job site during the course of rock excavation) or flowable fill up to the top of the pipe and either granular backfill, flowable fill or embankment material in six inch (6") lifts to an elevation of one (1) foot above the top of the pipe.
- 5. The remainder of the flexible, reinforced concrete, and utility pipe trench backfill shall be constructed with stone or unclassified materials soils mixed with shot rock or excavated stone.
 - a) Compaction of stone backfill shall be one (1) foot or less lifts, placed with mechanical effort.
 - b) Placement of unclassified materials shall be placed in lifts not to exceed twice the nominal size diameter (one (1) foot maximum) of the stone material, placed with mechanical effort, up to two (2) feet below subgrade elevation. When possible, density testing should be performed at random locations and intervals not to exceed two hundred (200) feet and every three (3) feet of fill, or as directed by the Planning Commission staff.
 - c) Clean soil (without rock) backfill shall be compacted to ninety-five percent (95%) standard proctor density to within one (1) foot of the subgrade elevation. Nuclear density testing shall be performed at random locations and intervals not to exceed two hundred (200) feet and every three (3) feet of fill, or as directed by the Planning Commission staff.
- 6. All reinforced concrete pipe trenches outside of pavements shall be placed on three inches (3") of uncompacted granular bedding material and then backfilled according to Section 6.2.H.5.
- 7. Trench width shall be a width necessary to lay the pipe and properly compact the backfill material (a minimum twelve inches (12") on each side of the installed pipe) and to meet other industry requirements.

Utility pipe bedding and the utility pipe envelope (backfill immediately adjacent to the pipe) shall meet the specification of the utility company and/or the pipe manufacturer's recommendation if different from #9 stone, or flowable fill. Careful attention shall be given to backfilling below the pipe spring line.

8. Backfill Around Structures: Special attention shall be given to backfill around structures (such as manholes and curb inlets) to ensure adequate compaction of backfill. Compacted dense grade aggregate (or flowable fill) shall be used twenty-four inches (24") adjacent to the structure then approved earth fill may be used in appropriate compacted lifts.
9. Acceptance of trench backfill shall be by the Planning Commission staff and may be required to be verified by density testing. The Planning Commission staff reserves the right for additional specifications and/or requirements as site conditions exist.

K. **INSPECTION OF SUBGRADE PREPARATION** – The Planning Commission and developer's representatives will inspect the preparation and completion of subgrade. A copy of the proctor test shall be supplied to the Planning Commission staff at the pre-application conference. The subgrade shall meet the density requirement of ninety-seven percent (97%) of standard proctor density. Test results shall be submitted to the Planning Commission staff for approval. As the minimum, the area will be proof rolled with a loaded tandem axle truck to determine suitability of the sub-grade material. Nuclear density testing is preferred when material permits and must be done in the presence of the Planning Commission's representative. Density tests will be required on the compacted subgrade at random locations and intervals not to exceed two hundred feet (200'). Sampling and testing is further defined in Appendix F. The roadway cross-section (including crown and sidewalk areas) shall be checked for proper cross-slope on fifty foot (50') intervals. The Planning Commission and developer's representatives must be present for the density and cross-section tests and must give twenty-four (24) hour notice. The contractor shall stop operations until approved by the Planning Commission Executive Director.

L. **INSPECTION OF CURB AND GUTTER CONSTRUCTION** – Concrete curb and gutter materials and construction shall be per requirements of the current edition of the Kentucky Transportation Cabinet's Standard Specifications for Road and Bridge Construction. The Planning Commission and developer's representatives must be scheduled and present for the tests, and must give twenty-four (24) hour notice. The contractor shall stop operations until approved by the Planning Commission Executive Director.

M. **INSPECTION OF DENSE GRADED AGGREGATE (DGA)** – Prior to commencing DGA construction, the developer's representative shall provide, at a minimum, a gradation test for the DGA. The Planning Commission and developer's representatives will inspect



