



City of Kelowna  
 1435 Water Street  
 Kelowna, BC V1Y 1J4  
 250 469-8500  
 kelowna.ca

# Council Policy

## Subdivision, Development & Servicing – Approved Products List

APPROVED July 29, 2002

RESOLUTION: R323/11/03/28

REPLACING: R375/10/04/26; R602/09/05/25; R59/99/01/25; R651/00/07/24; R650/02/07/29

DATE OF LAST REVIEW: March 2011

This policy specifies the approved products to be used in the construction of Works and Services in the City of Kelowna. This list will be expanded and amended from time to time.

The list is to:

- (a) Standardize the products used between Water Improvement Districts and the City.
- (b) To limit the number of certain products that can be used within the City, to ensure that staff is trained to maintain those items, and to limit the inventory necessary for maintenance.
- (c) Make it easier for contractors and to minimize errors.

The City, subject to recommendation by the Director of Design & Construction, may approve products that satisfy the requirements of the City. For "Water" products, the Kelowna Joint Water Committee establishes the requirements. The respective Civic Operations Managers will review Water, Wastewater, Drainage, Electrical, Parks, and Road and Transportation Products. Requests for product inclusion may be made to the respective Civic Operations Manager.

### Table of Contents:

#### A. Waterworks

1. Pipe
2. Fittings & Appurtenances
3. Valves
4. Hydrants
5. Brass Service Fittings

#### B. Manholes and Catch Basins

1. Adjustable Manhole Frame
2. Catch Basin Rollover frame and Grate

#### C. Misc Metals

1. Landscape Products

#### D. Irrigation

#### E. Wastewater

1. General
2. Sanitary sewer Pipe
3. Sewer Main Fittings and Appurtenances
4. Manholes

## A. WATERWORKS DIVISION

*Note:* Products must conform to CSA Standard, where applicable.

**Legend:**

@ Subject to Engineers Design and Approval

# Complete with Stainless Steel or high strength, low alloy steel bolts. All bolts to be denso paste and taped.

<b><u>Manufacturer</u></b>	<b><u>Make/Model</u></b>	<b><u>Size Range</u></b>	<b><u>Comments/Conditions</u></b>
<b>1. Pipe</b>			
<b><u>Water main</u></b>			
Ipex, Rehau, Royal	PVC C900	100 to 300mm	Only DR 18, class 150 or better as required for C900 & C905
	PVC C905	350 to 900mm	
Canada Pipe,	Ductile C151	250 to 750mm	Must be installed with Polyethylene encasement, and be cement mortar lined to AWWA C-104.
US Pipe	Ductile C151	750mm and up	
<b><u>Service Pipe</u></b>			
Noranda, Wolverine	Type k Copper	min. 20mm (3/4") max. 50mm (2")	Must conform to CSA HC.7.6 & ASTM B88
All Suppliers	Polyethylene	min. 25mm (1") max. 50mm (2")	Only Series 160 or 200 conforming to CAN/CSA-B137.1-M All PE: ID must be equivalent to copper tube flow capacity
<b>2. Fittings &amp; Appurtenances</b>			
<b><u>Fittings</u></b>			
TC / ACS	Iron	100 – 600 mm	C-153 Fittings only
Norwood Foundry	Iron	100 – 600 mm	C-153 Fittings only
Sigma Corporation	Iron	100 – 600 mm	C-153 Fittings only
Ipex	PVC	100 – 200 mm	DR 18 Class 150, CSA B137.2 & B137.3, AWWA C907
<b><u>Restraining Joints</u></b>			
Ford Meter Box Co. / Uni-Flange	1300C, 1350C & 1390C	100 – 600 mm	# @
Smith Blair	Model 982	100 – 600 mm	# @
Sigma	PV – LOC Series	100 – 600 mm	# @
EBAA Iron	Series 1500 PVC	100 – 600 mm	# @
Canada Pipe	Thrust Loc Series	100-600 MM	# @
Sigma	Zip Flange	100 - 600 mm	# @

