

SWQMP Appendix Q

**Subdivision Regulations: Article 6-7 – Stormwater Disposal Standards and
Article 6-11 – Standards for Environmentally Sensitive Areas and Geologic
Hazard Areas**

6-6 SEWAGE DISPOSAL STANDARDS - Every subdivision shall be provided with a sewage disposal system approved by the Lexington-Fayette County Health Department, the Kentucky Division of Water, the Division of Engineering and the Planning Commission. Construction shall conform to the Standard Drawings prepared and approved by the Division of Engineering and the Commissioner of Public Works and the Division of Engineering Technical Manuals.

6-6(a) SEPTIC TANKS - Septic tanks may be permitted for lots of ten (10) acres or more in size if public sanitary sewers are not immediately available to the property. For any proposed subdivision utilizing septic tanks, the Lexington-Fayette County Health Department and the Division of Planning shall review the general suitability of the site for septic tank use prior to Planning Commission action. In areas of questionable suitability, the Planning Commission may postpone action on the subdivision plan until the developer has obtained the approval of the Health Department. In all cases, no building permits shall be issued until the Health Department has issued a septic tank permit, and notes shall be required on final subdivision plans to this effect.

6-6(b) SANITARY SEWAGE SYSTEM - Except where septic tanks are permitted, every subdivision shall be provided with a public sanitary sewage disposal system. However, the Commission may approve subdivisions utilizing a privately owned system if the treatment plant is in existence at the time of adoption of these Subdivision Regulations, and the Health Department and the Kentucky Division of Water have determined that the plant has the capacity to serve the development without necessitating the expansion of any plant. Design and construction of the sanitary sewer system, whether public or private, shall conform to the requirements of the Division of Engineering Technical Manuals and the Standard Drawings.

6-6(c) SANITARY SEWER EASEMENTS - Easements for sanitary sewers shall be shown on the final subdivision plan at widths and locations specified in the Sanitary Sewer and Pumping Station Manual. Sanitary sewer easements may be combined with utility and other easements if sufficient widths are provided; however, except for necessary crossing points, no sanitary sewer easement may be combined with a utility easement containing underground electric or natural gas lines, unless sufficient clearance between the facilities is provided and documented. Release or modification of sanitary sewer easements shall require the expressed approval of the Urban County Council. Encroachments and other uses within sanitary sewer easements shall be at the approval of the Commissioner of Public Works or the Commissioner's authorized agent.

6-6(d) RELATIONSHIP OF LOTS AND STRUCTURES TO SANITARY SEWER MANHOLES - Every

lot shall be served by a gravity sewer lateral, and the design and layout of the subdivision shall reflect this requirement. A note shall be required on all final record plans stating: "All structures shall have a floor, that is not partially or completely underground, that is at least one (1) foot above the elevation of the nearest downstream manhole lid. Sewage from plumbing connections below that floor shall be pumped and discharged into the structure's sewer line."

6-7 STORMWATER DISPOSAL STANDARDS - Every subdivision shall provide satisfactory drainage of stormwater by means of underground sewer pipes and/or constructed channels, provided that such stormwater drainage system conforms to the requirements of this Article, the Division of Engineering Stormwater Technical Manual and Standard Drawings, and the Lexington-Fayette County Health Department. Failure to comply with the requirements of Stormwater Disposal Standards during construction, or to properly maintain the easements and/or facilities required by these standards during or after construction shall be a violation subject to a civil citation, as provided in Article 1 of these Subdivision Regulations.

6-7(a) FLOODPLAINS AND FLOODWAYS - Any construction within a designated floodplain or floodway shall conform with the provisions of Article 19 of the Zoning Ordinance. Notes and restrictions on the preliminary or final plan may be required by the Planning Commission to implement Article 19.

6-7(b) RELATIONSHIP OF STORM SEWERS TO SANITARY SEWER SYSTEMS - No stormwater drainage system may be designed, constructed or connected so as to flow into any public or private sanitary sewer system.

6-7(c) STORMWATER BEST MANAGEMENT PRACTICES - Where required by the Stormwater Manual, stormwater best management practices shall be provided by the developer.