the placing, shaping and compaction of the dense grade aggregate base construction. DGA shall be pugged (minimum 5% moisture by weight) and placed to proper grade and cross slope with a mechanical paver or approved spreader box such that further grading is minimal. A box spreader may be used as long as the contractor can demonstrate that it can be placed without segregation and can meet Kentucky specifications for compaction. Tailgating is not permitted. Before the course will be considered acceptable, the course shall meet the required eighty-four percent (84%) of solid density or a control strip shall be constructed to obtain target density (historically in Warren County, Kentucky, aggregate sources have produced mixes that had a specific gravity of 2.65 and solid density of 165 pcf) with subsequent compaction meeting ninety-five (95%) of target density. The Planning Commission staff may allow deviation from this standard, or target density, or proof rolls if field conditions are justified. A representative sampling of nuclear density testing shall be done in the presence of the Planning Commission and developer's representatives. At a minimum, density tests will be required on the compacted DGA at random locations and intervals not to exceed two hundred (200) feet. Test results shall be submitted to the Planning Commission staff for approval. Periodic inspection will be made during the construction of this item. All density tests shall be certified by a licensed civil engineer. Sampling and testing is further defined in Appendix F. The roadway cross-section shall be checked for proper cross-slope on fifty (50) foot intervals. The Planning Commission and developer's representatives must be scheduled and present for the density and cross-section tests and must give twenty-four (24) hour notice. Immediately after the dense DGA/CSB has been applied, the quantity used will be compiled to determine if the quantity per square yard has been constructed. Weigh tickets and summary shall be submitted to the Planning Commission staff for approval. The contractor shall stop operations until approved by the Planning Commission.

- N. **INSPECTION OF ASPHALT BASE CONSTRUCTION** – The asphalt mixture shall be provided by a Kentucky Transportation Cabinet (KYTC) certified asphalt plant. Prior to commencing asphalt base construction, the developer's asphalt supplier shall provide, at a minimum, a job mix formula for the asphalt base, which includes tests and calculations for percent air voids, VMA, maximum specific gravity, bulk specific gravity and percent liquid asphalt content. The Planning Commission and developer's representatives will review the beginning of the asphalt base application and check the truck to determine if they are equipped with heavy canvas covers to protect the material from the elements and retain the heat in the mix while in transit. At a minimum, the temperature of the material will also be checked when it arrives on the project site. The course shall meet the required minimum ninety-three percent (93%) of solid volume and maximum ninety-six percent (96%) of solid volume before it will be acceptable. A representative sampling by PQI, coring or nuclear density testing shall be done in the presence of the Planning Commission and developer's representatives. At a minimum, density tests will be required on the compacted asphalt base at random locations and intervals not to exceed two hundred (200) feet. Test results shall be submitted to the Planning Commission staff for approval. Periodic inspections will be made as the operations progress. Sampling and

testing is further defined in Appendix F. The Planning Commission and developer's representatives must be scheduled and present for the density test. All test requests must have at least twenty-four (24) hour notice. To assure the designed structural number is achieved, the median of field measurements must equal or exceed the design thickness. If a deficiency develops in the asphalt base course of any consequence, adjustments will be made in the overlying or succeeding asphalt surface course to compensate for the deficiency. The developer's representative or contractor shall obtain, for the information of the Planning Commission staff, the test reports showing, at a minimum, the test results and calculations for percent air voids, VMA, maximum specific gravity, bulk specific gravity and percent liquid asphalt content. Liquid asphalt shall be from a state approved source. Weigh tickets and summary shall be submitted to the Planning Commission staff for approval. At this time, the contractor shall check manholes, valve boxes and other obstacles within the pavement and adjust them to match the finished cross section, if needed. The contractor shall stop operations until approved by the Planning Commission. The Planning Commission staff reserves the right to require core samples of the finished asphalt base if insufficient thickness, poor compaction or other deficiencies are suspected.

- O. **INSPECTION OF ASPHALT TACK COAT AND ASPHALT SURFACE APPLICATION** – Prior to commencing asphalt surface construction, the developer's representative shall provide, at a minimum, a job mix formula, which includes tests and calculations for percent air voids, VMA, maximum specific gravity, bulk specific gravity and percent liquid asphalt content for the asphalt surface. The Planning Commission and developer's representatives shall review the application of asphalt tack coat and the application of the asphalt surface course. In like manner as the base construction, the trucks will be reviewed to determine if they are equipped with canvas covers to protect the material while in transit. At a minimum, the temperature of the mix when it arrives on the project site will be checked. The developer's representative or contractor shall obtain for the information of the Planning Commission staff the test reports showing, at a minimum, the test results and calculations for percent air voids, VMA, maximum specific gravity, bulk specific gravity and percent liquid asphalt content. Liquid asphalt shall be from a state approved source. Weigh tickets and summary shall be submitted to the Planning Commission staff for approval. Periodic inspection will be made of this construction. The Planning Commission and developer's representatives must be scheduled and present for the construction (all test requests must give twenty-four (24) hour notice). To assure the designed structural number is achieved; the median of field measurements must equal or exceed the design thickness. The Planning Commission staff reserves the right to require core samples of the finished asphalt surface if insufficient thickness, poor compaction or other deficiencies are suspected. Should the developer elect to delay placement of asphalt surface then the design structural number must be met with placement of the dense grade and asphalt base mats.
- P. **RIGID PAVEMENT CONSTRUCTION** – See requirements in Appendix F.

