



Lumpkin County Water & Sewerage Authority

DEVELOPMENT GUIDELINES FOR WATER MAINS & SANITARY SEWER SYSTEMS

REVISION DATE: January 2022

This list of guidelines has been put together as an aid for developers during the permitting process.

This listing should not be considered as a static document and therefore, every effort to obtain the latest revision should be made. Contact the Engineering Department of the Lumpkin County Water & Sewerage Authority at (706) 867-6580 for the latest revision of this document and/or the Authority's "Standard Specifications for Water Mains and Sanitary Sewers."

GENERAL

1. Minimum 10 feet horizontal distance between water and sewer lines.
2. Minimum 18 inches vertical distance between water and sewer lines.
3. Where water and sanitary sewer lines cross, the water main shall be 18 inches above the sewer. If the sewer must be above the water main the sewer shall be at least 18 inches above and encased in concrete a minimum of 10 feet on each side of the water main. Joints shall be spaced to provide maximum distance from crossing.
4. Where water or sanitary sewer mains cross storm drains, a minimum of 18 inch vertical separation shall be maintained. When vertical separation is less than 3 feet, 20 feet of concrete encasement is required, 10 feet each side of the crossing, along water mains and sanitary sewers.
5. The minimum cover over water and sewer lines shall be 4 feet. Water mains 12 inches and larger shall have minimum of 5 feet of cover. When water and sanitary sewer lines are located within road right-of-way minimum cover shall also be required below nearest edge of pavement or ditch.
6. Water mains and sanitary sewers shall be located outside of paved areas. Locating water mains and sanitary sewers in paved areas will only be allowed when no other alternative exists. No 2 inch PVC water mains will be allowed under roadways. Bore under existing roadways where possible to prevent pavement damage.

DEVELOPMENT GUIDELINES – Continued

PAGE 2

REVISION DATE: JANUARY 2022

7. All elevation data shall be referenced to mean sea level (MSL) and survey horizontal data shall be referenced to state-plane coordinate system including all proposed manholes.
8. A legible project location map shall be provided on the drawings.
9. Water distribution system and/or sanitary sewer system plans shall be submitted to the Authority for review and approval. The Authority shall be furnished with two (2) separate sets of plans for each submittal required during the review process. The Authority may also accept electronic plan submittals (in PDF format) in coordination with the Lumpkin County Planning and Development Department. Developers interested in submitting plans electronically should contact the Authority Engineering Department at (706) 867-6580 to confirm submittal options.
10. Plans requiring water or sanitary sewer main construction shall be stamped by Professional Engineer or Registered Land Surveyor. Drawings for fire sprinkler line located outside of building prepared by sprinkler contractor and stamped with “Certificate of Competency” will not be accepted or approved.
11. Fire sprinkler system drawings must be reviewed for backflow prevention compliance by the Authority prior to installation.
12. Fire mains shall be constructed in accordance with the Authority's "Standard Specifications for Water Mains and Sanitary Sewers" latest edition, and meet the same standards as those for water mains or NFPA Pamphlet No. 24, whichever is strictest. A post indicator valve and a free-standing Siamese fire department connection shall be installed a minimum of 40 feet from the building on all fire sprinkler system water mains. Said valve and connection shall be placed immediately downstream of the double detector check backflow preventer in the same vault and shall be in accordance with NFPA 24. A new or existing fire hydrant shall be located within 50 feet up stream of the fire department connection. These requirements will be strictly enforced unless a written variance from the Lumpkin County Fire Marshall is obtained. Fire sprinkler systems containing antifreeze will not be allowed to connect on to the Authority water system
13. The following fees shall be paid prior to plan approval:
 - Water System Plan Review Fee: \$500.00
 - Sewer System Plan Review Fee: \$750.00
 - 24 Hour Pressure and Flow Test: \$250.00
 - Additional fee for review of sanitary sewer lift station plans: \$1,500.00

DEVELOPMENT GUIDELINES – Continued

PAGE 3

REVISION DATE: JANUARY 2022

14. Drawings requiring public water, public sanitary sewer or private fire main construction shall bear the following notes:

The Lumpkin County Water & Sewerage Authority shall be notified 24 hours prior to any water or sanitary sewer line construction or repairs. Only contractors approved by Lumpkin County Water & Sewerage Authority will be allowed to perform construction or repairs connected to said water or sanitary sewer mains. Call the Authority at (706) 867-6580 prior to beginning any construction, or to apply to become an approved contractor.

All water main and sanitary sewer materials and workmanship shall be in accordance with the Lumpkin County Water & Sewerage Authority's "Standard Specifications for Water Mains and Sanitary Sewers", latest edition.

