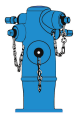


## APPROVED MATERIALS LIST SERVICE MATERIALS

August 2017

SIZE	DESCRIPTION	MANUFACTURER & MODEL NUMBER	NOTES
<b>CORPORATION STOPS</b>			
1"	MIP x CTS Comp ball corp stop	Ford: FB 1100-4Q McDonald: 74704-BQ	No lead
2"	MIP x CTS comp ball corp stop	Ford: FB 1100-7Q McDonald: 74704-BQ	No lead
1"	MIP x FIP ball corp stop *	Ford: FB 1700-4 McDonald: 73149-B	No lead
2"	MIP x FIP ball corp stop *	Ford: FB 1700-7 McDonald: 73149-B	No lead
* High pressure assembly only, above 150 psi			
<b>ANGLE METER STOPS</b>			
1"	CTS ball angle meter stop	Ford: BA43-444WQ McDonald: 74602-BQ	No lead
2"	CTS ball angle meter stop	Ford: BFA43-777WQ McDonald: 74602-BQ	With elongated holes No lead
1"	FIP ball angle meter stop*	Ford: BA13-444W McDonald: 74604-B	No lead
2"	FIP x flg. ball angle meter stop*	Ford: BFA13-77W McDonald: 76101-MW	With elongated holes No lead
* High pressure assembly only, above 150 psi			
<b>ADAPTERS</b>			
1"	MIP x CTS comp adapter	Ford: C84-44Q McDonald: 74753-Q	No lead
2"	MIP x CTS comp adapter	Ford: C84-77Q McDonald: 74753-Q	No lead
<b>BALL VALVES</b>			
1"	FIP ball valve	Ford: B11-444 McDonald: 76101 W	No lead

		Ford: B11-777 McDonald: 76101 W – SHDLB	No lead
1"	FIP ball valve with handle	Ford: B11-444W with HB34S McDonald: 76101W - SHDLB	No lead
2"	FIP ball valve with handle	Ford: B11-777W with HB67S McDonald: 76101W - SHDLB	No lead
¾"	FIP x meter nut ball valve with handle	Ford: B13-332W with HB34S McDonald: 76101MW - HDLB	No lead
1"	FIP x meter nut ball valve with handle	Ford: B13-444W with HB34S McDonald: 76101MW - HDLB	No lead
2"	FIP x flg ball valve with handle	Ford: BF13-777W with HB67S McDonald: 76101MW - SHLB	No lead
<b>SADDLES</b>			
1" & 2" IPT outlet	ACP, DIP	Jones: J-979 McDonald: 3826	Bronze body w/bronze double straps
1" & 2" IPT outlet	PVC (C-900)	Jones: J-969 McDonald: 3856	Bronze body w/s.s. double strap
<b>PRESSURE REGULATING VALVES</b>			
¾", 1" & 2"		Wilkins: #600HR*	No lead
* All bronze body and bell housing and S.S. replaceable seat			
<b>COPPER TUBING</b>			
1" & 2"	Type "K" soft		
<b>WATER METERS</b>			
¾" (x 7 ½")	Box/vault sets shall have TR/PL registers, cu.ft. x 100	Sensus iPERL	7 ½" Lay length
1"	Box/vault sets shall have TR/PL registers, cu.ft. x 100	Sensus iPERL	
1 ½"	Box/vault sets shall have TR/PL registers, cu.ft. x 100	Invensys Omni T <sup>2</sup>	Flanged ends, verify type
2"	Box/vault sets shall have TR/PL registers, cu.ft. x 100	Invensys Omni T <sup>2</sup>	Flanged ends, verify type
3" – 6" meters shall be Invensys Omni T <sup>2</sup> . Larger meters as approved by VWD			
<b>GATE VALVES</b>			



	on body and bonnet, ge with factory epoxy with low zinc stem	AVK, Clow, Mueller	* AWWA C-515 * Mfr date within one year of installation
<b>BUTTERFLY VALVES</b>			
	CL 250: All flanged, ductile iron body, rubber in the body, with factory epoxy inside	Pratt	* AWWA C-504 * Mfr date within one year of installation
<b>COMBINATION AIR AND VACUUM VALVES</b>			
1"	**	APCO: 143-C A.R.I.: D-040	Encl: Pipeline Prod. #VCAS 1424 BL, or app'd equal
2"	**	APCO: 145-C A.R.I.: D-040	Encl: Pipeline Prod. #VCAS 1830 BL, or app'd equal
3"	**	APCO: 147-C	Per approved plans
4"	**	APCO: 149-C	Per approved plans
6"	**	APCO: 150-C	Per approved plans
** For APCO, all internal parts shall be stainless steel			
<b>AUTOMATIC CONTROL VALVES</b>			
		Cla-Val	
<b>DETECTOR CHECK VALVES</b>			
2" - 10"		Cla-Val, Febco, Wilkins, Watts, Ames, Conbraco (all with iPERL bypass meter)	Double check detector or reduced pressure detector, depending on degree of hazard
<b>VAULT LIDS</b>			
	Type "J" or "JD"	Bilco, Syracuse	With all S.S. hardware, torsion bars, recessed locking hasp, hinged reading lid
<b>FIRE HYDRANTS</b>			

