

Section 4

Service Lines

A. General

1. A service line is that portion of a sanitary sewer line that extends from the outer building wall or foundation wall to its connection with the sewer lateral at the easement or right-of-way boundary.
2. Each improved property shall have its own individual service line. Each side of a duplex and each townhouse unit shall be considered a separate property requiring individual sewer connections.
3. Where premises in single ownership consist of more than one building, the Authority reserves the right to determine, under the circumstances of each case, whether each separate building must have its own individual sewer connection or whether all buildings together may use a single connection.
4. For non-residential connections the Authority may require a wastewater flow meter and/or monitoring manhole to be installed for billing or water quality monitoring purposes.

5. Maintenance and Repair of Service Lines:

All service lines shall be maintained and repaired by the Owner at the expense of the Owner of the improved property. Such repairs shall be subject to the approval and inspection of the Authority.

6. Inspection of Premises:

The Authority, by its agents and employees, shall have the right at all reasonable times to enter any premises connected to or about to be connected to the sewer system in order to enforce compliance with these Rules and Regulations.

7. Existing Service Lines:

Existing service lines may be used provided they have been inspected by the Authority and found to be reasonably true to grade and alignment, in good condition for the purpose of conveying sanitary sewage or industrial wastes, and have tight joints of approved materials. The integrity of the existing line shall be determined by performing the air test described in paragraph E – Testing and Inspection of this section. If the existing line does not conform to these requirements, the problem shall be corrected or a new line shall be laid at the expense of the property owner in accordance with the specifications contained herein. All testing required by the Authority shall be at the expense of the Owner.

8. Supervision and Inspection:

The construction of service lines shall at all times be subject to the supervision and inspection of the Authority or its authorized representative and shall conform to the Authority's specifications. No service connections shall be covered or backfilled until authorized by the Authority to do so.

9. The Authority will not be responsible for any damage that may result from basements being flooded by a blockage in the service line. Basement floor drains and sump pumps that collect groundwater or surface water shall not be connected to the sewer system.

10. Special Conditions and Requirements

- a. Construction of a service line under a paved driveway is discouraged and should be avoided whenever possible. However, when this condition is unavoidable and the service line is to be placed under a drive or other roadway and the depth is less than four feet (4'), the line shall be constructed of ductile iron pipe or as the Authority may direct.
- b. Service lines for all service stations, garages or other establishments storing, using or dispensing gasoline, kerosene, benzene or similar solvents shall be constructed of ductile iron pipe with chemically resistant joints.
- c. Grease and Sediment Interceptors
 1. No hotel, restaurant, hospital, school, bed and breakfast or other public eating establishment shall connect to the sewer system without first installing a grease interceptor on the service line from the kitchen area. The location of the interceptor shall be approved by the Authority. Sanitary waste shall be kept separate from the kitchen waste and shall not enter the interceptor. The interceptor shall be of double compartment design and shall be sized in accordance with the guidelines of the USEPA "Design Manual – Onsite Wastewater Treatment and Disposal System" October 1980 Edition. The design shall be submitted to the Authority for review and approval.
 2. No service station, garage, factory building or commercial establishment which handles oils, petroleum or similar products, or which washes cars, trucks or other types of machinery, shall connect to the sewer system without first installing grease and grit traps, of a size and type approved by the Authority, on the service line at a location approved by the Authority.

B. Design Criteria

1. Diameter and Slope

The internal diameter of the pipe shall be a minimum of 4 inches. All service lines shall be installed with a minimum grade of two percent. Pipes shall be laid in straight lines.

2. Depth of Sewers

A minimum cover of three and a half feet shall be maintained to prevent crushing and freezing. Any exceptions to this requirement must be approved by the Authority on a case-by-case basis.

3. Placement of Sewers

Sewer and water service lines shall be spaced 6 feet apart horizontally. If this separation cannot be met, the service lines may be spaced a minimum of 3 feet apart, provided that the lines are installed with the bottom of the water service line above the top of the sewer service line for the entire length of the lines.

4. Cleanouts

Cleanouts shall be provided in each service line at intervals not greater than 50 feet and at all horizontal bends of 45° or greater in the line to permit complete rodding of the service line. If a cleanout has not been provided inside the house, then a cleanout will be required within 5 feet outside the foundation wall. Cleanouts shall be constructed using a wye fitting in the run of the pipe with a 45° bend and risers to the ground surface. The riser shall be provided with a standard four inch (4") screw type ferrule and shall be installed a minimum of 4 inches above grade.