6-7(c)(1) SINGLE FAMILY, TWO-FAMILY, AND CERTAIN MULTI-FAMILY RESIDENTIAL AREAS - In single-family and two-family residential areas, when detention ponds, extended detention ponds, wet ponds, constructed wetlands and infiltration basins are used for stormwater management, they shall be dedicated to the Lexington-Fayette Urban County Government and shall be located on separate lots with adequate access for maintenance. In multi-family developments, such facilities shall be dedicated to the Lexington-Fayette Urban County Government when each multi-family structure is proposed to be located on a separate lot with access to a public street.

6-7(c)(2) OTHER RESIDENTIAL, OFFICE, BUSINESS AND INDUSTRIAL AREAS - In all other

multi-family residential, business, office and industrial areas, all stormwater best management practices shall be owned and maintained by the property owner. No stormwater best management practices shall be subdivided so as to be a part of more than one lot, and all shall be connected to an adjoining buildable lot.

6-7(d) STORM DRAINAGE EASEMENTS - Easements for stormwater drainage systems and access to stormwater best management practices shall be shown on the final record plan. Special notes relating to the maintenance of such easements may be required by the Planning Commission on the final subdivision plan. 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 for necessary crossing points, unless sufficient clearance between the facilities is provided and documented. Release or modification of storm drainage easements shall require the expressed approval of the Urban County Council. Encroachments, construction of drainage improvements and facilities shall be at the approval of the Commissioner of Public Works or the Commissioner's authorized agent.

6-7(e) CONSTRUCTED CHANNELS - When surface drainage of one acre or greater is proposed, a constructed channel shall be used. Such channels shall be designed in conformance with the Division of Engineering Stormwater Manual to contain the 100-year storm within the channel. Lots which include or adjoin the channel shall indicate a minimum elevation for the lowest floor of the lowest enclosed area (including basement) and all openings which shall be two (2) feet above the elevation of the water in the channel during the 100-year storm.

6-7(f) SOIL EROSION CONTROLS - Control of erosion and sedimentation for subdivisions shall be as required under Article 20 of the Zoning Ordinance and the provisions of the Division of Engineering Stormwater Manual.

6-7(g) ALTERNATE SOLUTIONS - In situations where off-site stormwater improvements are necessary and appropriate for the public health, safety and welfare of the community, and the developer is prevented from making such off-site improvements because 1) right-of-way and easements cannot be acquired; 2) State/Federal approval is required and/or 3) other unusual conditions exist beyond the control of the developer, then the Urban County Government may assist in resolving the problem or developing alternate solutions.

6-8 STREET STANDARDS - All streets (which are classified herein as either expressways, arterials, collectors/connectors or locals) shall conform to the Division

of Engineering Roadway Manual, the Standard Drawings and following standards:

6-8(a) STREET GEOMETRICS - All streets shall conform to the applicable geometric, cross-section and sight triangle standards of Exhibits 6-1 through 6-7.

6-8(b) STREET CONTINUITY - Streets shall be related to topography and shall generally provide for the continuation of existing or dedicated streets in adjoining or nearby tracts, and provide for connection to adjoining unsubdivided tracts, especially those which would otherwise be land-locked. Freeways and arterials shall not penetrate or bisect existing or proposed neighborhoods, but rather shall be located as appropriate boundaries for such. Collectors/Connectors shall carry traffic from arterials into neighborhoods. Locals shall carry traffic from collectors into the neighborhood for the primary purpose of access to individual properties.

6-8(c) STREET NAMES - Streets that are obviously in alignment with existing streets shall bear the name of the existing street. Street names, including cul-de-sacs, shall not duplicate or closely approximate the names of other streets in Lexington-Fayette County; and all street names, subdivision names, property and building numbers, etc., shall be as determined by the Planning Commission.

6-8(d) PLANNING FOR CONFLICTING TRAFFIC OR LAND USE - Whenever the proposed subdivision contains, or is adjacent to, a railroad right-of-way; arterial or expressway right-of-way; or conflicting changes in land uses, the Planning Commission shall require service roads; reverse frontage lots; lots with rear service alleys; lots with additional depth; or other such treatment as the Commission finds necessary for protection of abutting properties and to afford separation of conflicting types of traffic or land use.

