

DIVISION I

POLICIES AND PROCEDURES

SECTION 1: SCOPE AND INTENT

Page I-1.1

1.01 Purpose

- A. The purpose of this document is to set forth the uniform policies, procedures, design requirements, material requirements and construction standards of the City of Locust Grove as to comply with all applicable state and federal laws for the installation of water distribution systems and sanitary sewer systems.

- B. The State of Georgia, Department of Natural Resources, Environmental Protection Division, Drinking Water Permitting and Engineering Program and Engineering and Technical Support Program have approved the City of Locust Grove's *Standard Specifications for Water Distribution Systems and Sanitary Sewer Systems, 2nd Edition* on ____ (date) _____. Copies of the approval notices are included in Appendix A.

1.02 Delegation

- A. The City of Locust Grove shall review and submit to EPD for approval the design and installation of water distribution systems and sanitary sewer systems that will be owned and maintained by the City of Locust Grove or that will discharge into said sanitary sewer system.

DIVISION I

POLICIES AND PROCEDURES

SECTION 1: SCOPE AND INTENT

Page I-1.2

1.03 Variance

Under special conditions beyond the control of parties involved, the City of Locust Grove may vary from the specifications herein. The City Manager or designee of the City of Locust Grove shall authorize any variance in writing. The State of Georgia, Department of Natural Resources, Environmental Protection Division, shall be notified of any variance in writing.

1.04 Amendments to the Specifications

- A. The City of Locust Grove shall amend the *Standard Specifications for Water Distribution Systems and Sanitary Sewer Systems*, as determined necessary to improve the systems' performance and integrity. The City Manager or designee of the City of Locust Grove shall approve amendments in writing.
- B. The City of Locust Grove shall amend the *Standard Specifications for Water Distribution Systems and Sanitary Sewer Systems, 2nd Edition* as required due to changes in applicable regulations. The State of Georgia, Department of Natural Resources, Environmental Protection Division, shall approve regulatory amendments in writing.

DIVISION I
SECTION 2: DEFINITIONS

POLICIES AND PROCEDURES

Page I-2.1

The listed words or acronyms shall mean the following:

ACI: American Concrete Institute.

ANSI: American National Standards Institute.

ASTM: American Society for Testing and Materials.

AWWA: American Water Works Association.

LGWSD: City of Locust Grove Water and Sewer Department

CRSI: Concrete Reinforcing Steel Institute.

Design Engineer: The engineer or surveyor under whose direction the development plans submitted for review were prepared. Design Engineer shall be a Georgia Licensed Professional Engineer.

Developer: Any person, firm, corporation, association or partnership or any agent thereof who undertakes or proposes to undertake the development of land so as to constitute a residential subdivision, apartment complex, condominium or commercial/industrial/ institutional establishment.

DFT: Dry Film Thickness.

Diameter: Nominal inside diameter of pipe excluding bituminous or epoxy bonded coating thickness.

DIP: Ductile iron pipe.

DIVISION I

POLICIES AND PROCEDURES

SECTION 2: DEFINITIONS

Page I-2.2

Easement: Non-profitable interest in land owned by another that entitles its holder to a specific limited use.

Force Main: Piping, valves and other components of a single pressurized line used to convey raw water, potable water or sewage. A force main conveying potable water may have a limited number of service connections.

FMR: Factory Mutual Research.

Georgia EPD: State of Georgia, Department of Natural Resources, Environmental Protection Division.

GFI: Ground Fault Interrupt.

gpm: Gallons per minute.

Gravity Sewer: Piping and other components used to convey sanitary sewage in a non-pressurized system.

Lateral: Pipe extending from a sewer main to a street right-of-way or easement for the purpose of servicing a property (lot). The lateral shall be six (6) inches in diameter, shall not contain a manhole and shall be less than 250 feet in length.

Lift Station: All pumps, valves, wet wells, controls and other components used to pump sanitary sewage into a force main.

NEC: National Electrical Code, latest edition.

NEMA: National Electrical Manufacturers' Association.