**A. WATERWORKS DIVISION CON'T**

<u>Manufacturer</u>	<u>Make/Model</u>	<u>Size Range</u>	<u>Comments/Conditions</u>
<b><u>Service/Tapping Saddles</u></b>			
Robar	2606DB 2706DS	100 – 600 mm 100 – 600 mm	Up to 25mm boss With stainless steel straps
Canada Pipe	SC-2	100 – 400 mm With stainless steel straps	Up to 25mm boss
Ford	FS303 202 BS	100 – 300 mm 100 – 900 mm	Up to 25mm boss With stainless steel straps
Cambridge Brass	812	100 – 900 mm	Up to 25mm boss
<b><u>Couplings</u></b>			
<b>Note:</b> All couplings to be Fusion Bonded Epoxy Coated Ductile Iron.			
Ford	FC1-ESH & FCA-ESH FC2W Ultra Flex	100 – 600 mm 100 – 300 mm	# #
Robar	1506 & 1506R 1726 Multi-Fit	100 – 600 mm 100 – 300 mm	# #
Smith Blair	411, 413, 415, 441	100 – 600 mm	#
Canada Pipe	Style CDB	100 – 600 mm	#
Viking Johnson	Maxi-Fit & Maxi-Step	All sizes	#
T.P.S.	Hymax 2000	50 – 600 mm	#
Romac	XR 501 Extended Range	100 – 300 mm	#

**3. Valves****Gate Valves**

Clow	Clow Resilient	50 – 600 mm
Mueller	Super-Seal	50 – 300 mm
<i>Mueller</i>		AWWA C-515 A2361 350 – 1050 mm

**Tapping Saddles**

No fabricated Steele on PVC or AC	All sizes	# Unless approved by Utility or Improvement District
Ok on D.I. or C.I.		

**Butterfly Valves**

Centerline	Series 200	350 mm +
Pratt	Groundhog	350 mm +
Mueller	Lineseal III	350 mm +
Keystone	Type AR1 & AR2	350 mm +

**A. WATERWORKS DIVISION CON'T**

<b><u>Manufacturer</u></b>	<b><u>Make/Model</u></b>	<b><u>Size Range</u></b>	<b><u>Comments/Conditions</u></b>
<b><u>Air Valves</u></b>			
<b>Note:</b> Internal coating to be Factory, NSF approved Epoxy			
Golden Anderson	945 E	25 – 100 mm	Internally Coated
Apco	143C, 145C, 147C 149C & 150C	25 – 150 mm	Internally Coated
Valmatic	201C, 202C, 203C & 204C	25 – 150 mm	Internally Coated
Crispin	All Models	25 – 150 mm	Internally Coated
Cla-Val	All Models	25 – 150 mm	Internally Coated
<b><u>Service Boxes</u></b>			
Meuller	A-726 A-728	20 – 25 mm 37 – 50 mm	c/w Stainless Steel Rods & SS-RHD or MD-RHD Clevis Ends
Trojan	VSB1 VSB2	20 – 25 mm 37 – 50 mm	c/w Stainless Steel Rods & SS-RHD or MD-RHD Clevis Ends
<b><u>Main Valve Boxes</u></b>			
TC / ACS Norwood Foundry Dobney Foundry	D-5	Minimum 375mm Vertical Dimension	Nelson Type Nelson Type Nelson Type
<b>4. Hydrants</b>			
<b><u>Hydrants</u></b>			
Terminal City Clow Canada Valve	C-71-P Brigadier Century		TCH1A only c/w Storz Fitting c/w Storz Fitting c/w Storz Fitting
<b>5. Brass Service Fittings</b>			
<b><u>Corporation Stops</u></b>			
Mueller A.Y. McDonald Ford Cambridge Brass	B-25008 4701BQ FB 1000 Series 301	20 – 50 mm 20 – 50 mm 20 – 50 mm 20 – 50 mm	Full port only Full port only Full port only Full port c/w new mueller gasket
<b><u>Curb Stops</u></b>			
<b>Note:</b> Stop & Drains NOT permitted.			
Mueller A.Y. McDonald Ford Cambridge Brass	B-25209 6100XQ B44 Series Series 202	20 – 50 mm 20 – 50 mm 20 – 50 mm 20 – 50 mm	Full port only Full port only Only full port models 333, 444, 555, 666 & 777
<b><u>Service Line Couplers</u></b>			
Ford Mueller Cambridge Brass	C44 Series H-15403 Series 118 & 119	20 – 50 mm 20 – 50 mm 20 – 50 mm	Models C44-1 to C44-88 H15403, H15404 & H12940