6-8(e) HALF STREETS AND RESERVE STRIPS - New half or partial streets shall not be permitted. Existing half streets generally shall be completed to full right-of-way requirements. All streets to extend into an adjoining property shall have full right-of-way dedicated and street improvements constructed. When streets are constructed adjacent and parallel to an adjoining property, the right-of-way shall be established at the common property line. Reserve strips shall be prohibited.

6-8(f) CUL-DE-SACS - Cul-de-sacs shall not generally be longer than one thousand (1,000) feet, including the turnaround, which shall be provided at the closed end with a right-of-way radius of fifty (50) feet; curb radius of forty (40) feet; and a transition curve radius of seventy-five (75) feet. Alternate turnaround designs depicted in these regulations (See Exhibit 6-7) shall also be permitted. Longer cul-de-sacs may be permitted because of unusual topographic or other conditions; and,

may be of the small or medium flowering variety.

TABLE B: TYPE, NUMBER AND LOCATION OF TREES

LOCATION DESCRIPTION	REQUIRED TREES
(a) The elevation of the arterial is more than 10' above the elevation of the adjacent property	1 Evergreen tree/20' OFT planted 20' O.C.
(b) The elevation of the arterial is not more than 10' above or is below the elevation of the adjacent property	1 Tree/50' OFT from Group A of the plant list, alternated with 1 flowering tree for every 50' OFT
(c) The intersection of a collector/connector street with the arterial	Three evergreen trees planted in a triangular pattern 20' O.C., three deciduous trees from Group A of the plant list planted 40' O.C., and three flowering trees 25' O.C.
(d) Culverts and other wet locations	1 riparian tree/40' OFT

6-10(d)(2) LOCATION CRITERIA - Developers are encouraged to group rural street trees rather than arrange them in a straight line. The Commission may require the planting of any or all of the trees to adjoin the existing rural road

6-10(d)(3) PLANTING REQUIREMENT - The tree species to be utilized shall be determined at the time of Commission action on the preliminary subdivision plan and shall also be reflected on the final record plan. Tree species are not required to be consistent for the entire length of the street; however, species that are biologically compatible are to be used. The final plan shall indicate by symbol the number of trees and the general location where they shall be planted. The final subdivision plan shall contain a note stating that the rural street trees required herein shall be maintained by the property owner in accordance with 6-10(b)(5) above. A note stating that no tree may be removed without the approval of the Urban Forester shall also appear on the final plan. A fee in the amount of ten dollars (\$10.00) per tree shown on the plat, payable to the Lexington-Fayette Urban County Government, shall be paid by the developer and collected by the Division of Planning at the time of the recording of the final record plan.

6-10(d)(4) PLANTING AND MAINTENANCE - Planting and maintenance of rural street trees shall be as provided in 6-10(b)(4) and (5) herein above.

6-11 STANDARDS FOR ENVIRONMENTALLY SENSITIVE AREAS AND GEOLOGIC HAZARD AREAS - It is recognized that in certain areas environmental or geologic conditions may pose problems to providing safe development. Where such conditions are encountered on the land to be developed, all work shall conform to the Division of Engineering Technical Manuals. The locations of most environmentally sensitive and geologic hazard areas are shown in the Comprehensive Plan. Additional maps and other information regarding such areas are on file with the Division of Planning. Whenever a subdivision is proposed on land containing such areas, the requirements of this section shall

apply. Failure to comply with these standards or with requirements established by this section, during or after construction, shall be a violation subject to a civil citation, as provided in Article 1 of these Subdivision Regulations.

6-11(a) ENVIRONMENTALLY SENSITIVE AREAS - This term applies to any area, which, due to its natural or physical setting, may have environmental problems with regard to development. This is not to say that the land cannot be developed; but if it is determined that development can occur, then some safeguards, such as detailed site planning, will be necessary to overcome the physical limitations of the land. Lands in question shall include (but shall not be limited to) areas of steep slope (over 15%), floodplains, sinkholes, areas of poor soils, improper fill, wetlands, significant areas of tree stands, aquifer recharge areas, etc.

