

TOWN OF COLONIE  
DEPARTMENT OF PUBLIC WORKS  
DIVISION OF PURE WATERS

# **STANDARD SPECIFICATIONS**

for

# **RESIDENTIAL SANITARY SEWER CONNECTIONS**



Latest Revision Date: November 2017

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## SECTION 1 - GENERAL

### 1.1 DIVISION OF PURE WATERS AUTHORITY

- A. The following specifications apply to residential sanitary sewer connections in the Town of Colonie.
- B. All sanitary sewer connection installations shall be subject to the control and approval of the Division of Pure Waters (Sanitary Sewer Department).
- C. Authority for Division of Pure Waters control is derived from the Town of Colonie Local Law No. 9 of 1971, and Local Law No. 5 of 1975. The Local Laws regulate the use of all public and private sewers.

### 1.2 USE OF PUBLIC SEWERS REQUIRED

- A. The owner of any house, building, or property used for human occupancy, employment, recreation, or other purpose, situated within the Town, and abutting on any street, alley, or right-of-way, in which there is now - or may be in the future - located a public sanitary sewer, is hereby required to install suitable plumbing facilities therein, and to connect such facilities directly to the nearest public sewer, in accordance with these specifications.
- B. Under normal circumstances, such connection shall be made within ninety (90) days after the date of official notice to connect, provided that the public sewer is within one hundred (100) feet of the property line. However, the Division may allow additional time in specific cases.

### 1.3 PROHIBITED DISCHARGES

- A. No person shall discharge, or cause to be discharged, any stormwater, surface water, roof runoff, groundwater, subsurface drainage, uncontaminated cooling water, or unpolluted industrial process water into any sanitary sewer. Basement floor drains, footing drains or sump pumps shall not be connected to any sanitary sewer.
- B. Discharges containing certain contaminants hazardous or injurious to the sewers or the sewage treatment facilities are also excluded. A complete description of such wastes is found in Chapter 155 of the Local Law.

#### 1.4 PERMITS AND FEES

- A. No person shall uncover, make connection to, use, alter, or disturb any public sewer or appurtenance thereof, without first obtaining a Sewer Connection Permit or modification approval from the Division of Pure Waters. Single and two family homes are classified residential for permit fee purposes.
- B. Before making a sewer connection, the property owner or registered contractor shall apply for and obtain the appropriate permit from the Division of Pure Waters. The residential permit fee for 2018 is \$240.00 and is payable at the time the permit is issued. Permits are issued at the Division office located in the Public Operations Center at 347 Old Niskayuna Road, Monday through Friday between 8:30 a.m. and 4:30 p.m.
- C. All expenses incidental to the connection of a building to the sewer system are the responsibility of the property owner. The property owner or his contractor shall indemnify the Town of Colonie for any loss or damage that may result from the sewer connection work.

#### 1.5 CONTRACTOR REGISTRATION AND INSURANCE

- A. Any person working for fee (contractor) to make connections to the sanitary sewer system must register with the Division of Pure Waters.
- B. All registered contractors must have on file with the Division a Contractor's protective liability insurance policy, in the name of the Town of Colonie or naming the Town of Colonie as additional insured in the following amounts:  
bodily injury \$500,000 each person and \$1,000,000 each accident; and property damage \$100,000.