No. 57 Stone: Class I embedment or backfill material consisting of manufactured aggregates (crushed stone) in accordance with ASTM D 2321-89 (Reapproved 1995) and ASTM D 2487-00. Percent passing sieve sizes are as follows: 100% passes 1-1/2", < or 10% passes No. 4 and < 5% passes No. 200.

Pavement: Any asphalt, concrete, gravel or dirt surface including curbs and sidewalks used by vehicles and/or pedestrians.

DIVISION I
SECTION 2: DEFINITIONS

POLICIES AND PROCEDURES

Page I-2.3

pcf: Pounds per cubic foot.

psi: Pounds per square inch.

PVC: Polyvinyl chloride.

Rock: Solid material being greater than one (1) cubic yard in size which by actual demonstration cannot, in the opinion of the LGWSD Manager, be reasonably excavated with a minimum 135 horsepower backhoe, in good condition and equipped with manufacturer's standard boom and rock points or similar approved equipment; and which must be systematically drilled and blasted or broken by power-operated hammer, hydraulic rock breaker or expansive compounds.

Rock Excavation: Removal of solid material, as the above specifies, and does not necessarily correspond to "rock" as implied by the names of geologic formations.

Sanitary Sewer System: Multiple pipes, manholes and other components that convey sewage and to which storm water, surface water, and ground water are not intentionally admitted.

SCADA: Supervisory Control and Data Acquisition system.

Service Connection: Fitting(s) connecting a service line or lateral from a property (lot) to a water main or sewer main.

Service Line: Pressurized pipe extending from a water main to a water meter or pressurized pipe extending from a water main to a fire hydrant.

Sewage: The combination of water-carried wastes from residential housing, institutional facilities, and commercial and industrial complexes together with such groundwater, surface water, and storm water as may inadvertently be present.

Sewer: A pipe or conduit that conveys sewage.

Sewer Main: Sewer to which one or more laterals are connected.

Sewer Outfall: Sewer to which one or more sewer mains are connected.

DIVISION I

POLICIES AND PROCEDURES

SECTION 2: DEFINITIONS

Page I-2.4

Sewer Trunk: Sewer to which one or more sewer mains or sewer outfalls are connected and discharges into a Water Reclamation Facility.

Suitable Soil: Soil that conforms to and as recommended by ASTM D 2321-89 (Reapproved 1995) and ASTM D 2487-00 and that is free of organic and/or deleterious material, expansive clay and rock fragments larger than three (3) inches.

UL: Underwriters Laboratory

Utility Contractor: Georgia Licensed Utility Contractor in accordance with the Official Code of Georgia, Chapter 43.

Water Distribution System: Pressurized pipes, valves and other components that convey potable water.

Water Main: Pressurized pipe used to convey potable water from a force main to a service line.

WPCP: Water Pollution Control Plant.

WPP: Water Production Plant.

DIVISION I
SECTION 3: DESIGN APPROVAL

POLICIES AND PROCEDURES

Page I-3.1

3.01 General

- A. The design of water distribution systems and sanitary sewer systems shall conform to the specifications herein.
- B. Concurrent with plan submittal, the Design Engineer shall provide a completed Water Distribution/Sanitary Sewer Addition Submittal form. The Water Distribution/Sanitary Sewer Addition Submittal form is included in Appendix C.

3.02 Technical Review

- A. Proposed water distribution system and sanitary sewer system plans shall be reviewed by the LGWSD under the supervision of a Georgia Licensed Professional Engineer for technical adequacy and conformance to applicable requirements to determine that the systems are suitable for construction.
- B. Upon receipt of a proposed development, the LGWSD shall perform a feasibility study to determine whether the existing LGWSD water distribution system and/or sanitary sewer system has sufficient capacity. The following review shall be completed.

Water Distribution System

1. The latest 12 months of reported production from the system shall be examined to determine an average monthly production rate. A proposed development, whose supply requirement would cause the system to exceed the Georgia EPD permitted rate, shall not be connected to the LGWSD system.
2. Pressure and flow from the contributing water distribution system shall be examined to determine whether the additional supply requirement will adversely affect the surrounding system. A proposed development, whose supply requirement would adversely affect the surrounding system, shall not be connected to the LGWSD system.