**B.MANHOLE AND CATCH BASINS**

---

1. Adjustable Manhole Frame:
  - TC Ironworks Inc. C44A adjustable MH frame and SR-Support Ring
2. Catch Basin Rollover Frame and Grate:
  - Westview Sales Ltd. RB7 frame and grate

**C.MISCELLANEOUS METALS DIVISION**

---

**Landscape Products**

Dobney Foundry Surrey, BC (604) 596-7407	Tree Grates SP48 Model Grate Colour: Black
Dobney Foundry Surrey, BC (604) 596-7407	Tree Guards Type 'B' Colour: Black
Dobney Foundry Surrey, BC (604) 596-7407	Bollards Style 'B' Colour: Black
Frances Andrews Surrey, BC (800) 656-6579	Bench Model #G24-311M Colour: RAL 5011
Frances Andrews Surrey, BC (800) 656-6579	Garbage Receptacle Model # R-31-1 Colour: RAL 5011

**D. IRRIGATION**

<u>Manufacturer</u>	<u>Make/Model</u>	<u>Size Range</u>	<u>Comments/Conditions</u>
<b>Isolation Valve, Master Control Valve</b>			
Red & White	256	Up to 2" > 2"	As per Contract Dwgs
<b>Master Valve</b>			
Hunter	IBV Series		
Rain Bird	EFB and BPE Series		
Toro	220 Series		
<b>Pressure Reducing Valve</b>			
Watts	Series 25 AUB-Z3		
<b>Backflow Prevention Device – Double Check Valve Assembly</b>			
Conbraco	40-100 Series		
Watts	Series 709, c/w NRS		
<b>Backflow Prevention Device – Reduced Pressure Backflow Assembly</b>			
Conbraco	40-200 Series		
Watts	Series 909		
<b>Pulse Decoder</b>			
Rain Bird	M51200		
<b>Pulse Output Transmitter</b>			
Data Industrial	600-15		
Rain Bird	PT322		
<b>Electrical Control Valve</b>			
Hunter	ICV c/w Accu-Set		
Rain Bird	PEB c/w PRS-Dial		
Toro	P-220 c/w EZReg		
<b>Control Zone Kits For Drip Irrigation</b>			
Toro			
Rain Bird			
Netafim			
<b>Low Flow Control Valve</b>			
Hunter	ICV series		
Rain Bird	PEB series		
Toro	TPV series		
<b>Low Flow Filter</b>			
Rain Bird	QKCHK		

## **D. IRRIGATION CON'T**

---

### **High Flow Filter**

Amiad	Plastic filter w/ 130 micron screen	Wired to controller for automatic flush
-------	-------------------------------------	---

### **Quick Coupler Valve**

Rain Bird	5-RC
-----------	------

### **Irrigation Valve Box**

Carson Industries LLC NDS Manufacturing	Specifiction Grade Pro Series
--	----------------------------------

### **Wire Splice Box**

Carson Industries LLC NDS Manufacturing	Specifiction Grade Pro Series
--	----------------------------------

### **Sprayhead Sprinkler**

Hunter	INST-CV series
Rain Bird	PRS-SAM series
Toro	PRX-COM series

### **Rotor Sprinkler**

Hunter series	PGJ, PGP, I-35,
Rain Bird series	3500,5000 plus, 8005
Toro series	Mini 8, 640, T5 with check valve

### **Drip Emitter/Bubblers**

Hunter series  
Rain Bird series  
Toro series

### **Wire Splices**

3M	DBY Direct Bury Splice Kit
----	----------------------------

## **E.WATSEWATER**

---

### **1. GENERAL**

Materials not contained in the "Wastewater Approved Products List" may be accepted on a product by product basis, however approval must be provided from the City. If requested, evidence shall be provided that material complies with the all standard specifications listed in this document. All products must comply with the requirements in the current Master Municipal Construction Documents, and the City of Kelowna Supplementary Specifications.

