

Article 6

UTILITY DESIGN AND CONSTRUCTION STANDARDS

Standards

600 General

A professional engineer, licensed in Ohio, shall design any plans for public water supply, wastewater facilities, and stormwater systems. The plans shall meet regulations set forth by the County Engineer, County Water and Sewer District, County General Health District, and the Ohio Environmental Protection Agency (OPEA). All public water and sanitary sewer lines shall extend to stub to the adjacent property line per the County Water and Sewer District and/or the County General Health District, unless a variance is approved by the Planning Commission.

601 Water Supply

- a. Where a public water supply is accessible or required because of groundwater pollution problems, the subdivision shall be provided with a complete water distribution system capable of servicing each lot. When feasible, an approved water supply capable of supplying the required fire flow for fire protection shall be provided to premises upon which facilities, buildings, or portions of buildings are constructed. Appropriately spaced fire hydrants may be required per the County Water and Sewer District. Public water distribution and public well systems shall meet the requirements of the County Water and Sewer District and the Ohio Environmental Protection Agency per the Ohio Revised Code.
- b. Where public water supply is not available, as determined by the County Water and Sewer District, the developer shall supply acceptable evidence of the availability of water to the Planning Commission. The subdivider shall contact the General Health District on the feasibility of providing well service for a specific subdivision, and the requirements to achieve compliance with the County General Health District and the Ohio Environmental Protection Agency per the Ohio Revised Code and Ohio Administrative Code.
- c. For developments with more than 15 units and located within one (1) mile of an existing public or community water system, adequate justification to the Planning Commission shall be provided as to why they shall not provide a connection to such water supply system. The County Water and Sewer District, County General Health District and/or the Ohio Environmental Protection Agency shall review and approve such request. For developments with more than 15 units and located more than one mile from an existing system, the water supply system strategy shall be determined on a case-by-case basis taking into consideration density of

the development, costs, groundwater availability and quality.

602 Design Criteria for Public Waterlines

- a. Proposed design plans for public waterlines shall be submitted to and approved by the County Water and Sewer District. The developer shall contact the County Water and Sewer District to review the proposed subdivision to determine the water needs and all development requirements prior to final plat (pre-development) approval by the Planning Commission.
- b. All proposals shall comply with the Ohio Environmental Protection Agency.
- c. The County Water and Sewer District reserves the right to require a development agreement (with potential approval by the Planning Commission and/or the Board of County Commissioners) with the developer if the proposed subdivision warrants such requirement based on the design characteristics of the County water system at said subdivision location.

603 Fire Hydrants

- a. Fire hydrants shall be provided by the subdivider in all subdivisions with adequate public water supplies if feasible per the County Water and Sewer District.
- b. Hydrant spacing shall be per Chapter 506.06 of the County Water and Sewer District Regulations
- c. Any new hydrant(s) in subdivisions installed, or replaced, shall have two (2) 2.5-inch national standard thread connections and one (1) 5-inch storz connection on the streamer of the hydrant. Any new hydrant installed, or replaced, shall open by turning the yoke counterclockwise and turned off by turning the yoke clockwise.
- d. The minimum size of any water line serving any hydrant shall not be less than six (6) inches in diameter.
- e. No parking shall be located within 10 feet of a fire hydrant, and a 3-foot clear space shall be maintained around the circumference of the fire hydrants, except as otherwise required or approved.
- f. Where no public water supply is available, the Planning Commission may require fire ponds with dry hydrants, or the like with local fire department review and consideration.
- g. If no public water supply is available for fire prevention, the subject final plat shall have documentation indicating no public fire prevention is available for the subdivision.