DIVISION I
SECTION 3: DESIGN APPROVAL

POLICIES AND PROCEDURES

Page I-3.2

Sanitary Sewer System

1. The latest 12 months of reported discharge from the receiving WPCP shall be examined to determine an average monthly flow rate. A proposed development, whose discharge would cause the receiving WPCP to exceed the Georgia EPD permitted flow rate, shall not be connected to the LGWSD system.
 2. A capacity study shall be performed to determine whether the discharge from the development would exceed the capacity of the existing receiving sewers. A proposed development, whose discharge would exceed the capacity of the receiving sewers, shall not be connected to the LGWSD system.
- C. LGWSD review comments shall be marked on Technical Review Checklists and noted on development plans in the color red (Red Line Comments). Technical Review Checklists used during the LGWSD review are included in Appendix D.

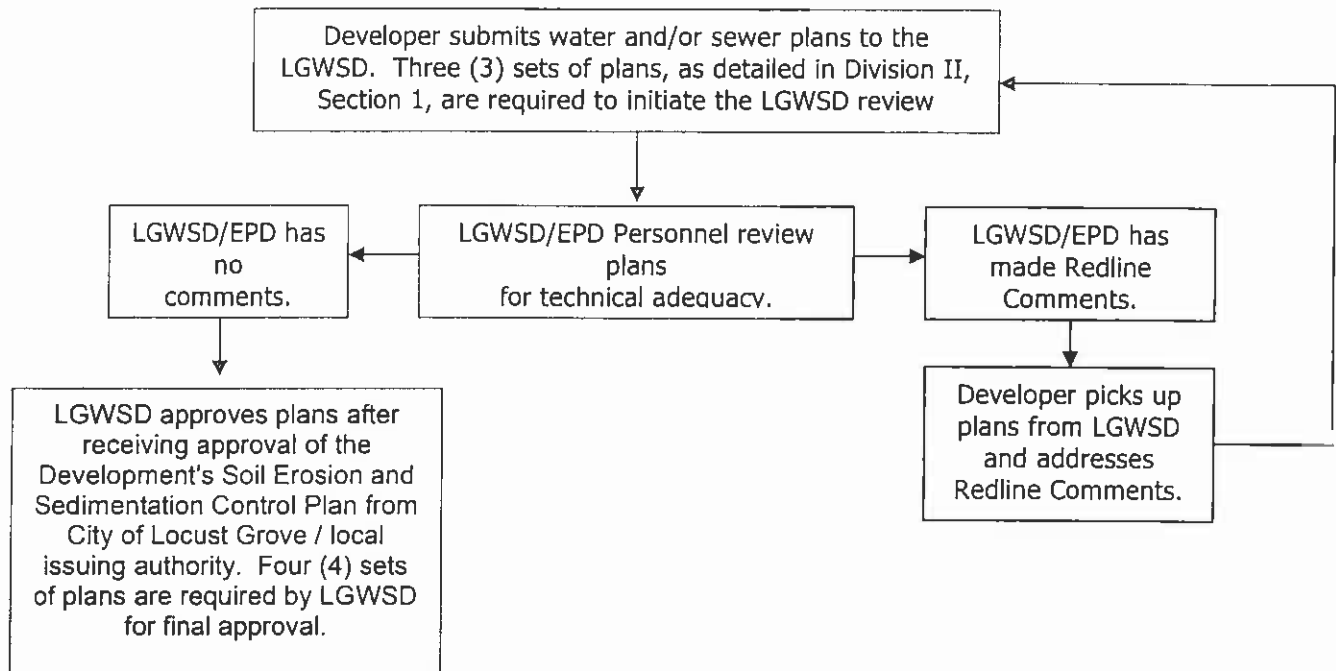
3.03 Plan Processing

- A. Water distribution system and/or sanitary sewer system plans shall be submitted to the LGWSD. Three (3) separate sets of water distribution system and/or sanitary sewer system plans are required for each submittal during the LGWSD review process.
- B. The Design Engineer shall address LGWSD review comments. Plans containing the original Red Line Comments shall accompany each re-submittal to the LGWSD.
- C. Four (4) separate sets of water distribution system and/or sanitary sewer system plans shall be required for final LGWSD approval.
- D. Soil Erosion and Sedimentation Control Plans pertaining to the overall Development shall be reviewed and approved by City of Locust Grove / local issuing authority or the local issuing authority. Construction of any kind shall not begin on a project prior to the issuance of a Land Disturbance Activity permit.