- Q. **CONSTRUCTION REVISIONS** – Changes to the construction plans shall be submitted to the Planning Commission for approval prior to continuing work affected by the changes. Review will be performed in a timely manner to minimize delay.
- R. **PLANNING COMMISSION AUTHORITY** – The Planning Commission reserves the right to stop work being performed improperly on this project by the contractor or any subcontractor until conditions can be agreed upon which work can proceed.
- S. **CITY / COUNTY ENGINEER OR PUBLIC WORKS AUTHORITY** – The County or City Public Works Director and/or Engineer will inspect the active construction occasionally, and has the same inspection and enforcement authority as Planning Commission staff to enforce these regulations.
- T. **INSPECTION OF FINAL DRESSING** – The Planning Commission and developer’s representatives will review the final dressing of shoulder, ditches, buffer areas, the back-slopes in cuts, embankment slopes and all other disturbed areas within the subdivision. Soils and amendments suitable for vegetation must be placed on any slopes that are to be seeded. Improvements will not be accepted until a good stand of grass is achieved and it appears unlikely that damages will occur due to heavy rain.
- U. **STREET NAME SIGNS AND TRAFFIC CONTROL DEVICES** – Refer to the appropriate Public Works Department.
- V. **INSPECTION AT COMPLETION OF CONSTRUCTION** – When all items, appurtenances and incidentals have been completed in compliance with the approved subdivision construction plans, the Planning Commission staff will request the City and/or County Engineer to attend a semi-final inspection of the subdivision in its entirety, and for final acceptance. The final inspection will be made by the Planning Commission staff, the County or City Engineer or Public Works Department, the developer’s engineer and the contractor.
1. **ACCEPTANCE OF DRYWELLS** – Drywells shall be inspected and retested for functionality in accordance with Section 6.4.M prior to acceptance by the local jurisdiction.
 2. **ACCEPTANCE OF SIDEWALKS** – Sidewalks will be inspected by the City, County or Planning Commission representative prior to and during concrete placement. Sidewalk ramps and transition areas shall be the responsibility of the developer as included in the construction contract and shall be installed when curb and gutter are constructed.
- W. **“AS-BUILT” PLANS** – When all improvements have been made and approved, a digital copy of “as-built” plans shall be submitted to the Planning Commission staff. The plans shall show the finished plan and profile of all streets, finished contours and volume of all retention/detention basins and profiles of all major drainage ditches, inlet/outlet



elevations of all pipe and storm sewer and all other pertinent construction. "As-built" of the gutter flow lines, edges of pavement and centerline of road shall be done prior to the surface course or as directed by the Planning Commission. Adjustments to the grade shall be made, if needed, prior to proceeding with surface pavement construction. The "as-built" plans shall be dated and signed by a licensed civil engineer or surveyor. State statutes and regulations shall govern the division of work performed by each profession.

- X. **ADMINISTRATIVE REVIEW FEES** – A fee for review and verification shall be paid prior to the commencement of construction or recordation of plat, whichever shall first occur. This review and verification is not a release of the responsibility of the developer's engineer and surveyor to certify that the improvements have been completed according to design drawings and specifications. The purpose of the Planning Commission's review and verification is a review for compliance and verification of methods and adherence to plans for the accepting agency. Inspection fees may be re-assessed for projects in default based on all or a portion of the original contract. Review fees are established by the Planning Commission (See Fee Schedule).



ARTICLE 8

DEFINITIONS

SECTION 8.1 Use of Terms

All words herein used in the present tense shall include the future tense, the singular shall include the plural, and plural the singular.

The word "shall" is mandatory, not permissive or directory.

The word "used" includes arranged, designed or intended to be used.

SECTION 8.2 Defined Terms

Unless otherwise provided, the following words and phrases are defined as follows.

ADA: Americans with Disabilities Act.

