

GENERAL PROVISIONS
OF THE
SPECIFICATIONS

MATERIALS SPECIFICATION LIST

General Note: All material that comes in contact with potable water shall be “lead free” to the extent defined in California Assembly Bill 1953 Chapter 853 and NSF 61 approved. All products shall be produced, manufactured and assembled domestically using manufacturer’s facilities in the United States unless otherwise approved.

1. DICL PIPE: U.S. Pipe, McWane, Electrosteel Pushtite, or American with Tyton or NXT Gaskets in accordance with AWWA C151. Use Thickness Class indicated below unless otherwise specified or shown on drawings.

<u>Pipe Size</u>	<u>ANSI Thickness Class</u>
4”	Class 52
6”, 8” and 10”	Class 50
12” – 48”	Class 51

- 1a. DICL PIPE (ZINC COATED): Same as item 1 with a minimum zinc mass of 200 g/m² per ISO 8179-1.
2. DICL PIPE RESTRAINT FITTINGS:

Gasket System:	4” – 24”	U. S. Pipe Field Lok or McWane Sure-Stop 350
	4” – 30”	American Pipe Fast-Grip
Joint System:	12” – 24”	McWane Thrust Lock, U. S. Pipe TR-Flex, Electrosteel Pushlock, NXT-R or HDSS (20”-24”)
	> 24”	McWane and U. S. Pipe TR-Flex, NXT-R or HDSS
3. FLANGE GASKETS: 4” - 24” EPDM (1/8” Cloth Insert SBR for recycled water), U.S. Pipe Full Face Flange-Tyte II Gasket or Garlock Multi-Swell Style 3760U.
4. POLYENCASEMENT: 8 mils unless otherwise specified, purple for recycled water or V-Bio (white) for potable water.
5. MARKER TAPE “RESTRAINED PIPE”: 3” width - blue tape with black lettering for potable and purple tape for recycled water.
6. TRACER WIRE: Agave Wire 12 AWG HMW PE 45 Direct Burial Tracer Wire 600 Volts E-246360.
7. GATE VALVE: Resilient Wedge Type. Gate valve are FLG, MJ, or FLG x MJ. Mueller, Clow, M & H or American Flow Control in accordance with AWWA C515 or AWWA C509 (ductile iron only). Use EPDM for o-rings and wedge coating. Minimum 200 psi pressure rating unless otherwise specified on SJWC drawings.
8. BUTTERFLY VALVE: Mueller/Pratt or DeZurik in accordance with AWWA C504. Use “Seat-in-Body” design, EPDM for o-rings and seat coating. Class 150 unless otherwise specified on SJWC drawings.

9. AIR VALVE: APCO or Crispin. APCO 50 or Crispin Midget only for below grade ½” installations per standard drawing MAIN-AVpavt.
10. VALVE BOX & LID: Tyler Union or Bingham & Taylor G05 ductile iron, Old Castle G12 concrete with steel ring valve box
11. PIPE CASING VALVE RISER BOX: SDR 35 PVC plastic pipe.
12. TEES, REDUCERS, ELBOWS, CROSSES, SOLID SLEEVES, FLG and MJ fittings: Tyler Union or Star domestic in accordance with AWWA C-153. Zinc coated in accordance with ISO 8179-2.
13. INSULATING KIT: Calpico 150 lb. full faced gaskets (4” and larger) and Red Devil #940 gasket material and double washers, ERDW, (1 ½” & 2” services).
14. SADDLE TAP FAB: Use SJWC Standard Drawing D-2-325. Fabricated by local metal shop.
15. SLEEVE TAP MJ: AC Pipe: Mueller, Smith-Blair or ROMAC up to 16”. Smith-Blair for sizes 16” and larger. CI or DI Pipe: Mueller or ROMAC.
16. SLEEVE TAP O-RING: Smith-Blair, Ford or ROMAC. Epoxy coated with stainless steel nuts and bolts.
17. SPACER DICL FLG x PE: Tyler Union, U.S. Pipe or ROMAC.
18. ADAPTER COUPLING w/o STUDS: Smith-Blair, Ford, or ROMAC.
19. ADAPTER MJ x FLG: Tyler Union, U.S. Pipe or ROMAC.
20. RESTRAINT: EBAA Iron or ROMAC or STAR with epoxy or zinc coating
21. FIRE HYDRANT: Clow Medallion (F-2454) or Mueller Centurion (A423) dry barrel fire hydrant with 5 ¼” valve opening and 4” pumper nozzle in accordance with AWWA C502. Use SJWC Standard Drawing MAIN-HYD unless otherwise shown on drawings. Use EPDM for o-rings and seats.
22. BOLTED COUPLING: Ford, Smith Blair, Hymax, or ROMAC. Epoxy coat with stainless steel bolts. Use couplings with the following sleeve lengths:

<u>Pipe Size</u>	<u>Sleeve Length</u>
4” – 10”	7” Min.
12”–16”	10” Min.
> 16”	14” Min.

23. CASING SEALS & SKIDS: With Stainless Steel bands. Calpico or approved equal.
24. STEEL PIPE type DCCL: Zinc coated cement lined (DCCL) welded steel pipe. ASTM A53 grade B steel (minimum), U.S. Steel or Pacific Pipe. Thickness per general plan. The coating shall be factory primed with a 3-mil organic zinc rich coating (Carboline 893 primer or approved equal) and the finish coat shall be factory applied Flexxide Acrylic Elastomer or approved equal. Above grade steel pipe color shall be Carboline number CWS D395 “Grouse Tan”.

25. PIPE CASING: Bare steel, ASTM A53 grade B steel (minimum), SCH 40, 0.375" wall, (minimum).
26. NON-METALLIC PIPE: With specific project approval from SJWC Engineering
 HDPE – C906-99 (class per general plans)
 PVC – C900 (4" – 48") (class per general plans)
 PVC Restraint: EBAA series PV Megalugs, RomaGrip by ROMAC or Smith-Blair
 PVCO – C909-02 (class per general plans)
 PVCO Restraint: EBAA Iron (Series 1600), RomaGrip by ROMAC or Smith Blair
27. NEOPRENE MAT: Commercial grade, 1" minimum thickness per SJWC Standard Drawing SEP-MAT.
28. COMBINED DOMESTIC AND FIRE SERVICE METERS: Neptune Protectus III or Badger Recordall FSAA-01
29. COPPER SERVICE: Use Mueller Blue Plastic Streamline Plumbshield Type K soft copper tube (25 Mil LDPE) per general plans. Refer to SJWC Standard Drawings Ser-1c, Ser-2c or larger.
30. PLASTIC SERVICE: AWWA C901, PE 4710 CTS, 250 psi, SDR9, ASTM D2737 blue pipe. Refer to SJWC Standard Drawings SER-1p and SER-2p.

31. CORP STOPS (Ball Type)

<u>Size</u>	<u>Type</u>	<u>Mueller</u>	<u>Ford (x=size)</u>	<u>AY McDonald</u>	<u>Jones</u>	<u>Std. Dwg.</u>
All	CC x FLR	B-25000N	FB600-x NL	74701B	E-1930	Ser-1c, 2c, 2M
All	MIPT x FLR	B-25025N	FB700-x NL	74704B	E-1929	Ser-1c, 2c, 2M MAIN-BO
3/4", 1"	CC x COM	B-25006N	FB1000-xU NL	74701BH	E-1937SG	Ser-1p
1-1/2", 2"	CC x COM	B-25008N	FB1000-xG NL	74701BG/74701BQ	E-1937SG	Ser-1p, 2p, 2M
3/4", 1"	MIPT x COM	B-25024N	FB1100-xU NL	74704BH	E-1935SG	Ser-1p
1-1/2", 2"	MIPT x COM	B-25028N	FB1100-xG NL	74704BG/74704BQ	E-1935SG	Ser-1p, 2p, 2M

Mueller COM (3/4" & 1") = Insta-Tite & Mueller COM (1-1/2" & 2") = Mueller 110 Compression

Ford, size x = 3 (3/4"), 4 (1"), 6 (1-1/2") or 7 (2") COM, U = Ultra-Tite & G = Grip-Joint

Jones COM = 110 Compression Connection (SG)