DIVISION I
SECTION 3: DESIGN APPROVAL

POLICIES AND PROCEDURES

E. The LGWSD plan processing sequence is shown on the following chart.



3.04 Approval by Regulatory Agencies

- A. The Developer's Engineer shall address all deficiencies and resubmit plans in accordance with Division I, Sections 3.02 and 3.03. Plans shall not be approved until all deficiencies have been addressed to the satisfaction of the LGWSD Manager.
- B. Note that plan approval by the LGWSD Manager shall not be construed, in any manner, to relieve the Developer of his responsibility for strict compliance with the specifications herein and any applicable laws and regulations.
- C. Installation of water distribution systems and/or sanitary sewer systems shall not commence on any development until the LGWSD has granted final approval of water distribution system and/or sanitary sewer plans and City of Locust Grove / local issuing authority or the local issuing authority has issued a Land Disturbance Activity permit.

DIVISION I

POLICIES AND PROCEDURES

SECTION 3: DESIGN APPROVAL

Page I-3.4

- D. 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, Norfolk Southern Railroad, Georgia Power Company and Southern Natural Gas.

3.05 Period of Plan Approval

The approval period of water distribution system and/or sanitary sewer system plans shall be six (6) months. Approved plans that are not initiated or are inactive for a six (6) month period shall become invalid. Should an approved plan be invalidated, the LGWSD Manager shall determine whether the plan is still valid or whether a new system design is required.

DIVISION I ***POLICIES AND PROCEDURES***
SECTION 4: EASEMENTS AND DEEDED PROPERTY Page I-4.1

4.01 General

- A. Components of water distribution systems and sanitary sewer systems, to be owned by the LGWSD, should be situated within streets' rights-of-way.
- B. The following water distribution system and sanitary sewer system components, to be owned by the LGWSD, shall be situated within an easement that is granted to the LGWSD, when a street right-of-way is not available.
 - 1. Force main.
 - 2. Water main.
 - 3. Water meter/check valve assembly.
 - 4. Fire hydrant.
 - 5. Sewer main.
 - 6. Sewer outfall.
 - 7. Manhole.
 - 8. Other components required by the LGWSD.
- C. An easement shall not encroach into a structure's foundation and shall be clear of all obstructions not associated with the water and/or sanitary sewer system including but not limited to construction debris, fencing and trees.
- D. Property developed and occupied by a lift station and/or an access road, to be owned by the LGWSD, shall be platted and deeded to the LGWSD.

4.02 On-Site Easement

- A. "On-site" easements are those easements falling within the boundaries of the current phase of the development that are shown on the plat and are recorded through the process of recording the final plat.
- B. Developer shall grant to the LGWSD, the exclusive right to construct, reconstruct, operate, maintain, repair, replace, improve, alter, remove, relocate and inspect water distribution systems and/or sanitary sewer systems that are situated over, across and under the land wherein the water distribution systems and/or sanitary sewer systems lie on the Developer's property.

DIVISION I

POLICIES AND PROCEDURES

SECTION 4: EASEMENTS AND DEEDED PROPERTY

Page I-4.2

4.03 Off-Site Easement

- A. "Off-site" easements are those easements falling outside the boundaries of the current phase of the development and shall be provided by the Developer and recorded by the LGWSD for each property owner. Easements through property owned by the developer, including water and sewer lines that will be included in later phases of the same project, must be treated as routine off-site easements.
- B. Off-site easements shall be negotiated and acquired by the Developer with the property owner.
- C. Construction of the off-site water distribution systems and/or sanitary sewer systems shall not begin until all off-site easements for system completion are acquired, recorded and received by the LGWSD Manager.