## 2. SANITARY SEWER PIPE

All pipes shall be Poly Vinyl Chloride (PVC) CSA approved pipe. Compounds used in manufacturing the pipe shall come from a single manufacturer and be subject to any tests outlined in the CSA standards.

<u>Manufacturer</u>	<u>Make/Model</u>	<u>Size Range</u>	<u>Comments/Conditions</u>
Ipex	“Ring-Tite” PVC	200 to 1200mm	Must meet CSA B182.2
Rehau	“BondLoc” PVC	200 to 1200mm	and DR 35, Gasket joint
Royal	“Flex-Lox” PVC	200 to 1200mm	
Ipex	“Ring-Tite” PVC	100 to 150mm	Must meet CSA B182.2
Rehau	“BondLoc” PVC	100 to 150mm	and DR 28, Gasket joint
Royal	“Flex-Lox” PVC	100 to 150mm	
<u>Pressure Sewer Main</u>			
Ipex	“Blue Brute” PVC	100 to 300mm	Must meet CSA B137.3,
Rehau	“AquaLoc” PVC	(all makes)	C900, DR 18, Gasket joint
Royal	“FlexLox” PVC	350 to 900mm	Must meet CSA B137.3, C905, Gasket joint, DR 41 or better as per engineers’ design and approval



### 3. SEWER MAIN FITTINGS AND APPURTENANCES

#### General

All fittings shall be CSA or ASTM approved; compounds used for molding fittings shall come from a single compound manufacturer. Locations of all proposed fittings must be shown on the Construction drawings and approved by the city.

#### Inserted Service Connections

<u>Manufacturer</u>	<u>Make/Model</u>	<u>Size Range</u>	<u>Comments/Conditions</u>
Le-Ron Plastics	Inserta Tee's PVC Gasketed	All	Acceptable for tie-ins to existing mains and for mains 375mm and over

#### Wye

<u>Manufacturer</u>	<u>Make/Model</u>	<u>Size Range</u>	<u>Comments/Conditions</u>
Le-Ron Plastics	PVC Gasketed	All	45°
Ipex	PVC Gasketed	All	45°
Royal	PVC Gasketed	All	45°

#### Couplings

<u>Manufacturer</u>	<u>Make/Model</u>	<u>Size Range</u>	<u>Comments/Conditions</u>
Ipex	PVC Gasketed	100 to 675mm	
LeRon Plastics	PVC Gasketed	100 to 675mm	
Mission Rubber	Shielded Transitional PVC	100 to 675mm	

*Note: Must not be plasticized. PVC Shear band and clamps to be 316 series stainless steel. Clamps must be nut & bolt design. Bushings to be integral.*

Royal	PVC Gasketed	100 to 675mm	
-------	--------------	--------------	--

#### Caps

<u>Manufacturer</u>	<u>Make/Model</u>	<u>Size Range</u>	<u>Comments/Conditions</u>
LeRon Plastics	PVC Gasketed	100mm to 1200mm	
Ipex	PVC Gasketed	100mm to 1200mm	

### 3. SEWER MAIN FITTINGS AND APPURTENANCES CON'T

#### Gaskets

<u>Manufacturer</u>	<u>Make/Model</u>	<u>Size Range</u>	<u>Comments/Conditions</u>
Ipex	"Ring-Tite" PVC	200 to 1200mm	
Rehau	"BondLoc" PVC	200 to 1200mm	
Royal	"Flex-Lox" PVC	200 to 1200mm	

#### Service Connection Bends

<u>Manufacturer</u>	<u>Make/Model</u>	<u>Size Range</u>	<u>Comments/Conditions</u>
Le-Ron Plastics	PVC Gasketed	All	Refer to Note
Ipex	PVC Gasketed	All	Refer to Note
Royal	PVC Gasketed	All	Refer to Note

*Note: all 22.5, 11.25, 45 Degree bends must be long radius.*

#### Inspections Chambers

<u>Manufacturer</u>	<u>Make/Model</u>	<u>Size Range</u>	<u>Comments/Conditions</u>
Le-Ron Plastics	PVC Gasketed	100mm to 200mm	Single service IC's only

#### Inspections Lids

<u>Manufacturer</u>	<u>Make/Model</u>	<u>Size Range</u>	<u>Comments/Conditions</u>
Le-Ron Plastics	PVC	200mm	Must be locking and Red in colour

#### Brooks Boxes

Inspections Lids shall state "sewer".