The Contractor shall be responsible for maintaining a marked-up set of design drawings showing all "as-built conditions". These "record drawings" shall be made available to the designer and/or the Authority Inspector upon request. The mark-ups shall be at the site at all times and shall be utilized to develop final record drawings. Final acceptance of water and/or sewer main construction will not be granted until as-built drawings have been received by the Lumpkin County Water & Sewerage Authority.

15. The following note shall appear on the final plat and/or as-built drawings:

Owners Dedication Certificate
Lumpkin County Water & Sewerage Authority
Lumpkin County, Georgia

The owner of the land shown on this plat and whose name is subscribed thereto, and in person or through a duly authorized agent, acknowledges that this plat was made from an actual survey and dedicated to the Lumpkin County Water & Sewerage Authority forever, all water mains, sanitary sewers, easements, and associated appurtenances thereon shown.

Owner _____

Date _____

16. Design professionals are required to use the latest edition of the Lumpkin County Water & Sewerage Authority's standard details wherever applicable.
17. Two (2) sets of final plat and/or as-built drawings shall be furnished to the Authority for review after construction is completed. (See final plat/as-built plan review checklist for specific drawing requirements.) After red-line comments have been addressed, one (1) hard copy and one (1) electronic copy (on disc or USB drive) in AutoCAD, version 2000 or later and one (1) copy of plan sheets in PDF or TIFF format will be required prior to project approval.
18. No trees shall be located within perpetual water or sewer easements or above fire protection water mains in order to prevent pipeline root damage.
19. Contractors are required to possess a business license to work within the applicable jurisdiction. Proof of said license and all other applicable permits (Erosion Control, DOT, etc.) shall be on the job site.

DEVELOPMENT GUIDELINES – Continued

PAGE 4

REVISION DATE: JANUARY 2022

20. Note that other agencies may have regulatory authority and the Developer is responsible for obtaining other agency approval. Other agencies could be, but are not limited to, State of Georgia Department of Natural Resources, State of Georgia Department of Transportation, United States Army Corps of Engineers, United States Environmental Protection Agency, Lumpkin County Planning and Public Works Division or other appropriate regulatory agencies.
21. Verify all service connections on water mains and sanitary sewers to be abandoned and reconnect if necessary.

WATER

1. A 20'-0" permanent, recorded, easement shall be required on all water mains crossing private property. The main shall be on the centerline of the easement and no buildings or other structures shall be built within easements. Easements shall be shown on all plans including landscape plan and an additional 11" x 17" easement exhibit "A" shall be provided to be included with easement document prepared by Authority staff. All water main easements shall be fully executed prior to plan approval. Include total area of easement to be dedicated to the Lumpkin County Water & Sewerage Authority in square feet.
2. Developments requiring installation of public water mains or fire hydrants within public right-of-way shall be required to sign a "Facilities Dedication" form prior to plan approval. An 11" x 17" exhibit "A" shall be provided indicating location of facilities and will be included with dedication form prepared by Authority staff.
3. Easement and facilities dedication documents shall be recorded by the developer upon completion of project and original documents returned to the Authority prior to project approval.
4. Water mains shall be placed in the back 5'-0" of Lumpkin County, or DOT Rights-of-Way as applicable.
5. Existing water supply facilities shall have adequate capacity to meet future potable water demands of proposed development.
6. No fire hydrant shall be placed on water mains smaller than 6 inch diameter in any case.
7. Fire hydrants servicing residential areas shall be spaced at a maximum of 500 feet as measured along the edge of pavement.
8. Fire hydrants servicing commercial and industrial areas shall be spaced a maximum of 300 feet as measured along edge of pavement. Note: The Lumpkin County Fire Marshall should be contacted to see if stricter requirements are in order for specific project types.