	2 1/2" outlets	Jones: J-3700 or J-4040C Clow: 2050 or 850	Bronze or Iron, 6 hole, 7/8" drilling, plastic caps
Multi-Res, Commercial & Industrial Areas	Two 4" & one 2 1/2" outlets	Jones: J-3775 or J-4065C Clow: 2065 or 865	Bronze or Iron, 6 hole, 7/8" drilling, plastic caps
<b>METER BOXES</b>			
3/4" Meter	Polymer Concrete #4 1/2 (20K)	J & R Armorcast	
1"-2" Meter	Polymer Concrete #6B (20K)	J & R Armorcast	
<p>#4 1/2 meter boxes shall have one-piece polymer lids rated 20K max. load, with 2" touch read hole</p> <p>#6 meter boxes shall have two-piece polymer lids rated 20K max. load, with 2" touch read hole</p>			
<b>TAPPING SLEEVES</b>			
Size on Size	Cut-in flanged tee with valves and flex couplings		Fire and hydrant services only
Reducing	Fabricated steel with fusion epoxy and S.S. nuts and bolts.	Smith-Blair: #622 – ALL PIPE Mueller MJ: H-619 - ACP	
Reducing	Fabricated all stainless steel with drop in bolts	Romac: SST – ALL PIPE Smith-Blair: #665 – ALL PIPE Powerseal: #3490AS – ALL PIPE	
<b>FLANGED COUPLING ADAPTER</b>			
	Epoxy	Romac: FCA 501 Smith-Blair: 912 (new style)	
<b>FLEX COUPLINGS / TRANSITIONS</b>			
	AC, DIP, CML&C, PVC	Romac: Alpha (restrained), Macro HP Smith Blair: 441 PowerSeal: 3506	MegaLug, Uni-Flange or TUFgrip on DIP transition, as approved
<b>WATER DISTRIBUTION PIPE</b>			
	Ductile Iron Pipe (DIP)* Class: x pressure	TJ, MJ	per approved plans
	Cement Mortar Lined and Coated 10 gauge steel pipe		per approved plans
	Polyvinyl Chloride (PVC) C900, DR14		per approved plans 6" – 12' dia.

pe sleeve on outside

**SEWER PIPE**

	Ductile Iron Pipe (DIP), Class ___ x depth/loading*		per approved plans
	PVC Pipe (12" and smaller)	SDR 35, Green	class per depth
* 8 mil clear polyethylene pipe sleeve on outside			

**SEWER LATERALS**

	Ductile Iron Pipe (DIP) Class ___ x depth/loading*		Lining per approved plans. I.D. same as main.
	PVC Pipe	D-3034 SDR 35	

\* 8 mil clear polyethylene pipe sleeve on outside

**MISCELLANEOUS**

	Ductile Iron Pipe (DIP)		6" non-det tape
	CML&C Steel Pipe		6" non-det tape
	PVC Water 3M DBY-6 Direct Bury Splice Kit (600 Volts)	Approval Required	6" det tape 10 ga. Solid blue tracer wire
	Grounding Clamps	LH Dottie DB 25 or approved equal	
	Northtown Company	CP-Z15 (15lbs)	Per Manufacturer Recommendation
	PVC Sewer		6" det tape
	Tencate Mirafi	140N or approved equal	

	fittings, cement lined, 53	Star / Union Foundry Sigma - water only	Lining per approved plans. I.D. same as main (sewer).
	Paint	blue: FSC Coatings "Nat'l Blue" - Silicone PolyPlus yellow: FSC Coatings "Safety Yellow" - Silicone PolyPlus	FSC phone: (800) 579-8459

NOTES: All materials listed shall be installed in accordance with the most recent edition of the "Standard Specifications for Construction of Water and Sewer Facilities" of the Vallecitos Water District.