4.04 Easement Size

- A. The minimum width of a permanent on-site/off-site easement associated with water distribution system and sanitary sewer system components shall be 20 feet.
- B. The minimum size of an easement associated with a water meter/check valve assembly shall be 20 feet by 30 feet.
- C. Easement width or size may be increased or decreased at the discretion of the LGWSD Manager.

4.05 Deeded Property

- A. The minimum size of deeded property associated with a lift station shall be 60 feet by 60 feet.
- B. The minimum width of deeded property associated with an access road shall be 20 feet.
- C. The size or width of deeded property may be increased or decreased at the discretion of the LGWSD Manager.

DIVISION I

POLICIES AND PROCEDURES

SECTION 5: INSTALLATION

Page I-5.1

5.01 General

- A. The installation of water distribution systems and sanitary sewer systems shall be in accordance with the approved plans and specifications herein.
- B. A set of plans stamped approved by the LGWSD shall be present on the job site whenever work is being performed on the water distribution system and/or sanitary sewer system.

5.02 Utility Contractor

- A. A licensed Utility Contractor shall install water distribution systems and sanitary sewer systems.
- B. Prior to commencing construction activities on a proposed water distribution system and/or sanitary sewer system, the LGWSD Manager shall receive a copy of the Utility Contractor's License.

5.03 LGWSD Installation

- A. The LGWSD shall perform the following system components installation at a cost to the Developer/Owner.
 - 1. Supply materials and labor to install water meter and check valve assemblies from 5/8 inch in diameter through two (2) inches in diameter.
 - 2. Supply labor to tap water main.
 - 3. Supply materials and labor to install a sewer main tap for a private individual.
- B. The installation of residential water service lines will be performed by the Developer's Utility Contractor with approval by the LGWSD.

DIVISION I
SECTION 5: INSTALLATION

POLICIES AND PROCEDURES

Page I-5.2

5.04 Insurance Requirements

- A. Utility Contractors performing work on LGWSD funded or partially funded projects shall comply with current LGWSD insurance and bonding requirements.
- B. Companies such as railroads, electric power suppliers, natural gas suppliers, etc. may require Utility Contractors to furnish insurance, in addition to LGWSD requirements when crossing their respective easements. The Utility Contractor shall provide such insurance as required.

5.05 Inspection

- A. A LGWSD Inspector, under the supervision of a Georgia Licensed Professional Engineer, shall inspect water distribution systems and sanitary sewer systems during all phases of construction to ensure the systems are being constructed in accordance with the plans approved by the LGWSD and specifications herein.
- B. The Developer shall provide the LGWSD Manager a 48-hour notice prior to commencing construction on a water distribution system and/or sanitary sewer system.
- C. The Developer/Utility Contractor shall, at all times, permit and facilitate inspection of work by the LGWSD. The presence of a LGWSD Inspector or LGWSD Manager on the site of work shall not be construed to, in any manner, relieve the Developer/Utility Contractor of their responsibility for strict compliance with the approved plans and specifications herein.
- D. The LGWSD Inspector shall not change or modify the approved water distribution and/or sanitary sewer system plans or specifications herein without written approval from the LGWSD Manager.

DIVISION I
SECTION 5: INSTALLATION

POLICIES AND PROCEDURES

Page I-5.3

- E. The LGWSD Inspector shall inform the Developer/Utility Contractor when construction is deficient from the approved plans and specifications herein. Deficiencies shall be addressed in a timely manner as determined by the LGWSD Inspector. Construction activities and other pertinent information shall be recorded on an Inspection Report included in Appendix E.
- F. The City of Locust Grove Building Department shall perform inspections relating to electric power supply.
- G. Deficiencies not addressed in a timely manner shall be justification for the LGWSD to stop work on a project. The LGWSD Manager shall issue a Stop Work Order to the Developer/Utility Contractor in writing. Continued work on a project after being issued a Stop Work Order shall be justification for necessary enforcement actions.