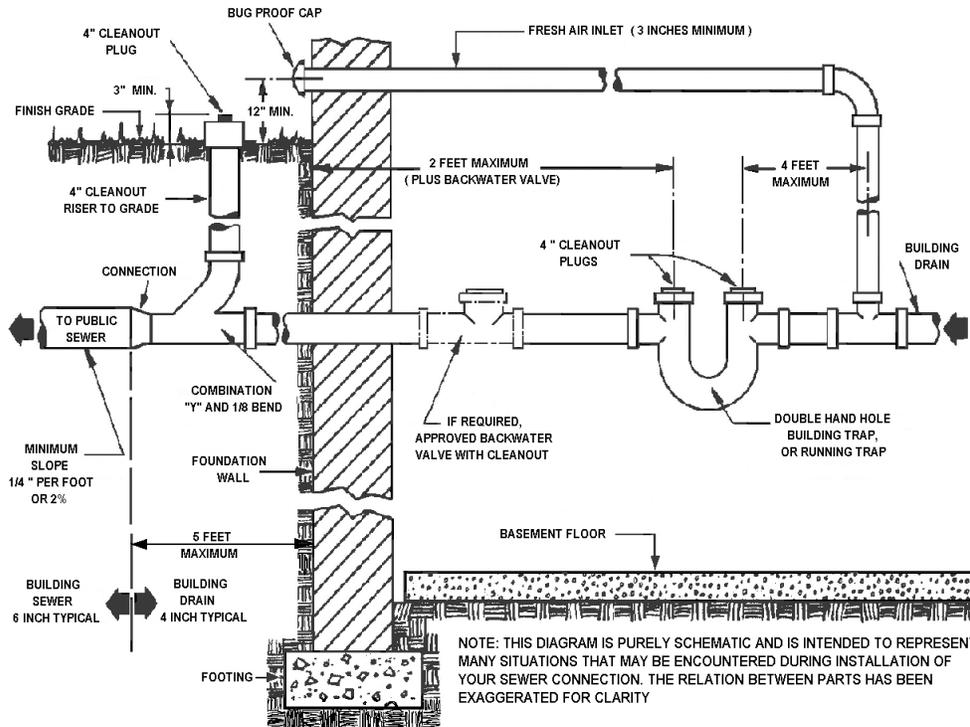
- End of Section -

## SECTION 2 - LAYOUT OF SEWER CONNECTION

### 2.1 BUILDING SEWER

- A. The building sewer is defined as the portion of sewer pipe beginning at the public sewer main and extending to the start of the building drain. The building drain is considered to begin at a point five (5) feet outside the foundation wall (see Figure 1).
- B. For existing buildings where the building sewer has been installed by the Town's contractor to the owner's property line (or permanent easement boundary), a 2x4 marker is placed at the pipe end cap to await connection by the property owner.
- C. In the case of undeveloped property where a building sewer connection may not have been provided at the property line (or permanent easement boundary), the property owner will be required, if and when a sewer connection becomes necessary, to construct at his expense a building sewer from the public sewer main to his property.
- D. In all cases, it is the property owner's responsibility to extend and construct, at his expense, the building sewer from the stub provided by the Town's contractor to the point of connection with the building drain.
- E. A separate and independent building sewer must be provided for every building, except for special connections described in the Local Laws and approved by the Division of Pure Waters.
- F. The building sewer shall be installed at an elevation below that of the first floor to provide gravity sewer service. Pump systems must be approved in advance and may only be installed when gravity service is not possible.
- G. The building sewer shall be laid at a minimum depth of four feet to provide protection from frost, and at a uniform grade of  $\frac{1}{4}$  inch per foot or about 2%.
- H. The building sewer shall not be laid within three (3) feet of and parallel to any bearing wall.
- I. Necessary changes in direction shall be made only with properly curved pipe and fittings. 90-degree bends are not acceptable. To change direction by 90 degrees, two 45 degree bends connected with a 1-foot section of pipe or a 90-degree long sweep fitting should be installed.
- J. For building sewers longer than one hundred feet and not connected into a manhole, intermediate cleanouts must be installed at each one hundred (100) feet interval with risers extended to ground level. The exterior cleanout on the building drain must extend to a point at least three (3) inches above finish grade (ground level).

FIGURE 1 - TYPICAL BUILDING DRAIN LAYOUT



## 2.2 BUILDING DRAIN

- A. Figure 1 illustrates the requirements for a typical building drain. The building drain is defined as starting at a point five (5) feet outside the foundation wall and extending into the building.
- B. All building drains shall include:
  1. A 4-inch cleanout to a point at least three (3) inches above finish grade located outside the foundation wall.
  2. A double hand hole building trap (or running trap) installed inside the foundation wall.
  3. A 3-inch fresh air inlet, vented to the outside air.
- C. The building trap shall be located within two (2) feet of the foundation wall. No fixture connections shall be made to the building drain downstream of the trap.
- D. Homes which have any sanitary fixtures at an elevation below the elevation of the road must be protected from backflow. In most cases, an approved backwater valve must be installed on the main building drain (see Figure 1). In some cases, smaller backwater valves can be installed on individual fixtures. Contact the Division of Pure Waters to discuss options regarding backflow protection.
- E. If your building drain is located under the basement floor, all cleanouts must be extended to raise the cleanout plugs up to the level of the basement floor.