6-11(a)(1) REVIEW BY THE COMMISSION - All environmentally sensitive areas shall be identified and located on the preliminary subdivision plan as provided in Article 5. In addition, the developer shall be required to file with the application a general statement describing the nature of the environmentally sensitive areas, and the manner in which such area is to be handled during development of the property, as well as any special design measures taken by the developer to attempt to minimize the development's impact on the environmentally sensitive areas. If, after a review of this general statement and any other available information, the Planning Commission finds that questions remain concerning the development's impact on the environmentally sensitive area, or the health and safety of future users of the area, the Commission shall refuse to fully approve the preliminary subdivision plan until it is satisfied that the hazards have been eliminated or adequate safeguards provided to ensure the least negative impact on the environmentally sensitive area.

To assist it in making this determination, the Commission may require the developer to have comprehensive and detailed environmental assessment studies prepared by

qualified professionals for Commission consideration. The Division of Planning shall review all such studies and make specific comments and recommendations to the Commission. Such studies shall be submitted to the Division of Planning no later than five (5) working days prior to the established date of the public hearing at which the Division's comments will be presented.

6-11(a)(2) AREAS OF ALLUVIAL SOILS - Where areas of alluvial soils, as shown in the Soil Survey, Fayette County, Kentucky, U.S. Department of Agriculture, Soil Conservation Service, 1968, are found in the area to be developed, the boundaries of the soils shall be delineated on the final record plan. Structures to be built within the areas of alluvial soils shall be required to have the foundation and footer detail prepared by a licensed professional engineer prior to the issuance of a building permit and to comply with the provisions of Article 19 of the Zoning Ordinance. Areas of alluvial soils are as follows: Armour Silt Loam (ArA), when adjacent to a stream or other alluvial soil; Armour Silt Loam (ArB and ArC), when along the Kentucky River; Captina Silt Loam (CaA), Captina Silt Loam (CaB), Egam Silt Loam (Ea), Egam Silt Loam (Ec), Huntington Silt Loam (Hu), Lanton Silt Loam (La), Lawrence Silt Loam (Lc), Linside Silt Loam (Ld), Melvin Silt Loam (Mt), and Newark Silt Loam (Ne).

6-11(a)(3) FLOODPLAIN AREAS EXCEPTED - Floodplain areas along streams that have Special Flood Hazard Areas or where detailed hydrologic and hydraulic calculations have been done to calculate post-development floodplain shall not be required to be contained in reports required above for environmentally sensitive areas, except to the extent they impact or are impacted by another environmentally sensitive area. Restrictions for floodplain areas shall be as required by Article 19 of the Zoning Ordinance and the Stormwater Technical Manual.

6-11(a)(4) SINKHOLES - In locations where a sinkhole, a sinkhole cluster, or an immediate sinkhole drainage area is found, the following requirements shall apply:

(a) PLAN REQUIREMENTS - A sinkhole, the immediate sinkhole drainage area, a sinkhole cluster area or portions of such areas shall be shown on any development plan or preliminary subdivision plan. Sinkhole-related non-buildable areas and restricted fill areas shall be shown on final subdivision plans and final development plans.

(b) STUDIES REQUIRED - In locations where a sinkhole, a sinkhole cluster, or an immediate sinkhole drainage area is found, the developer shall provide recommendations from the project engineer based upon substantial and state-of-the-art field studies and evaluation of the specific sinkhole system. Such

studies and recommendations shall be prepared in conformance with the Geotechnical Manual and submitted to the Planning Commission as a part of the Improvement Plan Progress Report.

(c) SINKHOLE-RELATED NON-BUILDABLE AREAS - Based upon the topography, geology, soils, and known history of the sinkhole (such as past filling) and the project engineer's stormwater analysis and plan, the Planning Commission shall, when appropriate, establish sinkhole-related non-buildable areas. No buildings, parking areas or other structures shall be permitted within the sinkhole-related non-buildable area. The non-buildable area shall follow the limits of the sinkhole in most cases. However, the non-buildable area may be expanded or contracted by action of the Planning Commission, where warranted, due to the nature of the specific sinkhole; the underlying geology; soils; drainage and any related information, such as depth to bedrock.