ALLEY: A service road usually located at the rear of a property. It is usually only wide enough for a single vehicle. It may be used as a means to gain access to the rear of a property for garage or dumpster service, but it may not be considered as road frontage. No addresses will be given from an alley. An alley may run in any direction.

AS-BUILT PLANS: Documents that depict the actual configuration of installed improvements.

AVERAGE DAILY TRAFFIC (ADT): The number of vehicles that pass a certain point during a twenty-four (24) hour period.

BACKGROUND TRAFFIC: The existing traffic levels without the proposed development for current conditions or projected traffic excluding the proposed development and including surrounding developments at built-out conditions.

BINDING ELEMENTS: See "Development Plan Conditions." The term "Development Plan Conditions" shall substitute for any prior reference to the term "Binding Elements."

BLOCK: A surface of land area separated and distinguished from other surface land areas by visible physical boundaries such as streets, railroads, rivers, extremely steep land or other physical barriers.

BORDER STRIP: A strip of land that is of insufficient width/depth to be considered a buildable lot that only serves to separate a dedicated public way from lands that would otherwise be adjacent. Border strips have no effect on otherwise adjacent properties with respect to access.



BOUNDARY DESCRIPTION: The metes and bounds text that traces the outer perimeter of the property.

BUFFER STRIP: Grassed or landscaped area between the curb and gutter or the shoulder and the sidewalk.

BUILDING: A structure, but not a mobile home located in a mobile home park, built or constructed for the support, shelter or enclosure of persons, animals, chattels or property of any kind and having a fixed base on or fixed connection to the ground.

BUILDING SETBACK LINE: A line across a lot beyond which no building may extend, as established by ordinance. A building setback line in some instances may coincide with the property line.

BUILT-OUT: The fully developed condition of the property.

CASH SURETY: Cash used as the guarantee that improvements outlined in a subdivision plan or development plan will be completed.

CORPORATE SURETY BOND: A performance bond provided by an insurance company that guarantees that improvements outlined in a subdivision plan or development plan will be completed.

COMMISSION: Means the City-County Planning Commission of Warren County.

COMMON RECREATIONAL SPACE: The area of a subdivision open and unobstructed to the sky and which is legally accessible to and usable by all residents of the development. Common Recreational Space may include but not be limited to wooded areas, watercourses, greenway trails and recreational facilities (i.e. swimming pools, golf courses, playgrounds, soccer practice fields, picnic or passive play areas). These areas are not to be part of any drainage areas. Property located within buffer strips, sidewalks and land located within the right-of-way (excluding designated greenway trails) are excluded and do not count as Common Recreational Space.

COMPACTION: The state of the soil matrix measured by the density relative to a standard determined by laboratory analysis.

CONSERVATION SUBDIVISION: Any area, established by and governed by the Zoning Ordinance of Warren County, Kentucky, consisting of at least forty (40) contiguous acres or greater to allow residential developments that permit flexibility of design and efficient uses of the land where at least half of the land is reserved in common ownership for a twenty (20) year period; to preserve sensitive natural resources such as groundwater, floodplains, wetlands, streams, steep slopes, woodlands and wildlife habitat; to conserve scenic views and view sheds of open spaces; to preserve agricultural land or practices; and to allow for an alternative and



optional development style with regard to sidewalks, street widths, street lights, curb and gutter or other development requirements.

CONSTRUCTION PLANS: All drawings, standards and specifications needed to complete improvements.

CONTROL MONUMENTS: Survey markers set in accordance with 201 KAR 18.150 used to locate boundaries and installed improvements.

COVENANTS: Rules that are agreed to by owners that govern the subject property.

CULVERTS: Underground conduits used to convey storm water runoff flows.

DEED RESTRICTIONS: Requirements stated in the property deed that govern activities on that property.

DENSE GRADE AGREGATE (DGA): Crushed aggregate containing a graded mix that will stabilize when compacted.

DETENTION BASIN: A drainage storage structure that will delay the discharge of accumulated storm water runoff.

DEVELOPER: An individual, partnership, corporation or other legal entity or agent thereof which undertakes the activities covered by these regulations. Inasmuch as the subdivision plan drawings are merely a necessary means to the end of assuring development, the term developer includes subdivider, owner, builder, etc., although the persons and their precise interests may vary at different project stages.

DEVELOPMENT PLAN CONDITIONS: Those conditions agreed to by the Planning Commission and the developer which are imposed upon a development plan and which control the development and use of the property in question.