AY McDonald COM, Q = McQuik, G = McGrip & H = Handy-Loc

32. METER BOXES AND LIDS: Nicor, DFW, Old Castle

**Table 1: Landscape – Nicor Lid Equivalent

Service	Landscape - Nicor Lid Equivalent with SJW LOGO
3/4" Service	B9CNLGRYSJWthS B3NLGRYSJWthS
1" Service	B16NLGRYSJWthS
3/4" w/ Check Valve	B16NLGRYSJWthS
1" w/ Check Valve	B30NLGRYSJWthS
Regulated 3/4"	No NICOR Equivalent
Regulated 1"	No NICOR Equivalent
1-1/2" & SER-2r (tandem)	B30NLGRYSJWthS
2" Service	B36NLGRYSJWthS
1-1/2" w/ Check Valve	B36NLGRYSJWthS
2" w/ Check Valve	B36NLGRYSJWthS
1-1/2" Regulated (SER-2r)	No NICOR Equivalent
2" Regulated (Ser-2r)	No NICOR Equivalent
2" Manifolder (SER-2M)	B36NLGRYSJWthS
3" Service	B36NLGRYSJWthS
3" Service w/ Check Valve	No NICOR Equivalent
3" Service w/ Regulator & CV	No NICOR Equivalent
4" Service (Compound Meters)	No NICOR Equivalent
4" Service (Turbo Meters)	No NICOR Equivalent
6" Service (Compound Meters)	No NICOR Equivalent
6" Service (Turbo Meters)	No NICOR Equivalent
8" Service (Compound Meters)	No NICOR Equivalent
8" Service (Turbo Meters)	No NICOR Equivalent
4" Blowoff	No NICOR Equivalent

**Table 2: Sidewalk or Driveway (H-20 Loading) – Nicor Lid Equivalent

Service	Sidewalk (*) or Driveway (H-20 Loading), Nicor Lid Equivalent with SJW LOGO
3/4" Service	B9CNLGRYSJWthS B3NLGRYSJWthS
1" Service	B16NLGRYSJWthS
3/4" w/ Check Valve	B16NLGRYSJWthS
1" w/ Check Valve	B30NLGRYSJWthS

****Table 2: Sidewalk or Driveway (H-20 Loading) – Nicor Lid Equivalent (con't)**

Service	Sidewalk (*) or Driveway (H-20 Loading), Nicor Lid Equivalent with SJW LOGO
Regulated 3/4"	No NICOR Equivalent
Regulated 1"	No NICOR Equivalent
1-1/2" & SER-2r (tandem)	B30NLGRYSJWthS
2" Service	B36NLGRYSJWthS
1-1/2" w/ Check Valve	B36NLGRYSJWthS
2" w/ Check Valve	B36NLGRYSJWthS
1-1/2" Regulated (SER-2r)	No NICOR Equivalent
2" Regulated (Ser-2r)	No NICOR Equivalent
2" Manifolded (SER-2M)	B36NLGRYSJWthS
3" Service	B36NLGRYSJWthS
3" Service w/ Check Valve	No NICOR Equivalent
3" Service w/ Regulator & CV	No NICOR Equivalent
4" Service (Compound Meters)	No NICOR Equivalent
4" Service (Turbo Meters)	No NICOR Equivalent
6" Service (Compound Meters)	No NICOR Equivalent
6" Service (Turbo Meters)	No NICOR Equivalent
8" Service (Compound Meters)	No NICOR Equivalent
8" Service (Turbo Meters)	No NICOR Equivalent
4" Blowoff	