(d) DEVELOPMENT IN SINKHOLE DRAINAGE AREAS - Development may occur in the immediate sinkhole drainage area if the developer provides alternative surface drainage away from the sinkhole, while keeping the water in the same surface drainage basin; and provided further that the water shall not go into another sinkhole drainage area off the petitioner's property, nor into another stream of known flooding problems. The immediate sinkhole drainage area (or portion thereof) which cannot be provided with an alternative drainage system can be deleted from the development area and be used to meet the normal open space requirements. The developer may request that the Planning Commission increase the density on the remainder of the developable area with the total resulting density no greater than if the entire area were developed to the permitted density. For portions of the immediate sinkhole drainage area where alternative surface drainage methods cannot be provided, as determined by the project engineer, the developer may choose one of the alternatives described in Section 5 below based upon the information derived from the studies, evaluation, and recommendations required above.

(e) SINKHOLE SURFACE DRAINAGE ANALYSES - The sinkhole can be used for surface runoff drainage of a proposed development if the conditions of either of the following alternatives are met:

(1) ALTERNATIVE 1 - A sinkhole can be used for surface runoff of a proposed development with or without retention or detention facilities, as recommended by the project engineer, provided that any increase in the quantity of surface runoff due to development of the entire sinkhole drainage area in question will not aggravate flooding on the proposed development, adjacent existing

development, or connected/adjacent sinkhole subsurface systems. The Planning Commission shall not approve a development using this alternative unless the study, evaluation and recommendations required above meet the requirements of this subsection.

(2) ALTERNATIVE 2 - A sinkhole can be used for surface drainage of a proposed development if all of the following conditions and provisions are met:

- a. That the runoff from the development area is either completely retained in a retention basin or detained in a detention basin. The flow rate out of the above basins shall be regulated so that it is no greater than the flow rate into the sinkhole for the development area prior to development for the 100-year/24-hour storm. The outflow rate shall not aggravate flooding on downstream properties for this storm.
- b. The developer may elect to divert enough of the sinkhole drainage area so that the development of the remaining area does not increase the total quantity of runoff into the sinkhole. Where additional runoff is anticipated, the project engineer shall evaluate and show the effect of any additional quantity of runoff to the sinkhole and sinkhole system. For approval, the study must show the development will not aggravate flooding on the proposed development, adjacent lands, or connected/adjacent sinkhole systems.
- c. Where the sinkhole outlet is off site, either the runoff leaving the subject property must be shown to be no greater in flow, or in quantity, than existed before development; or written approvals must be submitted from owners of the property where any increase in flow or quantity of water must go to reach the sinkhole outlet. Easement areas shall be based upon the project engineer's calculations of proposed ponding elevation.

(f) FILLING IN SINKHOLES AND SINKHOLE DRAINAGE AREAS - Development may involve some filling of the sinkhole drainage area or sinkhole based on the study, evaluation and recommendation of the project engineer, and when such filling is done in conformance with the Geotechnical Manual. However, no principal or accessory buildings with soil bearing

foundations shall be permitted to be constructed on fill within the limits of any sinkhole.

(g) REQUIRED PLAN NOTES - For any land that includes a sinkhole related, non-buildable area, or restricted fill area, the developer shall place the following note on the final subdivision plan or development plan:

(1) "Based upon the evidence presented to them, the Planning Commission has identified sinkhole related non-buildable areas on this plan. However, approval of this plan is not to be interpreted as any guarantee that future sinkhole problems will not occur due to either natural or human activities."

Based upon the facts of each case, the following notes may be required, in whole or part, by the Planning Commission, depending upon the nature of the sinkhole and the method of treatment (if any) proposed by the project engineer. Additional notes may be required, or the language of the following notes may be modified, as required by the Planning Commission:

(2) "Any sinkhole related, non-buildable area identified here has been determined to be unsuitable for any construction activity; and no buildings, parking areas or other structures shall be permitted within this area."

(3) "Any sinkhole or restricted fill area identified here has been determined to be unsuitable for soil bearing foundations, and the entire structure of any building (including the floor system) constructed therein must be founded on solid rock."