DRAINAGE PLAN: A detailed study and design of the storm water flow and control within a designated area that minimizes erosion, sedimentation and flooding.

DRAINAGE STRUCTURE: Physical elements of the drainage plan. These include but are not limited to ditches, pipes, basins and discharge equipment.

EASEMENT: The right to use another person's property, but only for a limited and specifically named purpose. The owner generally may continue to make restricted use of such land since he has given up only certain, and not all, ownership rights.

ENGINEER: A qualified person registered and currently licensed by the Kentucky State Board of Licensure for Professional Engineers and Land Surveyors.



EROSION PROTECTION: Stabilization measures used to prevent natural elements from disturbing soil.

FILL: Imported material used to raise the elevation of land.

FINISHED FLOOR ELEVATION (FFE): The minimum elevation that can be used for construction of an occupied level of a structure.

FLOOD, 100-YEAR: A flood having a one percent (1%) chance of being equaled or exceeded in any given year.

FLOOD or FLOODING: A general and temporary condition of partial or complete inundation of normally dry land areas from:

- a. the overflow of inland waters; or
- b. the unusual and rapid accumulation or runoff of surface waters from any source.

FLOOD, BASE: A flood having a one percent (1%) chance of being equaled or exceeded in any given year (commonly referred to as the 100-year flood).

FLOOD HAZARD AREA OR SPECIAL FLOOD HAZARD AREA: Any area inundated by the 100-year flood as delineated by the Flood Insurance Rate Map (FIRM) or the Flood Hazard Boundary Map (FHBM).

FLOOD INSURANCE RATE MAP (FIRM): An official map of a community on which the Federal Emergency Management Agency has delineated both the areas of special flood hazard and the risk premium zones applicable to the community.

FLOOD INSURANCE STUDY: The official report provided by the Federal Emergency Management Agency. The report contains flood profiles, as well as the Flood Hazard Boundary map and the water surface elevation of the base flood.

FLOODPLAIN: Any land area susceptible to being inundated by water from any source.

FLOODWAY: The channel of a river or other watercourse or the depressed area of a sink and the adjacent land area that shall be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than an elevated height.

FLOOR AREA RATIO (FAR): The ratio of gross floor area of all structures on a lot to total lot area. The FAR is calculated by taking the total square footage of a building(s) on a lot and dividing it by the square footage of the lot the building is located on.



FRONTAGE: The length of the front lot line measured at the street right-of-way line. A property line that abuts a fully controlled access street and which permanently has no access to that street shall be deemed to not have frontage. An alley shall not be used to determine legal frontage when subdividing a piece of property.

GRADE: The inclination, with the horizontal, of a road, unimproved land, etc., which is generally expressed as a ratio of the vertical rise to the horizontal distance.

HEADWALL: The structure used to stabilize the inlet or outlet of a culvert.

HORIZONTAL PROPERTY: Property developed under the rules and regulations as defined by Kentucky Revised Statutes in Chapter 381.805 et. seq. (Also referred to as condominiums)

HOMEOWNERS ASSOCIATION: A chartered organization representing property owners in a defined area.

IMPROVEMENTS: Physical changes made to raw land, and structures placed on or under the land surface, to make the land more usable for man's activities. Typical improvements in these regulations would be grading, street pavement, curbs, gutters, drainage ditches, storm and sanitary sewers, utility lines of all types, street name signs, property number signs, trees, etc.

JOINT AGENCY PLAN: A plan sheet showing the designed layout of all utilities. The original plan sheet shall be certified by all utilities that will service the project site. Copies of this plan sheet shall be included in the construction plans. The original shall be kept on file at the office of the Engineer of Record until final acceptance for the project has been given.

LANDSCAPE ARCHITECT: A qualified person currently licensed by the State Board of Examiners and Registration of Landscape Architects of Kentucky.

LARGE TRACT PLAT: The optional record document that is used to define twenty (20) or more acres by deed, where no improvements are being proposed, for informational and/or financing purposes only.

LEGISLATIVE BODY: The governing organization that has jurisdiction and responsibility for accepting the public facilities constructed on the property.

LETTER OF CREDIT: A financial instrument that guarantees the fulfillment of the developer's construction contract obligations.

LEVEL OF SERVICE: A scale that measures the amount of traffic that a roadway or intersection can accommodate, based on such factors as maneuverability, driver dissatisfaction and delay.

