

8. Inspection

Must be requested one working day prior to the need, as noted in the Richmond Inspection Request notices.

The piping must be completely installed including the connection to the City sanitary inspection chamber.

The ditch must be free from accumulation of ground water which in most cases requires a pump in the deep end.

The crown of the pipe must be exposed with the certification markings visible at the crown.

The inspection must include the infiltration test noted in Item #9 of this information handout.

9. Infiltration Test

The permit holder must provide this test by filling the entire system with water. Where the City Inspection Chamber is PVC plastic pipe, it has a plug in inlet that is accessible from inside the chamber.

Where the City Inspection Chamber is concrete, the permit holder must provide a test ball which is inserted into the inlet pipe from within the chamber.

The height of this test must be to the overflow rim of the lowest plumbing fixture inside the building.

10. Installation Details

A. Cleanouts - Must be installed at intervals not exceeding 7.5 m (25') for 50 mm (2") pipe and 15 m (50') for 100 mm (4") pipe. Additional cleanouts are also required where cumulation changes of direction exceed 45° in any portion of the sewer. All cleanouts must be accessible for effective rodding and cleaning.

B. Fittings - The sewer should be installed as straight as possible with a minimal use of fittings.

Changes of direction may be made with wyes and other fittings not exceeding a 45° change of direction. See also the notes under cleanouts.

11. Abandoned Tanks

Upon connection to the sanitary sewer the existing septic tank/soap box contents must be pumped out and removed from the site by a licenced disposal service.

The receipt for such pumping must be made available to the Plumbing Inspector for notation on records at the time of sewer completion.

NOTE - Pumping the contents of the disposal tanks into a ditch or sanitary sewer is **prohibited**.

12. General Information

The installation requirements noted in Item 1 and 4 through 10 of this handout apply to all sanitary sewers for one/two family dwellings.

The inspector will require an inspection of the existing systems within the building to ensure health and safety is maintained.

NOTE - Septic Tanks and Systems

All enquiries regarding the installation or repair of septic tanks and systems should be directed to:

Vancouver Coastal Health
8100 Granville Avenue
Richmond, BC V6Y 3T7
Telephone: 604-233-3174



All Sanitary Sewers & Conversion from Septic Tank for One/Two Family Dwellings



Inspection Line 604-276-4111

City of Richmond

6911 No. 3 Road, Richmond, BC V6Y 2C1
Telephone: 604-276-4000
www.richmond.ca
BA-B-4 / February 10, 2011

Building Approvals Division
www.richmond.ca

1. Permits

To complete the connection from a one/ two family dwelling to the City inspection chamber a Sewer Permit is required from the Permit Centre at a cost of \$63.50 for the first 100 ft. (30 m) plus \$23.50 for each additional 100 ft. (30 m).

This permit may be obtained by a licenced sewer contractor, a licenced plumbing contractor, or the registered owner of the property. The sewer installation outside of the building may be performed by any of the above permit holders.

Where the connection to City Sewer requires plumbing alterations in or under the building a plumbing alteration permit is required. This permit may be issued to a licenced plumbing contractor, or in the case of a single family dwelling only, an owner who resides in that dwelling who signs a Statutory Declaration to that effect. The plumbing work must be performed by the permit holder.

2. Existing System

The present system generally consists of a 100 mm (4") cast iron pipe to the septic tank and may have a 50 mm (2") cast iron pipe to the soap box. These pipes are normally at or near the surface of the ground between the building foundation and the appropriate disposal tank.

3. Installation Connection

Disconnect inlet to septic tank and soap box by cutting existing cast iron pipes approximately 300 mm (12") from the footing.

Connect to existing cast iron pipes with 45° mechanical joint cast iron fittings and extend cast iron pipe to a minimum 450 mm (18") cover necessary for plastic pipe. The pipes may then be joined together by means of a wye fitting and extended to the City sanitary sewer connection provided.

4. Materials

All pipe materials must be certified and marked in accordance with the appropriate standards as follows:

- A.** C.S.A. - B182.1-M for ABS/PVC Sewer Pipe and Fittings.
- B.** C.S.A. - B181.1-M for ABS Drain Waste and Vent Pipe and Fittings.
- C.** C.S.A. - B181.2-M for PVC Drain Waste and Vent Pipe and Fittings.
- D.** C.S.A. - B70-M for Cast Iron Pipe and Fittings.
- E.** CAN/CSA-B182.6-M, "Profile Polyethylene Sewer Pipe and Fittings," with a pipe stiffness of not less than 320 kPa.
- F.** ASTM F 628-00 "Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe with a Cellular Core." (DWV)

	All sanitary pipe and fittings used under a building:	All pipe and fittings for sanitary sewer located outside the building with a minimum of 450 mm (18"), cover under landscape area or more than 900 mm (36") cover under vehicle traffic areas:	All pipe and fittings for sanitary sewer located outside of the building with less than 900 mm (36") cover under vehicle traffic areas:
ABS/PVC plastic sewer pipe certified to CSA B182.1	P	P	NP
ABS/PVC DWV certified to CSA B181.1 & B181.2 respectively	P	P	P
Cast Iron certified to CSA B70 Standard	P	P	P
CAN/CSA-B182.6-M, "Profile Polyethylene Sewer Pipe and Fittings," with a pipe stiffness of not less than 320 kPa.	P	P	NP
ASTM F 628-00 "Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe with a Cellular Core." (DWV)	P	P	NP
	P-Permitted	NP-Not Permitted	

Listed above are the most common materials available in the market place. Other pipe, such as vitrified clay pipe, concrete sewer pipe, are acceptable if clearly marked in accordance with the relevant standard.

5. Slopes/Gradients

All sewers must have a downward slope between the existing piping and the City sanitary sewer of 1% for 100 mm (4") pipe.

6. Depth/Materials

Except for piping located at the existing building noted in connection above, Table 1 indicates the type and class pipes acceptable for various locations.

7. Bedding

All sanitary sewers in minimum 450 mm (18") width trench must have a solid bedding under and at the sides of the pipe consisting of a minimum of 150 mm (6") of ¾" Clear Crush.

The least expensive ¾" Clear Crush is preferred as it packs well under and around the pipe with the least effort.

Other types of rock bedding meeting Class I as defined in ASTM D2321 Standards are acceptable.

After inspection approval the area above the sewer pipe shall be backfilled with rock for the first 150 mm (6") and natural soil to the surface.