

SCHEDULE "G"

BACKFLOW PREVENTION DEVICES

1. Requirement for Backflow Prevention Assemblies

- .1 Over and above the requirements of the Plumbing Code, the Engineer shall require backflow prevention assemblies to protect the City's potable water supply in private systems which:
 - (a) Serve docks, or piers; or
 - (b) Are identified in the latest edition of AWWA M14 "Recommended Practice for Backflow Prevention and Cross-Connection Control" as systems requiring backflow prevention devices; or
 - (c) As determined by the Engineer, based on anticipated use of water on the premises.

2. Design of Backflow Prevention Assemblies

- .1 The type of Backflow Prevention Assembly required will be determined by the Owner's designer of the private water distribution system in accordance with the latest edition of AWWA M14 "Recommended Practice for Backflow Prevention and Cross Connection Control."
- .2 Only approved backflow prevention assemblies shall be used. Approved backflow-prevention assembly shall mean an assembly that has been manufactured in full conformance with the standards established by the American Water Works Association titled:
 - (a) *AWWA C510-89 - Standard for Double Check Valve Backflow-Prevention Assembly, and
 - (b) *AWWA C511-89 - Standard for Reduced-Pressure Principle Backflow-Prevention Assembly,

and have met completely the laboratory and field performance specifications of the Foundation for Cross-Connection Control and Hydraulic Research for the University of Southern California (USC FCCCHR) established by "Specification of Backflow-Prevention Assemblies" - Sec. 10 of the most current issue of the Manual of Cross-Connection Control.

- .3 The USC FCCCHR approves the entire assembly, which includes both the backflow prevention assembly and the accompanying isolating valves. All approved assemblies shall be supplied direct from the manufacturer with the approved isolating valves attached.

- .4 Any modification of an assembly, including pressure or atmospheric vacuum breakers, after it leaves the manufacturer's plant, such as the substitution of the make or model of isolating valves, voids the approval of the assembly. After installation, to retain approval of an assembly, any replacement of parts, materials, etc., for maintenance reasons, shall utilize only those parts and materials supplied by the manufacturer for the make and model of assembly specified.

3. Location and Layout of Backflow Prevention Assemblies

- .1 The location of backflow prevention assemblies will be as approved by the Engineer. Wherever possible, the backflow prevention assembly shall be located inside the building, and shall be upstream of meters and branch fire lines.
- .2 Clearances for backflow prevention assemblies located inside the building or in a hut shall be in accordance with City of North Vancouver Standard Detail #___, and as defined in the table below shall apply.
- .3 Where a backflow prevention assembly is installed in a hut or pit, the minimum clearance dimensions shown on City of North Vancouver Standard Details #___ and as defined in the table below shall apply.

**BACKFLOW PREVENTION ASSEMBLIES*
TYPICAL CLEARANCES**

Nominal Diameter of Device	A	B	C		D	E
			Bldg or Hut	Pit		
3/4" – 1 1/2" 20mm – 40mm	0.53 m	0.3 m	0.3 m	0.6 m	0.3 m	1.0 m
2" – 3" 50mm – 75mm	0.66 m	0.3 m	0.3 m	0.6 m	0.3 m	1.0 m
4" – 6" 100mm – 150mm	0.81 m	0.3 m	0.3 m	0.75 m	0.3 m	1.0 m
8" – 10" 200 mm – 250 mm	0.81 m	0.3 m	0.3 m	0.75 m	0.3 m	1.0 m

*Check manufacturer's literature for recommended dimensions

4. Installation of Backflow Prevention Assemblies

- .1 All plumbing shall meet the requirements of the City Plumbing Bylaw and this Bylaw.
- .2 All backflow prevention assemblies shall be installed in a horizontal position.
- .3 The installation of an assembly may not be approved if, in the opinion of the Engineer, the assembly is located such that inspection, testing or maintenance may be encumbered.

5. Testing and Certification of Backflow Prevention Assemblies

- .1 The water service pipe shall not be turned on at the curb stop until the backflow prevention assembly installation has been tested and certified by an approved tester.
- .2 An approved backflow prevention assembly tester is one who is listed with the BC Waste and Water Cross Connection Tester Certification Program.
- .3 In July of each year, after the year of initial installation, or more frequently if required by the Engineer, the backflow prevention assembly shall be checked by an approved backflow prevention assembly tester and the tester's certificate shall be forwarded to the Engineer.
- .4 Failure to forward the certificate can result in penalties as specified in Section 9 of this Bylaw.

6. Cost of Backflow Prevention Assemblies

- .1 All costs related to the purchase, installation, maintenance and certification shall be borne by the Owner.