

SUNSHINE COAST REGIONAL DISTRICT
SUBDIVISION SERVICING STANDARDS (WATER AND SEWER)

2. MATERIALS

2.01 General Requirements

All materials and equipment incorporated into work covered by these Standards shall conform to these Standards and to the latest edition of the pertinent AWWA Standard Specifications for the material or equipment. All material shall be new and of the best quality available. Alternative materials shall be covered by up to date specifications of the AWWA. All material must be approved by the Provincial Department of Health for use in public water supply systems.

2.02 Handling

Tools, trucks and other equipment as well as methods of handling and hauling the material shall be such that pipes and other materials will not be dropped or damaged. In no case shall materials be allowed to drop, roll freely, or bump against other materials or objects of any kind. The use of hooks on pipe ends will not be permitted, and special care shall be exercised to prevent damage to machined ends. If pipes or other materials are damaged, they shall be replaced by the Contractor at his own expense. The interior of pipe, valves and fittings shall be kept clean.

2.03 Pipe

Pipe in size 150 mm and larger shall be ductile iron (ductile). Alternatively, Sclairpipe with the approval from S.C.R.D. may be used.

Ductile Iron Pipe shall conform to AWWA Standard C150 with the following particular requirements:

- (a) Class - The pipe wall thickness shall be designed for each application in accordance with AWWA H3.
- (b) Standard Length - The standard length of pipe shall be 5.5 M.
- (c) Lining - Ductile iron pipe shall be cement-mortar lined in accordance with AWWA Standard C104.
- (d) Pipe Joints - Pipe joints shall be a rubber gasket type conforming to AWWA C111, such as Bell-tite, Tyton or approved equal.
- (e) Cast Iron Fitting Hubs - Hub connections shall be Bell-tite, Tyton, Ter-Mech or approved equal.

2.04 Main Line Valves

Line valves from 100 mm to 300 mm sizes shall be Terminal City or approved equivalent gate valves conforming to AWWA Standard C500. Valves

shall be iron-body, bronze-mounted, solid wedge or double-disc gate, non-rising stem with flanged or hubbed ends to suit. Flanges shall have Class 125 standard drilling. Valve stems shall be fitted with a standard AWWA nut and they shall turn clockwise to close. Line valves in sizes 14 inch and larger shall be rubber seated butterfly valves conforming to AWWA C504.

All valves shall have the manufacturer's name and catalogue number molded as an integral part of the valve body.

2.05 Cast Iron Fittings

Cast iron fittings such as bends, tees, crosses, adaptors, end caps, etc., shall conform to AWWA Standard C110. Ends of fittings shall be flanged or hubbed to suit. Flanges shall be standard Class 125 cast iron flanges.

2.06 Fire Hydrants

All hydrants shall be sliding gate type Terminal City Ironworks No. 20P. Hydrants shall be of the post type with 112 mm pumper outlet locked and leaded or screwed in place. Each outlet shall be safeguarded against blowing out, turning or backing out.

Hose and pumper outlet threads shall be manufactured to the B.C. Fire Hose Thread Specifications except in west Howe Sound Fire Improvement District where threads are to suit.

All working parts shall be arranged so that they may be removed without disturbing the barrel or base of the hydrant without excavation.

The hydrant shall be so designed that its top section may, without excavation, be rotated 45, 90 or 135 degrees to the right or left or 180 degrees from the inlet pipe, if desired, and bolted or locked in place without decreasing its strength or causing it to leak when under pressure. All stems shall open counter-clockwise, as viewed from the top.

All hydrants shall be subject to a hydrostatic pressure test of 2,070 kilopascals certified by the manufacturer. The main operating screw shall be stainless steel.

All hydrants shall be painted red prior to acceptance by the Corporation.

2.07 Valve Boxes

Valve boxes shall be telescopic Robar No. 37-72, R-C Nelson Valve boxes.

2.08 Service Connections

Service connection pipe up to 25 mm diameter shall be Type K soft copper tube conforming to ASTM specification B88.

All bushings, reducers, unions and nipples shall be standard brass.

2.09 Air Valves

Air Valves shall be Terminal City Ironworks double acting air valves or approved equal.

2.10 Pipe Bedding Material

The material immediately under the pipe and on each side of the pipe up to the springline is defined as pipe bedding material.

Sand may be used for pipe bedding in dry trenches where the sand can be successfully compacted.

In wet trenches pipe bedding material shall be a well graded mixture of gravel or crushed stone and sand 100% passing a 19 mm screen.

2.11 Select Backfill

The material placed on each side of the pipe and above the pipe to a level of 300 mm above the top of the pipe shall be select backfill.

For ductile iron pipe, select backfill may consist of trench excavated material free from material and particles larger than 75 mm.

2.12 Nuts and Bolts

All nuts and bolts for flanged or mechanical joints shall be cadmium plated to resist corrosion. All bolts shall be correctly sized and otherwise be in accordance with AWWA Specifications.