604 Sanitary Sewers

- a. Where an adequate public sanitary sewer system is reasonably accessible in the determination of the County Water and Sewer District, public sanitary sewers shall be installed to adequately serve all lots, including lateral connections to the public system. Public sewer system extensions shall meet the requirements of the County Water and Sewer District and the Ohio Environmental Protection Agency. Combinations of sanitary sewers and storm sewers shall be prohibited.
- b. Where a public sanitary sewer system is not reasonably accessible, lots may be served by individual disposal systems only with approval from the County General Health District. The developer shall contact the County General Health District on the feasibility of providing septic service for a specific lot or subdivision, and the requirements to achieve compliance with the County General Health District and the Ohio Environmental Protection Agency per the Ohio Revised Code and Ohio Administrative Code. Some of the requirements include:
 - Where the installation of individual disposal systems is considered, the absorptive ability of the soil, surface drainage, ground water level, and topography shall be the criteria used for determining whether or not the installation of individual systems is permissible.
 - When individual, on-lot sewage systems are approved, each lot so served shall be of a size and shape to accommodate the necessary length of a leach field(s) at a safe distance from and at a lower elevation than the proposed building(s). Such lot size and shape shall also conform to the standards set forth in these Regulations.
 - Contact the County General Health District for a complete list of all requirements.
- c. Residential, commercial, and industrial subdivisions shall be connected to an existing public sanitary sewer system, if public service is available within 200 feet of the subject parcel per the County General Health District and the Ohio Environmental Protection Agency.
- d. For developments with more than 15 units and located within one mile of an existing public sanitary sewer system, adequate justification shall be provided to the Planning Commission as to why they should not provide a connection to the existing public sewer system. The County Water and Sewer District, County General Health District and/or the Ohio Environmental Protection Agency shall review and approve such request.

605 Design Criteria for Public Sanitary Sewers

- a. Proposed design plans for public sanitary sewers shall be submitted to and approved by the County Water and Sewer District. The developer shall contact the County Water and Sewer District to review the proposed subdivision to determine the specific sanitary needs and all development requirements prior to final plat (pre-development) approval by the Planning Commission.
- b. All subdivision proposals shall comply with the Ohio Environmental Protection Agency.
- c. The County Water and Sewer District reserves the right to require a development agreement (with potential approval by the Planning Commission or Board of County Commissioners) with the developer, if the proposed subdivision warrants such requirement based on the design characteristics of the County sanitary system at said subdivision location.

606 Drainage and Storm Sewers

All storm drainage design shall be planned and executed so as to preserve natural topographic features and vegetative cover, to minimize change to existing topography, and to preserve natural drainage systems.

- a. Where an adequate public storm sewer is available at the plat boundary, the developer shall construct a storm sewer system and connect with such storm sewer line. If such a storm sewer system is not accessible, natural drainage channels with easements of adequate width shall be provided as determined by the County Engineer. Storm drainage from lots, including drain tile around basements, shall not be permitted to discharge into any sanitary sewer facility, but shall connect to an adequate drainage outlet.
- b. The developer shall construct all necessary facilities including underground pipe, inlets, catch basins, or open drainage ditches, as determined by the County Engineer, to provide for the adequate disposal of subsurface and surface water, and maintenance of natural drainage courses. The best available technology shall be used to minimize off-site stormwater runoff, increase onsite filtration, encourage natural filtration functions, simulate natural drainage systems, and minimize off-site discharge of pollutants to ground and surface water. Best available technology may include measures such as retention basins, recharge trenches, porous paving and piping, contour terraces, and swales. Stormwater management shall follow the standards established in Rainwater and Land Development: Ohio's Standards for Stormwater Management. Land Development and Urban Stream Protection Second Edition, 1996 (Department of Natural Resources, Division of Soil and Water Conservation), or any later version that is published as an update. Subdivision development shall not increase the rate of runoff, and an increase in the volume of runoff shall require a reduction in the rate of runoff.

- c. When necessary, outlet ditches of closed sewers of an approved type and size shall be required as part of the construction. If stormwater utilities extend across private property, rights-of-way or easements shall be obtained by the developer for the construction and future maintenance. These rights-of-way or easements shall be shown on the construction plans. Post development drainage patterns shall be the same as pre-development drainage patterns. The design of streets and grading shall be such that runoff from roofs, driveways, and other impervious surfaces will be collected in ditches and/or gutters in short runs three hundred (300) feet to four hundred (400) feet in length. The runoff shall then be diverted from the surface, if not already underground, into storm sewers or a natural watercourse. Streets shall be located away from water courses unless storm sewers are to be installed.
- d. The developer shall guard against the creation or continuation of swampy areas or stagnant pools, unless they are a component of a designed wetlands open space. The County Engineer may require fill, swale, and/or channel improvements in order to forestall such problems.
- e. Adequate measures for the protection of open and closed drainage channels shall be provided. Maintenance easement widths shall be determined by the County Engineer. The velocity flow on an open ditch shall not exceed four (4) feet per second in soil ditches or six (6) feet per second in turf gutters. Paved gutters will be required if velocities of flow are greater than those specified, or if it is otherwise likely that destructive erosion will result. Drainage ditches shall not be permitted to discharge into any sanitary sewer facility.
- f. No water course shall be altered in such a way as to change the amount or direction of flow. No fill, building, or structures shall be situated in natural water courses unless provision is made for the flow of water in a manner satisfactory to the county engineer.
- g. Stormwater Control Measures Policy shall be implemented to ensure the system complies with all regulations (*See Appendix B*).