DEVELOPMENT GUIDELINES – Continued

PAGE 5

REVISION DATE: JANUARY 2022

9. Fire hydrants shall have a maximum spacing of 1000 feet.
10. Gate valves shall be installed on all hydrant leads.
11. Valve location markers shall be installed for all valves (except hydrant lead valves).
12. Fire hydrants (or blow off assemblies if applicable) shall be placed at the end of cul-de-sacs and at the terminus of all dead end lines. Standard terminations shall be installed where water main will be extended in future.
13. Water mains 6 inches and larger shall be ductile iron pipe, including fire protection water mains.
14. Fire protection water mains shall enter buildings at fire riser location and cannot be installed horizontally under building slabs.
15. Pipe for 2-inch diameter water mains shall be polyvinyl chloride (PVC) pressure rated pipe. The pipe shall have a SDR of 13.5 and a pressure rating of not less than 315 psi.
16. A continuous tracer wire shall be attached to the pipe on all 2-inch polyvinyl chloride (PVC) water main installations.
17. In general, 2 inch diameter pipe will only be allowed around the radii of cul-de-sacs and located outside of paved areas.
18. Tapping sleeve and valves shall be required on all connections to an existing water main. A back tap shall be installed when required. If existing water main is located under pavement, an additional gate valve is required outside of pavement.
19. In-line gate valves are required every 1800 to 2000 feet.
20. Each tax parcel shall be served by a separate water meter. Master meters to serve more than one tax parcel will not be allowed including condominium developments. Master meters serving multi-unit buildings such as apartments and commercial retail centers shall also install privately owned and operated sub-meters for water tracking purposes.
21. Deduct meters on private water service lines serving cooling towers are not allowed in any circumstance.

DEVELOPMENT GUIDELINES – Continued

PAGE 6

REVISION DATE: JANUARY 2022

SANITARY SEWER

1. A 30'-0" permanent, recorded, easement shall be required on all 8-inch through 18-inch diameter sanitary sewers with up to 20' - 0" of cover and a 40' - 0" permanent, recorded easement shall be required if cover is over 20' - 0". A 40' - 0" permanent, recorded easement shall be required on all 24-inch and larger diameter sewers regardless of depth of cover. The sewer shall be on the centerline of the easement and no buildings or other structures shall be built within easements. Easements shall be shown on all plans including landscape plan and an additional 11" x 17" exhibit "A" shall be provided to be included with easement document prepared by Authority staff. All sanitary sewer easements shall be fully executed prior to plan approval. Include total area of easement to be dedicated to the Lumpkin County Water & Sewerage Authority in square feet.
2. Developments requiring installation of public sewer mains within public right-of-way shall be required to sign and record a "Facilities Dedication" form prior to plan approval. An 11"x 17" exhibit "A" shall be provided indicating location of facilities and will be included with dedication form prepared by Authority staff.
3. Easement and facilities dedication documents shall be recorded by the developer upon completion of project and original documents shall be returned to the Authority.
4. Proposed average and peak sanitary sewer flows shall be submitted prior to plan approval to determine if all downstream wastewater facilities including wastewater treatment plant, gravity sanitary sewer lines, and wastewater pumping stations shall have adequate capacity for future wastewater flows from proposed development.
5. All stream buffer encroachment variances shall be obtained from Georgia Environmental Protection Division and/or U.S. Army Corps of Engineers permit prior to plan approval.
6. Minimum slope for 8-inch and larger gravity sanitary sewer pipe shall be 0.50%, the maximum slope shall be 15.0%.
7. Gravity sanitary sewer pipe material shall be SDR 26 PVC unless depth of cover is 20' or greater, less than 4', or the sewer is to be laid in fill area. In these cases, the pipe shall be ductile iron, Class 50 with Protecto 401 interior coating.
8. Bedding for sanitary sewers shall be Class B or greater.

DEVELOPMENT GUIDELINES – Continued

PAGE 7

REVISION DATE: JANUARY 2022

9. Sanitary sewage force mains shall be ductile iron pipe, Class 50 with Protecto 401 interior coating.
10. Service lateral pipe material shall be SDR 26 PVC or Ductile Iron sewer pipe as required.
11. Cleanouts shall be placed on all building service laterals at the point at which Authority maintenance terminates. This point shall be the curb line, the property line, the right of way line, or the easement line as applicable. Cleanouts shall be 6-inch and have a brass cap. Cleanouts shall not be placed in pavement areas if at all possible. If required, use traffic-grade cleanouts when located within pavement areas.
12. All service lines shall be connected to gravity sewer pipe if at all possible. If connection to manhole is required, then the invert of building service lines shall be placed at or above the crown of the Authority sewer but not to exceed 2 feet above the crown of the Authority sewer.
13. Buildings proposing to connect to sanitary sewer shall be connected by a separate sanitary sewer tap.
14. The minimum diameter of sanitary sewer pipe shall be 8-inches with the exception of building service laterals that may be 6-inches.
15. Manholes shall be placed at all changes in direction and grade of sanitary sewers. Manholes shall be spaced such that the distance between manholes does not exceed 400 feet. The minimum angle between lines entering and exiting a manhole is 90 degrees.
16. Outside drop connections shall be constructed at manholes on all influent sewers where the invert elevation is greater than 2 feet above the invert elevation of the effluent sewer. Outside drops shall not exceed 10 vertical feet. Slope of incoming pipe into outside drop manhole may not exceed 10%.
17. Sewage pumping stations will not be permitted unless the developer can demonstrate extreme hardship would result if the station were denied. Pumping stations will be discouraged and therefore, only permitted on a case by case basis. All pumping stations shall be located above the 100 year flood plain and out of storm drainage flow paths.
18. All sewage pumping stations shall have an auxiliary power source. Additionally, they shall be provided with a remote telemetry system compatible with the Authority's existing system and a potable water service with a reduced pressure zone (RPZ) backflow preventer.
19. Plans and profiles showing all utility and pipeline crossings as well as existing and proposed grades shall be provided for all sanitary sewers. Building services are excepted.