5.06 Testing

- A. Water distribution systems and sanitary sewer systems shall be subjected to pressure testing, televising and mandrel testing as detailed in Division IV. Testing shall be performed at the expense of the developer.
- B. The LGWSD shall be given a 48-hour notice prior to any testing. A LGWSD Inspector shall witness all testing.
- C. Testing for the compressive strength of concrete and density of compacted soil shall be performed at the expense of the Developer by LGWSD approved geotechnical and material testing companies. Materials not meeting required specification shall be removed, replaced and retested for compliance at the expense of the Developer.
- D. Results of tests performed by testing companies shall be provided to the LGWSD Manager. Testing forms used by the LGWSD are included in Appendix F.

DIVISION I

POLICIES AND PROCEDURES

SECTION 6: CONNECTING TO LGWSD SYSTEMS

Page I-6.1

6.01 General

- A. Provided the Developer has complied with the terms of these Policies and Procedures and the installed water distribution system and/or sanitary sewer system is in accordance with the approved plans and specifications herein, the LGWSD shall allow the Developer/Owner to connect the new system(s) into the LGWSD system(s). Copies of the LGWSD letters approving construction of the Developer's water distribution system and/or sanitary sewer system are included in Appendix G.
- B. LGWSD cannot authorize the conveyance of wastewater to and/or from an approved or unapproved sanitary sewer system by means of pumping and hauling.
- C. The conveyance of wastewater onto the ground or into a receiving stream is prohibited.

6.02 Connection to Existing Systems

- A. The LGWSD Inspector shall be notified at least 48-hours in advance of connecting to the LGWSD systems.
- B. A LGWSD Inspector shall be present during connection of the Developer's systems to the LGWSD systems. Prior to installation, a LGWSD Inspector shall approve all materials supplied by the Developer to be used in making the connection.
- C. Upon completing a water distribution and/or sanitary sewer connection, the Developer's systems shall be valved-off and/or immediately plugged, respectively, until Final Acceptance.
- D. Should an unauthorized connection or connection without the presence of the LGWSD Inspector be made to the LGWSD systems, the Developer shall be subject to a fine and/or refusal of service. Under any circumstance, the Developer shall expose and thoroughly clean all piping and components of the connection for inspection by the LGWSD. Noncompliant connections and/or damage to the LGWSD system shall be repaired/replaced in conformance with the approved plans and specifications herein at the expense of the Developer.

DIVISION I

POLICIES AND PROCEDURES

SECTION 7: SYSTEM ACCEPTANCE

Page I-7.1

7.01 General

Acceptance of the Developer's water distribution system and/or sanitary sewer system shall be considered by the LGWSD at such time as the Developer has met all terms and conditions of the specifications herein.

7.02 Final Inspection

Prior to final acceptance, a LGWSD Inspector shall perform a final inspection of the water distribution system and/or sanitary sewer system after all pavement is installed. The final inspection shall determine the proper installation of valve and meter boxes, the integrity of manholes, and the presence of debris in sewers and curb markings. Results of the inspection shall be recorded on a Final Inspection Report and is included in Appendix H. Deficiencies encountered shall be immediately addressed and an additional final inspection shall be required.

7.03 Warranty

The Developer shall warrant the development's water distribution system and/or sanitary sewer system and hold the LGWSD harmless against all costs, expenses and losses, including, without limitation, incidental and consequential damages, resulting from any defects in the Developer's water distribution system and/or sanitary sewer system, including without limitation, defects in material and workmanship, which are discovered or arise within a minimum period of one (1) years beginning on the date of final acceptance by the LGWSD. A longer warranty period may be required on certain material requirements and/or construction standards as indicated in the specifications.

7.04 Final Acceptance

- A. Final acceptance of the Developer's water distribution system and/or sanitary sewer system by the LGWSD shall be when written, signed and dated by the LGWSD Manager. A copy of the LGWSD Final Acceptance Letter is included in Appendix I.
- B. Upon issuance of Final Acceptance Letter, the Developer's new system(s) may be opened to the LGWSD system(s).