LOT: A portion or parcel of land considered as a unit, in single ownership and not divided by a street. The lot does not include any land within the right-of-way of a public or private street upon which said Lot abuts, even if the ownership to such right-of-way is in the name of the owner of the lot.



MEDIAN: The element that divides traffic lanes and prevents traffic from crossing.

MONUMENTS: Survey markers set to 201 KAR 18.150 used to locate boundaries and installed improvements. Intended to be located in an undisturbed area and used to establish reliable control for the area during construction and for future use.

NON-BUILDABLE AREA: The portion of a lot rendered unsuitable for location of a structure due to easements or physical restrictions.

NON-CONFORMING LOT OF RECORD: A lot, the area, dimensions or location which was lawful prior to the adoption or revision of an amendment to the Zoning Ordinance and these regulations, but which fails by reason of such adoption, revision or amendment to conform to the present requirements of the zoning district.

OPEN SPACE: The area of a lot, to be maintained by the property owner, open and unobstructed to the sky. Open space may include, along with natural environmental elements, formal landscaped areas, wooded areas, watercourses, greenways trails, swimming pools, tennis courts and playgrounds. Open space shall not be deemed to include driveways, travelways, parking lots, storage areas for vehicles or areas in any drainage areas or permanent drainage easements. Property located in buffer strips and/or public right-of-way (excluding a designated greenway) does not qualify as open space.

OPEN SPACE, COMMON: The area of a subdivision open and unobstructed to the sky, which is legally accessible to and useable by all residents of the development. Common open space is to be maintained by the developer until at least fifty percent (50%) of the lots in the subdivision have been sold and developed. At such time, the developer shall have the option to transfer ownership of the common open space to either the local municipality or governing body or a properly constituted homeowners association through transfer of a deed.

PAVEMENT WIDTH: The dimension from face of curb to face of curb for curb and gutter roads or the dimension from edge to edge of hard surface for other roadways.

PEAK HOUR: The traffic count that represents the highest volume of traffic in a one (1) hour period.

PLANNED UNIT DEVELOPMENT: A development of land under unified control which is planned and carried out as a whole or programmed in a series of development stages and which adheres to a development plan approved by the Planning Commission. The development may include a mixture of land uses, clustering of residential units of varying types and common recreational/open space and other site features and improvements through flexible regulations, which encourage creative design and preserve the natural features and foliage of the site.

PLANNING COMMISSION: The City-County Planning Commission of Warren County, Kentucky.



PRELIMINARY PLAT: The initial plat drawing of the lots, utilities and road layout in conformance with all applicable sections of the Subdivision Regulations to be reviewed by Planning Commission staff.

PRIVATE EASEMENTS: Noted grants of access or exclusion of use that are placed on property.

PUBLIC IMPROVEMENTS: Facilities that are necessary for access or use which are installed for the benefit of the general population.

PUBLIC PARK LAND: Open lands developed for the use of the general population. Defined as the area of a subdivision open and unobstructed to the sky and which is owned by the local municipality or government and is legally accessible to the public. These lands may include, along with natural environmental elements, formal landscaped areas, wooded areas, watercourses, greenway trails, recreational facilities such as public swimming pools, public golf courses, playgrounds, picnic or passive play areas.

RECORDING PLAT: The recording document for subdivisions containing all required information, including signatures and notations to be recorded in the Warren County Clerk's office.

RETENTION BASIN: A drainage storage structure that prevents surface runoff from passing to other surface structures or facilities.

RIGHT-OF-WAY: A strip of land dedicated to the public to accommodate access and/or utilities to lots or tracts. The usage of the term "right-of-way" for land platting purposes shall mean that every right-of-way shown on a recording plat is to be separate and distinct from the lots or parcels adjoining such right-of-way and not included within the dimensions or areas of such lots or parcels.

ROADWAY: That portion of a street intended for vehicular traffic.

SLOPE: The inclined portion of land. The degree of slope is normally expressed in terms of the amount of vertical change for a certain amount of horizontal change.

SOIL EROSION AND SEDIMENT CONTROL PLAN: Documents that show the means that will be employed to stabilize the surface soils and to prevent any eroded soil from leaving the property.

STREET, ARTERIAL: A street primarily for moving vehicles safely and efficiently, providing direct connection with major state, federal, and interstate roadways, and providing connection between points of heavy traffic generation and neighborhoods at moderate speeds. Arterial streets contain directional flow separated by mountable, nonmountable or barrier medians and are served by one (1) to three (3) lanes in each direction.