5. Traps

An intercepting trap shall be placed outside the right-of-way and driveway, between the curb line (or sidewalk) and the building. The trap shall be a cast iron or PVC single running trap with vent. The riser and vent shall be on the building side of the trap. Unless otherwise authorized by the Authority, the top of the vent shall be a minimum of 4-inches above the ground and shall have a cowl type vent to prevent surface water from entering the service line, and shall be located in an area not subject to flooding or ponding.

C. Materials and Equipment

1. Gravity Service Lines

a. Ductile Iron Pipe and Fittings

Refer to Section 2 – Gravity Sewers for these requirements.

b. Polyvinyl Chloride Pipe and Fittings

Four-inch gravity service lines shall be Schedule 40 PVC conforming to ASTM D1785. Six-inch and larger gravity service lines shall be SDR 35 PVC as specified in Section 2 – Gravity Sewers.

2. Low-Pressure Service Lines

Refer to Section 6 – Low-Pressure Sewers for these requirements.

3. Jointing materials for the various types of pipe shall be as follows:

- a. Cast Iron Pipe shall have approved pre-molded rubber joints made with bell and spigot ends. Portland cement joints will not be permitted.
- b. SDR 35 PVC pipe (6 inches or larger) shall have joints of O-ring gaskets, or an O-ring adapter manufactured of rubber, and shall be installed in accordance with the manufacturer's recommendations.
- c. Schedule 40 PVC pipe (4 inches or smaller) shall have either:
 - (1) joints of O-ring gaskets per ASTM D3212 installed in accordance with the manufacturer's recommendations; or
 - (2) glued joints per ASTM D2672. Pipe ends shall be cleaned, deburred, primed, glued and installed in accordance with the manufacturer's recommendations.

4. Flexible Coupling

Flexible couplings composed of elastomeric PVC shall conform to ASTM C443, C425, C564 and D1869 as manufactured by Fernco, Inc. Each coupling shall be supplied with two Type 305 stainless steel adjustable clamps.

D. Installation

1. General

- a. The portion of the service line which runs through building or foundation walls shall pass through a 5' cast iron or steel wall sleeve. The sleeve shall be two pipe sizes larger than the service line.
- b. A straight horizontal alignment shall be maintained where possible. When conditions exist that require the use of bends (ell fittings) in the line, the following shall apply:

- (1) It shall be incumbent on the Contractor to contact the inspector prior to excavation to discuss the proposed route of the service line and the use of bends in the line.
 - (2) Measures shall be taken by the Contractor to minimize the number of bends and/or directional changes in the service line.
 - (3) The existence of rock is not an acceptable reason for using bends.
 - (4) Cleanouts shall be provided at all horizontal bends of 45° or greater. The use of a series of multiple lesser degree bends to achieve a horizontal directional change of 45° or greater shall be prohibited.
 - (5) A 45° or 90° bend installed horizontally but rotated in a downward orientation shall be considered a horizontal bend if the angle of rotation from horizontal is less than 45° and, thus, shall require a cleanout.
 - (6) Vertical bends of greater than 45° shall be prohibited.
- c. The excavator shall supply sufficient 1B stone in the trench so that the service pipe may be laid on a firm continuous bed of stone. Pipe shall not be blocked up on rocks, bricks or wood in accordance with the International Plumbing Code.
- d. Connections to Sewer Laterals
- (1) Where the service line and the sewer lateral are of different pipe sizes and similar materials, the connection shall be made using a DWV (drain-waste-vent) hub.
 - (2) Where the service line and the sewer lateral are of the same size pipe and similar material, connections shall be made by properly joining the bell end of the service line with the lateral sewer.
 - (3) If the service line and sewer lateral are of unlike materials, the connection may be made with a Fernco flexible coupling with stainless steel bands suitable for the type and size of pipe to be connected.
 - (4) Projecting the smaller pipe into the larger and sealing with grout or mastic will under no circumstances be permitted.
 - (5) In the case of a low -pressure sewer, joining the service line to the sewer lateral of the same size shall be done using the proper fittings and an approved solvent cement.