## 2.3 HOW TO PLAN YOUR SEWER CONNECTION

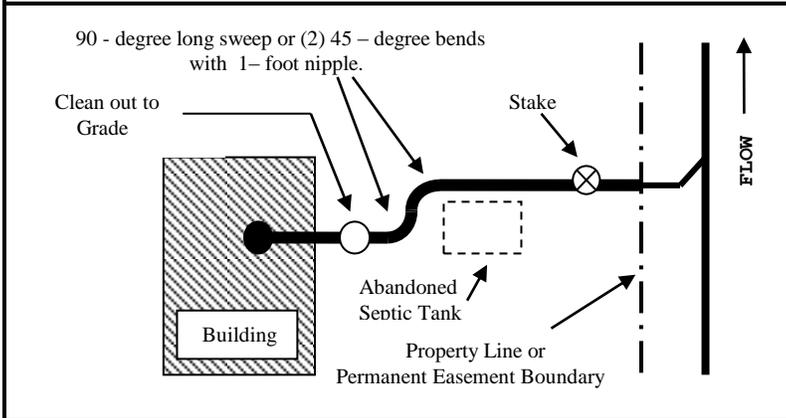
- A. Where possible, your sewer connection should be made directly in front of your building, and in no case should your building sewer cross another property .
- B. Figure 2 illustrates three alternate sewer lateral layouts, one of which should apply to your connection. These layouts should be used as a guide in planning your sewer connection based on your interior plumbing arrangement, septic tank location, and the location of your connection to the public sewer. You may wish to consult with an experienced plumber or registered contractor about your sewer lateral layout and the relative cost of each connection option.
- C. When the layout for your building sewer has been established, the wooden stake that was provided to you should be driven in the ground at the location along your front property line where your building sewer will cross as indicated by the ⊗ in Figure 2. The wooden stake will show the Town's contractor where to install your building sewer stub. The stake should be driven firmly into the ground and be located away from trees, shrubs, and flower beds so it can be seen by the contractor.
- D. If you decide not to remove, but abandon your existing septic tank, it must be pumped out. Only authorized septage haulers should pump septic tanks. Metal septic tanks must be pumped out, the cover removed and the tank filled with compacted gravel or sand prior to inspection by Division personnel. Pre-cast concrete tanks must be pumped out and the inlet plugged. Pre-cast concrete tanks can be used for sump pump outlets. Concrete block tanks with wood covers must be pumped out, the wood cover removed and the tank filled with compacted gravel or sand. Building sewer piping should not pass through the abandoned septic tank.

- End of Section -

FIGURE 2

**HOW TO PLAN YOUR BUILDING SEWER CONNECTION**

In general, your building sewer connection should be made short, straight, and as direct as possible. Your particular situation should be covered by one of the three alternates illustrated below. Note that in each of the diagrams, the heavy lines represent the portion of the installation for which you are responsible, from your home to the property line or the permanent easement boundary.

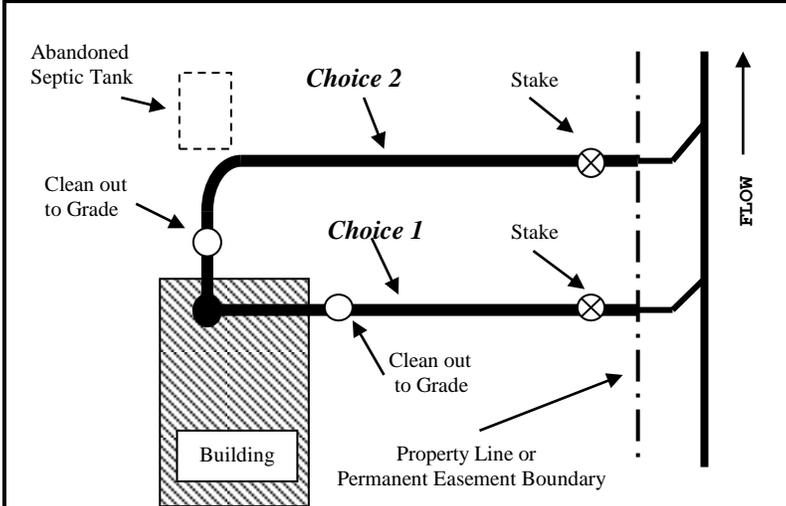


**ALTERNATE "A"**  
**SEPTIC TANK ON THE SEWER SIDE OF THE BUILDING**

This is the simplest form of connection. Extend your present building drain to the building sewer provided by the Town's contractor. A clean out to grade will be required outside the building wall. (See note at the bottom of this page)

YOUR SEPTIC TANK SHOULD BE EITHER REMOVED OR EMPTIED, FILLED AND ABANDONED. IF ABANDONED, PIPING SHOULD BY-PASS THE TANK AS SHOWN ON THE DIAGRAM AT LEFT.