DEVELOPMENT GUIDELINES – Continued

PAGE 8

REVISION DATE: JANUARY 2022

20. Sewer Maintenance Access shall be maintained on all Sanitary Sewer Easements. Maintenance Access is defined as alignment grades, soil compaction and cross slopes that will allow a sewer jet truck (weighing approximately 50,000 lbs.) to navigate easily. Maximum grade shall not exceed 20% and easement contour lines shall be shown on grading plans. Minimum of 2' contour intervals shall be used. Access to existing sanitary sewer easements located within proposed construction areas shall be maintained during all phases of construction.
21. Sanitary sewers over 20'-0" in depth will not be permitted unless the developer can demonstrate no other alternative exists. Each instance will be reviewed on a case by case basis.

BACKFLOW PREVENTION AND PRETREATMENT

1. Projects requiring Backflow Prevention Installation shall bear the following notes:
“Prior to backflow preventer installation, contact Authority Inspector at (706) 867-6580”.
2. As a minimum, commercial, industrial, and institutional establishments and multi-family housing shall install and maintain double check valve assemblies immediately downstream from the Authority’s meter in a separate meter box or vault as applicable.
3. All water service lines installed for landscaping and/or irrigation purposes shall have a double check valve assembly installed in them immediately downstream from the Authority’s meter.
4. Establishments determined to present a high hazard backflow potential, including swimming pools, doctor’s offices, car washes and sanitary sewer pump stations shall install and maintain reduced pressure zone (RPZ) backflow preventers in above ground, non-freezing enclosures. Water service lines serving sanitary sewer pump stations shall also install a pressure reducing valve (PRV) prior to the backflow preventer.
5. Double detector check valves shall be installed on all fire sprinkler mains. Valves shall be housed in a vault as close to the Authority water main as is possible. A water meter that reads in gallons equipped with touch read/radio read device compatible with the Authority’s water meter and billing system shall be required.
6. More detailed information is available from the Lumpkin County Water & Sewerage Authority Engineering Department at (706) 867-6580.

DEVELOPMENT GUIDELINES – Continued

PAGE 9

REVISION DATE: JANUARY 2022

7. Projects requiring Pre-Treatment shall bear the following note:
“Prior to Pre-Treatment device installation, contact Authority Inspector at (706) 867-6580”.
8. Sand traps and oil separators with sample station manholes shall be installed in all sanitary sewer service lines from service stations, garages, car washes, and similar operations. Proposed pretreatment devices shall be specifically designed for required pretreatment and details for premanufactured devices shall be pre-approved by the Authority and included in permitted drawings.
9. Grease traps and sample station manholes shall be installed in process waste lines of all sanitary service sewers for commercial, industrial, and institutional establishments with food preparation areas.
10. Lint traps and sample station manholes shall be installed in all sanitary sewer service lines from laundry mats.
11. Hair traps and sample station manholes shall be installed in all sanitary sewer service lines from veterinary clinic/animal control facilities.
12. Domestic sewage shall not pass through pretreatment devices or sample stations.
13. If dumpster pad drains are to be tied onto the sanitary sewer, a grease trap and sample station manhole shall be placed between the pad and the Authority sewer. Domestic wastewater shall be excluded from the trap.
14. Rainwater shall be prevented from entering the sanitary sewer at all dumpster pad locations. Method must be detailed on drawings.
15. Grease trap and oil separator details shall appear on the project drawings and shall be approved prior to installation.
16. Oil separators shall be sized to handle two (2) times the expected flow rate.
17. Grease traps shall be sized as necessary with the minimum allowable size being 1500 gallons.
18. Sample station manholes may be required on all commercial, industrial, and institutional sanitary service sewers. Domestic sewage shall not pass through sample station manholes.
19. Commercial car washes will be required to install a water reclamation and recycling system.