607 Electric, Gas, Telephone, and Other Utility Improvements

- a. Electric, telephone service, and other appropriate utilities shall be provided within each subdivision. Gas service may be required where reasonably accessible. Whenever such facilities are reasonably accessible and available, they shall be required to be installed within the area prior to the approval of the final plat (post-development). Telephone, electric, street lighting wires, conduits, cables, and other utilities shall be constructed underground, except in cases where the County Engineer determines that topographic, bedrock, underground water conditions, or utility size would result in excessive costs to the developer.

- b. Overhead utility lines, where permitted, shall be located at the rear of all lots unless the County Engineer, upon the recommendation of utility company, provides reasons that justify the location of easements at another location. The width of the easement per lot shall be not less than ten (10) feet and the total easement width shall be not less than twenty (20) feet.
- c. Whenever a sanitary sewer line and electric and/or telephone line are each placed underground in the same utility easement; the total easement width shall be not less than twenty (20) feet.
- d. Whenever a major gas transmission line is on, or adjacent, to property proposed to be subdivided, adequate measures shall be taken to ensure that all buildable sites are at a minimum safe distance from the transmission line easement, as recommended by the gas transmission company and the Public Utilities Commission of Ohio.

608 Offsite Improvements and Oversize Utilities

The Board of County Commissioners, with advice provided by the Planning Commission, may require that road improvements, traffic signals, utilities, stormwater, and other land improvements for the proposed subdivision be required and designed to be oversized, and/or with extensions provided, to serve nearby land which is an integral part of the County roadway network, utility service system, or drainage shed as determined by the County Engineer and/or the County Water and Sewer District.

a. Streets and Roads

- Turns Lane(s) & Deceleration Lane(s)
 - i. The developer may be required to install a turn lane(s) and/or deceleration lane(s) based on a traffic impact study of the proposed subdivision reviewed and approved by the County Engineer with approval by the Planning Commission. The developer may be required to pay for the full cost of the turn lane(s) and/or deceleration lane(s) or escrow the developers fair share cost per the County Engineer with approval by the Planning Commission.
- Traffic Signal(s)
 - i. The developer may be required to install a traffic signal(s) for the proposed subdivision based on a County planned traffic signal location or based on a traffic impact study required by the proposed subdivision reviewed and approved by the County Engineer with approval of the Planning Commission. The developer may be required to pay for the full cost traffic signal(s) or escrow the developers fair share cost of the traffic signal per the County Engineer with approval by the Planning Commission.

- ii. Other traffic options such as a roundabout or the like may be viable options but shall have to be reviewed and approved by the County Engineer with the approval by the Planning Commission.
- Minor or Major Arterial and Collector Streets
 - i. The developer shall be required to pay only the percentage cost of construction of major or minor arterial and collector streets required by the proposed subdivision, if the County was planning to construct the said road per the adopted Thoroughfare Plan as determined by the County Engineer.

b. Utilities

- The developer shall be responsible to pay the cost for the necessary pipe size to service the subdivision from water and sanitary perspective, but the County shall pay the difference in cost between the cost of the pipe necessary to service the subdivision, and any larger sized pipe, when the larger sized pipe is required to service the County water and sanitary needs beyond the limits of the subdivision per the County Water and Sewer District with approval of the Planning Commission.

c. Stormwater

- The developer shall be responsible to pay the cost for the necessary pipe size to service the subdivision from a stormwater perspective, but the County shall pay the difference in cost between the cost of the pipe necessary to service the subdivision and any larger sized pipe when the larger sized pipe is required to service the drainage shed beyond the limits of the subdivision per the County Engineer with approval of the Planning Commission.