PLEASE DRIVE STAKE INTO THE GROUND AS INDICATED BY ⊗



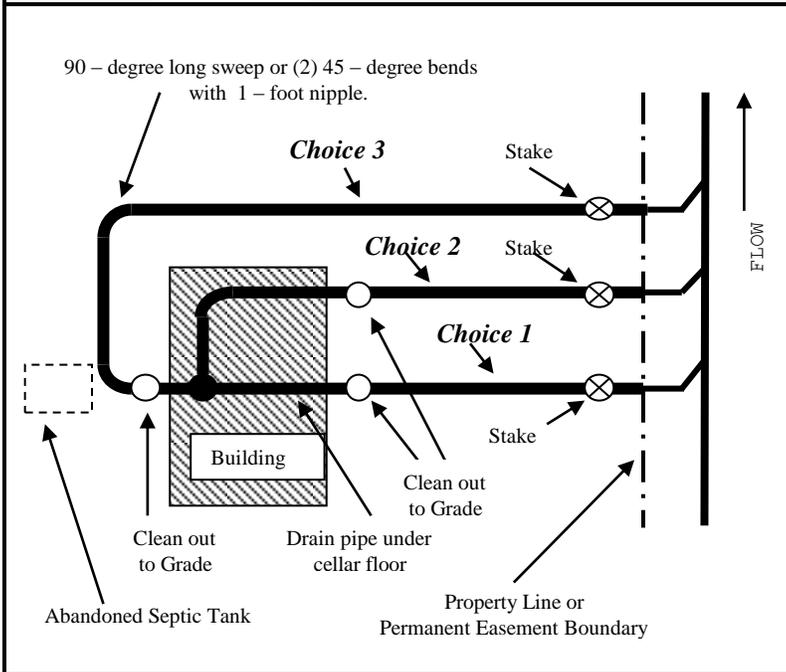
**ALTERNATE "B"**  
**SEPTIC TANK AT THE SIDE OF THE BUILDING**

You have two choices:

- 1) Exit at the front of the building and run the drain pipe along the inside of the cellar wall. This may not be practical if your cellar is finished as a play area, laundry room, or workshop, etc.
- 2) Exit at the septic tank side and use the present drain connection through the wall.

Either choice will require at least one (1) clean out to grade as shown. (See note at the bottom of this page).

PLEASE DRIVE STAKE INTO THE GROUND AS INDICATED BY ⊗ ACCORDING TO CHOICE 1 OR CHOICE 2 ABOVE.



**ALTERNATE "C"**  
**SEPTIC TANK ON THE OPPOSITE SIDE OF THE BUILDING FROM THE SEWER LINE**

You have three choices:

- 1) Exit at the front of the building by relocating the building drain under the cellar floor. This should be considered only if you do not wish to have the drainpipe rerouted along the inside of the cellar wall.
- 2) Exit at the front corner (similar to choice 1 of Alternate B). This is satisfactory only if you can locate the drainpipe along the inside wall of the cellar. If you have a finished cellar, this may not be practical.
- 3) Exit at the rear, using your present drain connection through the wall.

Whatever choice you may select, the installation will require at least one (1) clean out to grade as shown. (See note at the bottom of this page).

PLEASE DRIVE STAKE INTO THE GROUND AS INDICATED BY ⊗ ACCORDING TO CHOICE 1 OR CHOICE 2, OR CHOICE 3 ABOVE.

**IMPORTANT NOTE:** THE 3 DIAGRAMS ABOVE SHOW ONLY ONE CLEANOUT TO GRADE PER INSTALLATION. HOWEVER, IF THE TOTAL LENGTH OF YOUR PORTION OF THE INSTALLATION (HEAVY LINE) EXCEEDS ONE HUNDRED (100) FEET, AND YOUR LATERAL DOES NOT ENTER A MANHOLE, ADDITIONAL CLEANOUT(S), SPACED NO MORE THAN ONE HUNDRED (100) FEET APART, MUST BE INSTALLED ALONG THE LINE.

## SECTION 3 - MATERIALS

### 3.1 BUILDING SEWER PIPE AND FITTINGS

- A. All standard building sewer pipe and fittings shall be 6-inch diameter PVC SDR 26 gravity sewer pipe conforming to ASTM D3034 with integral bell and elastomeric gasketed joints conforming to ASTM F477-90 (PVC - Polyvinyl Chloride) (SDR - Standard Dimension Ratio). Under special conditions and with prior approval of the Division of Pure Waters, other sewer pipe material may be acceptable.