(4) "No basement or first floor elevations shall be lower than an elevation, USGS datum, to be determined on a case-by-case basis, said elevation being at least two (2) feet above the 100-year/24-hour storm, assuming no outflow from the sinkhole."

(5) "Geological remediation took place on portions of lots ____ as a part of the infrastructure installation. A geotechnical report concerning the investigation and remediation, prepared by (name of the individual or firm), is on file with the Lexington-Fayette Urban County Government Division of Engineering. Construction on these lots should exercise reasonable caution in relation to particular project needs and the previous remediation. Since the exact nature of building or development in the remediation area is unknown at this time, (project engineer) and the Lexington-Fayette Urban County Government Division of Engineering can make no representation as to the

extent, adequacy, or appropriateness of the remediation for future uses.”

6-11(b) GEOLOGIC HAZARD AREAS - A geologic hazard area differs from an environmentally sensitive area in that the environmental problems are so numerous that development, even with severe limitations, would pose a serious problem to the immediate area or the surrounding areas. Examples of these areas are areas of excessive floodplain, areas that have potential collapse problems due to caves underneath the rock strata but close to the surface, cliff areas, etc. All geologic hazard areas shall be identified and located on the preliminary subdivision plan as provided in Article 5. As a general rule, development shall be designed such that any geologic hazard area shall be left in its natural state as permanent open space. However, if the developer intends to develop within, or otherwise impact the geologic hazard area, a comprehensive environmental assessment study of the geologic hazard area prepared by a qualified professional shall be required to be filed at the time of application for plan consideration by the Commission. The Division of Planning shall not accept applications if this report is not provided. The Division of Planning shall review the contents of the study and make specific comments and recommendations to the Commission. The Commission shall refuse to fully approve the subdivision plan unless and until it is satisfied that the safeguards will be provided such that future residents will experience no loss of health, safety or welfare due to development within the geologic hazard area.

6-12 SURVEYING AND MONUMENTATION STANDARDS - All vertical and horizontal control shall be tied to the Lexington-Fayette Urban County Government Control Network, shall be at least Third Order, and installed in accordance with the standards of the Division of Engineering. All surveying and monumentation shall comply with the *Standard of Practice for Professional Land Surveyors (201 KAR 18.150)*.

6-13 SUBDIVISION STANDARDS WITHIN THE URBAN SERVICE EXPANSION AREAS - Subdivision of land within the designated Urban Service Expansion Areas shall comply with all provisions of these Land Subdivision Regulations, the Zoning Ordinance and the Division of Engineering Technical Manuals as normally applicable to property within Fayette County, except as expressly modified as follows:

6-13(a) STORMWATER STANDARDS - All subdivisions shall comply with Article 6-7 above, except when located within a System-Wide Stormwater Management District, in which case the requirement for such District shall take precedence.

6-13(b) CONTINUITY BETWEEN SUBDIVISION DEVELOPMENTS - Subdivisions within the Expansion Area shall be connected to other developments with collector streets. In addition, it is intended that local street

connections shall be provided between developments to act as a network to supplement the collector/connector and arterial street systems.

6-13(c) STREET CROSS-SECTIONS AND GEOMETRICS - Developers within the Expansion Areas are encouraged to pursue alternative street cross-sections, street geometrics and development designs which achieve the basic purposes of these Regulations; subject to proper demonstration that such alternatives can be implemented without impairment of the public health, safety and welfare. The reviewing agencies, Committees and Planning Commission are directed to earnestly consider such alternatives under the provisions of 1-5(b) herein. Where specific street cross-sections, including bikeways, are shown in the Expansion Area Master Plan for major roadways, the cross-sections depicted shall be utilized for construction of the applicable roadway as determined by the Planning Commission.

6-13(d) RURAL SCENIC ROADS - The provisions of Article 6-8(p), Street Improvement Standards, of the Land Subdivision Regulations, shall not generally apply to Rural Scenic Roads as established in the Expansion Area Master Plan. Should roadway improvements be needed as a project improvement, as defined in Zoning Ordinance Article 23, the Commission shall require only the minimum improvement to the existing roadway needed to mitigate concerns regarding safety.