<u>Manufacturer</u>	<u>Make/Model</u>	<u>Size Range</u>	<u>Comments/Conditions</u>
Langley Concrete	WM-37-1	590x410mm	Brook style Box
Kon Kast	No. 1480	545x370mm	Brook style Box

## 4. MANHOLES

### General

All Concrete used in construction shall be sulphate resistant cement Type HS (Type 50) or alternate cement type may be approved by the City. All manhole components including any cast iron, steel or ductile iron shall be coated with an asphalt varnish. All material referenced in this section shall be constructed in accordance to the dimensions and material specifications referenced in Schedule 5 of Bylaw 7600 City of Kelowna Construction Standards, Section 2 standard drawings.

### Manhole Cover

All Manhole covers shall conform to the standard detail drawing, all dimensions and specifications must meet the requirements as specified.

<u>Manufacturer</u>	<u>Make/Model</u>	<u>Size Range</u>	<u>Comments/Conditions</u>
TC/ACS	C44A	660mm Diameter	
Westview	TR40	660mm Diameter	
AE Concrete	C23	760mm Diameter	
Langley Concrete	C18	565mm Diameter	

### Manhole Frame

All Manhole frames shall conform to the standard detail drawings, all dimensions and specifications must meet the requirements as specified. The required frame shall be specified by the Engineer.

### Standard

<u>Manufacturer</u>	<u>Make/Model</u>	<u>Size Range</u>	<u>Comments/Conditions</u>
TC/ACS	C44A	760mm Diameter	
Westview	TR40	760mm Diameter	
AE Concrete	C23	760mm Diameter	
Langley Concrete	C18	565mm Diameter	

### Adjustable

<u>Manufacturer</u>	<u>Make/Model</u>	<u>Size Range</u>	<u>Comments/Conditions</u>
TC/ACS	C44A	760mm Diameter	
AE Concrete	C23A	760mm Diameter	

**Manhole Collars (Grade Rings)**

<u>Manufacturer</u>	<u>Make/Model</u>	<u>Size Range</u>	<u>Comments/Conditions</u>
Kon Kast	720-723	50mm-150mm	760mm Diameter Opening
Langley Concrete	MH-6	50mm-100mm	760mm Diameter Opening
AE Concrete	915	50mm-150mm	

**Manhole Barrel Sections**

<u>Manufacturer</u>	<u>Make/Model</u>	<u>Size Range</u>	<u>Comments/Conditions</u>
Kon Kast	Concrete	1050-2400mm	Refer to detail drawings
Langley Concrete	Concrete	1050-1500mm	

**Manhole Steps**

Manhole steps shall be fabricated from aluminum and installed as per the City of Kelowna Supplementary Specifications.

**Manhole Barrel Lids**

<u>Manufacturer</u>	<u>Make/Model</u>	<u>Size Range</u>	<u>Comments/Conditions</u>
Kon Kast	Concrete	1050mm-2400mm	Refer to detail drawings
Langley Concrete		635mm Opening	

**Manhole Precast Bases**

<u>Manufacturer</u>	<u>Make/Model</u>	<u>Size Range</u>	<u>Comments/Conditions</u>
Kon Kast	Concrete	1050mm-2400mm	Refer to detail drawings
Langley Concrete		1050mm-1500mm	

**Internal Drops**

Material supplied or recommended by the manufacturer and approved by the Engineer shall be used.

<u>Manufacturer</u>	<u>Make/Model</u>	<u>Size Range</u>	<u>Comments/Conditions</u>
Le-Ron Plastics		100mm-200mm	

REASON FOR POLICY

To standardize products used for City infrastructure.

LEGISLATIVE AUTHORITY

Local Government Act, Sec. 938 “subdivision servicing requirements”; Subdivision, Development & Servicing Bylaw, Schedule 5, Sec. SO2666, 2.1.2; MMCD Volume III

PROCEDURE FOR IMPLEMENTATION

Policy and products referred to in contracts and engineering drawings.