STREET, CIRCLE: A street that starts and terminates onto the same street.

STREET, COLLECTOR: A street that functions to conduct traffic between major arterial streets, minor activity centers and local streets and provides access to adjacent property. Collector streets contain a directional flow served by one (1) or two (2) lanes in each direction and permits on-street parking.

STREET, COMMERCIAL-INDUSTRIAL: A local street with two (2) ends open to vehicular traffic or a cul-de-sac which serves to conduct commercial traffic to and from places of business or industrial establishments and constructed to sustain the weight and safety requirements imposed by commercial-oriented traffic.

STREET, CUL-DE-SAC: A local street with only one (1) end open to vehicular traffic and the other end terminated by a permanent vehicular turnaround. The length of a cul-de-sac is measured along the centerline of the street from the centerline intersection of a through street to the center of the cul-de-sac bulb radius.

STREET, DEAD-END: A street similar to a cul-de-sac except that it provides no turnaround circle at the closed end and are not allowed in any proposed subdivision.

STREET, EXPRESSWAY: A highway for through traffic, with full control of access and grade separations at intersections. Arterials are the only class of street that generally should be connected with expressways at interchange points.

STREET, FRONTAGE ROAD: A street used for the exclusive purpose of providing access to properties adjacent to arterial streets, limited access highways or railroad rights-of-way. A frontage road may include the terms backage road or rear frontage road. Frontage roads provide for two (2) way traffic at a slow rate of speed and are parallel to the arterial street, limited access highway or railroad right-of-way.

STREET GEOMETRICS: All dimensions describing the physical requirements or characteristics of a roadway.

STREET, HALF: A partial street constructed on the boundary of a property typically only on one side of a centerline.

STREET, LOCAL: Streets providing vehicular access and services to abutting property. A local street has a directional flow served by one (1) lane in each direction and allows on-street parking. The layout of a local street should discourage through traffic.

STREET, PRIVATE: A means of access within a planned developed project that gives access to a public street and is owned and maintained by the property owners.

STREET, PUBLIC: A publicly maintained roadway other than an alley, constructed within the boundaries of an officially deeded and accepted public right-of-way, which affords a primary means of access to abutting property.



STREET, RESIDENTIAL: A local street with two (2) ends open to vehicular traffic and serving to conduct traffic to and from dwelling units to other streets within the street system.

STREET, STUB: A local street used only as a temporary turnaround and constructed as part of a continuing street plan by making provisions for future connections as adjacent property develops. If the stub street is more than one (1) lot in length then a turnaround must be installed.

STREET, THOROUGHFARE: A street that serves to move traffic through an area or neighborhood.

STREET, THROUGH: A local street where both ends terminate at intersections with another street(s).

SUBDIVISION: Any land, vacant or improved, which is divided or proposed to be divided into two (2) or more lots, parcels, sites, units, plots, condominiums, tracts or interests for the purpose of offer, sale, lease or development whether immediate or future, either on the installment plan or upon any and all other plans, terms and conditions. Subdivision includes the division or development of residentially and non-residentially zoned land, whether by deed, metes and bounds description, devise, intestacy, lease, map, plat or other recorded instrument. Subdivision includes resubdivision and condominium creation or conversion.

SUBGRADE: The supporting material immediately below the design pavement or foundation section.

SURVEYOR: A person licensed as a Land Surveyor by the Kentucky State Board of Registration for Professional Engineers and Land Surveyors.

TANDOM AXLE TRUCK (LOADED): A vehicle weighing sixteen (16) to twenty (20) tons or similar equipment capable of producing an equivalent loading.

TOPOGRAPHIC SURVEY: A generalized description of the existing drainage conditions for a site. At a minimum, ten (10) foot contours from a USGS 7.5 minutes series topographic quadrangle map. A graphical representation of the existing drainage structure locations, along with a narrative describing the existing drainage conditions for the site and the sizes of existing drainage structures, should be included.

TRAFFIC IMPACT STUDY: The collection, processing and report of data showing current and future conditions of vehicular movement.

VEHICLES PER HOUR (VPH): The number of vehicles that pass a certain point during a sixty (60) minute period.

ZERO LOT LINE: The location of a building on a lot in such a manner that one of the building's sides rests directly on a property line.



ZONING ORDINANCE: The Joint Zoning Ordinance of Warren County and the Cities of Bowling Green, Oakland, Plum Springs, Smiths Grove and Woodburn.