- (6) When connecting a low-pressure sewer to a gravity sewer lateral, connection shall be made using a PVC adapter and an approved solvent cement.
 - (7) All connections to sewers shall be made at the terminus of the sewer lateral unless the Authority specifically authorizes otherwise.
 - (8) Whenever a sewer lateral has not previously been constructed the construction of the sewer lateral and the connection of the sewer lateral to the sewer main shall be as described in Section 3 – Sanitary Sewer Laterals of these regulations.
- e. Ground and surface water in trenches for service lines shall not be permitted to enter the sewerage system. Care shall be taken to prevent broken lateral caps and other debris from entering sewerage system
 - f. No trench shall be backfilled until the service line has been inspected and approved by the Authority or its representative.
 - g. The following requirements shall be applicable for that portion of the service line installed within the paved portion of the rights-of-way of township roads and state highways, and it shall be the responsibility of the Owner of the property served to require his plumber or contractor to adhere to these requirements.
 - (1) The trench shall be thoroughly compacted using mechanical tamping equipment.
 - (2) The trench area shall be graded to conform to existing grade.
 - (3) No surplus excavated materials or debris shall be piled or stored in this area.
 - (4) All street, road or highway surfaces which are disturbed or damaged by the Owner or Contractor shall be properly repaired at the Owner's expense.
 - (5) Subsequent settlement of the street, road or highway surface resulting from improper compaction of the service line trench or failure to protect the lateral line trench shall be promptly repaired at the Owner's expense.
 - (6) If the Owner or Contractor fails to comply with any of the requirements of subparagraphs (1) through (5) of this subsection h, then after reasonable notice to the Owner, the Authority may proceed on its own to make any necessary correction or repairs so that the

aforesaid requirements are fulfilled. If the Authority performs such work, then the Owner of the property shall be liable to the Authority for the entire costs of such repairs and said costs will be included in the Owner's next quarterly billing for sewer services.

2. Excavation

Refer to Section 2 – Gravity Sewers for these requirements.

3. Bedding

Refer to Section 2 – Gravity Sewers for these requirements.

4. Laying Pipe

Refer to Section 2 – Gravity Sewers for these requirements.

5. Backfilling

Refer to Section 2 – Gravity Sewers for these requirements.

6. Surface Restoration

Refer to Section 2 – Gravity Sewers for these requirements.

E. Testing and Inspection

1. Notification

It is incumbent upon the Applicant to arrange a pre-construction meeting or an inspection 24 hours in advance.

2. Inspection Procedure

The inspection procedure for service line installations shall be as follows:

- a. Prior to excavation for the service line, the Applicant shall be responsible for arranging a meeting between the excavator, the plumber and the SLSA inspector. This meeting shall serve as a pre-construction meeting, where the inspector can review SLSA requirements with the excavator and plumber. During this meeting, the alignment for the service line shall be established and marked.
- b. Once the service line has been installed, the inspector shall be called out again to inspect the installation and witness the air test. This second inspection shall be conducted prior to backfill of the service line. The service line shall be clearly visible, with 6 inches of the specified stone bedding material beneath the line (the line shall not be supported by

blocks or large stones). At this time, there shall also be a stockpile of the proper stone backfill onsite to ensure that the trench will be backfilled with the proper material.

- c. If the installation fails either because of a failed air test or an improper installation of the service line, subsequent visits to the site by the inspector shall be charged to the Applicant.

3. Air Test Procedure

- a. Each service line shall be subjected to an air test prior to approval by the Authority. The test shall be witnessed by an agent of the Authority and the service line shall not be deemed acceptable until said service line has satisfactorily passed the test described below. All costs of testing and any subsequent test(s), including equipment, material or labor required shall be the responsibility of the Owner.
- b. The service line shall be tested by plugging the line at the point of connection with the Authority's system by the use of a "test wye" and by plugging the line just before the point of connection with the building sewer. All risers, vents, plugs and cleanouts should be adequately blocked, plugged or supported to withstand the pressure associated with the test. The test shall be an air test and shall be designed to provide a residual pressure of 5 psi throughout the length of the service line.
- c. The air test shall be made by attaching an air compressor testing apparatus to any suitable opening and after closing and supporting all other inlets and outlets to the service line, forcing air into the service line until there is a uniform gauge pressure of 5 psi. Wait for approximately 2 minutes to allow the air temperature in the pipe to stabilize. If necessary, add more air to attain a testing pressure of 5 psi. The service line shall be deemed acceptable if this pressure is maintained for 5 minutes without the introduction of additional air.
- d. Care must be taken that the pressures generated by the air test do not exceed the pipe manufacturer's recommendations.

F. Detail Drawings

Relevant detail drawings are:

- 1 Right-of-Way Restoration
- 10 Typical Gravity Service Line
- 11 Typical Low-Pressure Service Line to Gravity Sewer

12 Typical Low-Pressure Service Line to Low-Pressure Sewer Main or Force Main

END OF SECTION