### 3.2 BUILDING DRAIN PIPE AND FITTINGS

- A. All building drain pipe and fittings shall be cast iron or PVC Schedule 40 with 4" minimum diameter and shall conform to the requirements of the New York State Building Construction Code applicable to Plumbing.

### 3.3 CONNECTION TO AN EXISTING PUBLIC SEWER MAIN

- A. In circumstances where no lateral stub has been provided to vacant property, the property owner will be required to install the entire length of the building sewer from the building drain to the public sewer main. These types of connections to the public sewer main involve special construction and as such, require prior approval of the Division of Pure Waters.

### 3.4 CONNECTION TO AN EXISTING BUILDING SEWER

- A. In the event where a new building sewer pipe must be joined to an existing building sewer pipe the connection shall be made watertight using the standard pipe fitting/coupling designed to join the two pipes.
- B. In the event there is no manufactured fitting available to join two dissimilar pipes, a Fernco coupling designed to join the types of pipes involved may be used.

### 3.5 CONNECTION OF BUILDING SEWER TO BUILDING DRAIN

- A. The type of coupling to be used will depend on the pipe material and the pipe sizes being joined. The typical coupling used to join cast iron to PVC is a 6"x4" Fernco. In joining PVC SDR 26 to PVC Schedule 40 pipe, a manufactured reducing fitting with rubber gaskets should be used.

### 3.6 BUILDING DRAIN CLEANOUTS

- A. The exterior cleanout on the building drain shall be a minimum 4" diameter and include a manufactured wye fitting, 45 degree bend and vertical riser extended to an elevation 3" above finish grade (ground level) terminated with a threaded cap for access. For cast iron cleanouts which are terminated with a brass cap, the threads of the cap should be coated with anti-seizing compound. Pipe joints in the cleanout riser must be rubber-gasketed or caulked lead with oakum for cast iron pipe and glued for PVC Schedule 40 pipe. Mortared joints and double hub cast iron fittings are not allowed.

### 3.7 BUILDING TRAP

- A. All building traps shall be either cast iron manufactured or PVC Schedule 40. All traps shall be the double hand hole type incorporating two 4" diameter cleanouts. When using cast iron traps, the threads on the brass caps should be coated with an anti-seizing compound.
- B. For traps located below the basement floor, the trap cleanouts must be raised and terminated at the basement floor level.

### 3.8 FRESH AIR INLET

- A. Fresh air inlet piping shall be a minimum 3-inch diameter cast iron, copper, or plastic pipe. The fresh air inlet shall terminate outside the building at least twelve (12) inches above finish grade. The open end shall be protected by a bug-proof plate or cap permanently fixed in the mouth of the pipe with an open ventilating area at least equal to the area of the inlet pipe.

### 3.9 BACKWATER VALVE

- A. All backwater valves, whether installed in the main building drain, or in separate connections to the building drain, shall incorporate a cleanout and be of a type approved by the Division of Pure Waters.

- End of Section -

## SECTION 4 - PIPE INSTALLATION

### 4.1 GENERAL CONSTRUCTION

- A. All excavation, pipe installation, and backfilling shall be performed in accordance with modern standard practices, pipe manufacturer's recommendations, New York State Building Code for Plumbing, all applicable ASTM Standards, and OSHA Regulations for Construction.
- B. All excavations shall be adequately protected with barricades and lights. All excavations must be properly refilled to grade in compacted layers. Roadways, sidewalks, parkways, and other public property disturbed in the course of the work shall be restored in a manner satisfactory to the Division of Pure Waters or to the authority having jurisdiction.
- C. The opening of streets and sidewalks for the purpose of making sewer connections must be completed in accordance with the requirements of Town Law and of the County or State Highway Department having jurisdiction. Any required Highway Work Permit shall be obtained by the property owner or his contractor prior to issuance of a Sewer Connection Permit.
- D. No connection shall be made into a public sewer main unless approved in advance by the Division of Pure Waters and in the presence of a Pure Waters representative.
- E. No water shall be allowed to gather in the pipeline excavation or trenchline. It is the property owner's or his registered contractor's responsibility to provide pumps to remove the water from the excavation to allow for inspection of the pipe. Pumping of ground water into the public sewer system is a violation of Local Law.

### 4.2 REQUIREMENT FOR PIPE INSPECTION

- A. Upon completion of the building sewer installation and prior to backfilling the trench, the contractor shall notify the Division of Pure Waters at 783-2766 to request an inspection of the pipe installation. Trenches backfilled without Pure Waters inspection will be re-excavated by the contractor at his expense. Inspection requirements also apply to property owners who install their own building sewer connections.

- End of Section -