*****Table 3: Landscape – DFW Box and Lid**

Service	Landscape – DFW Box and Lid
3/4" Service	DFW1922C (LID ONLY FOR B9X RETROFITS) DFWB9C4-12-BODY (BOX) DFWB9C-AF4A NHK-LID (LID)
1" Service	DFWB16C4-12-BODY (BOX) DFWB16C-AF4A NHK-LID (LID)
3/4" w/ Check Valve	DFWB16C4-12-BODY (BOX) DFWB16C-AF4A NHK-LID (LID)
1" w/ Check Valve	DFWB40WBC4-14-BODY (BOX) DFEB40C25-4A-LI
Regulated 3/4"	DFWB40WBC4-14-BODY (BOX) DFEB40C25-4A-LID (LID)
Regulated 1"	DFWB48C-4A-LID (LID ONLY)
1-1/2" & SER-2r (tandem)	DFWB40WBC4-14-BODY (BOX) DFEB40C25-4A-LID (LID)
2" Service	DFW1730C4-12-BODY (BOX) DFW1730C-AF4A NHK-LID (LID)
1-1/2" w/ Check Valve	DFW1730C4-12-BODY (BOX) DFW1730C-AF4A NHK-LID (LID)
2" w/ Check Valve	DFW1730C4-12-BODY (BOX) DFW1730C-AF4A NHK-LID (LID)
1-1/2" Regulated (SER-2r)	DFWB48C-4A-LID (LID ONLY)
2" Regulated (Ser-2r)	No DFW Equivalent

***Table 3: Landscape – DFW Box and Lid (con't)

Service	Landscape – DFW Box and Lid	
2" Manifolder (SER-2M)	DFW1730C4-12-BODY (BOX)	DFW1730C-AF4A NHK-LID (LID)
3" Service	DFW1730C4-12-BODY (BOX)	DFW1730C-AF4A NHK-LID (LID)
3" Service w/ Check Valve	DFWB48C-4A-LID (LID ONLY)	
3" Service w/ Regulator & CV	No DFW Equivalent	
4" Service (Compound Meters)	DFWB48C-4A-LID (LID ONLY)	
4" Service (Turbo Meters)	DFWB40WBC4-14-BODY (BOX)	DFEB40C25-4A-LID (LID)
6" Service (Compound Meters)	DFWB48C-4A-LID (LID ONLY)	
6" Service (Turbo Meters)	DFWB40WBC4-14-BODY (BOX)	DFEB40C25-4A-LID (LID)
8" Service (Compound Meters)	No DFW Equivalent	
8" Service (Turbo Meters)	DFWB48C-4A-LID (LID ONLY)	
4" Blowoff	No DFW Equivalent	

***Table 4: Sidewalk or Driveway (H-20 Loading) – DFW Box and Lid

Service	Sidewalk (*) or Driveway (H-20 Loading), Nicor Lid Equivalent with SJW LOGO	
3/4" Service	DFW1922C (LID ONLY FOR B9X) DFWB9C4-12-BODY (BOX)	DFWB9C-AF4A NHK-LID (LID)
1" Service	DFWB16C4-12-BODY (BOX) DFWB16C-AF4A NHK-LID (LID)	
3/4" w/ Check Valve	DFWB16C4-12-BODY (BOX) DFWB16C-AF4A NHK-LID (LID)	
1" w/ Check Valve	DFW1324C4-12-BODY (BOX)	DFW1324C-AF4A NHK-LID (LID)
Regulated 3/4"	DFWB40WBC4-14-BODY (BOX)	DFEB40C25-4A-LID (LID)
Regulated 1"	No DFW Equivalent	
1-1/2" & SER-2r (tandem)	DFWB40WBC4-14-BODY (BOX)	DFEB40C25-4A-LID (LID)
2" Service	DFW1730C4-12-BODY (BOX)	DFW1730C-AF4A NHK-LID (LID)
1-1/2" w/ Check Valve	DFW1730C4-12-BODY (BOX)	DFW1730C-AF4A NHK-LID (LID)
2" w/ Check Valve	DFW1730C4-12-BODY (BOX)	DFW1730C-AF4A NHK-LID (LID)
1-1/2" Regulated (SER-2r)	No DFW Equivalent	
2" Regulated (Ser-2r)	No DFW Equivalent	
2" Manifolder (SER-2M)	DFW1730C4-12-BODY (BOX)	DFW1730C-AF4A NHK-LID (LID)
3" Service	DFW1730C4-12-BODY (BOX)	DFW1730C-AF4A NHK-LID (LID)
3" Service w/ Check Valve	No DFW Equivalent	
3" Service w/ Regulator & CV	No DFW Equivalent	
4" Service (Compound Meters)	No DFW Equivalent	
4" Service (Turbo Meters)	DFWB40WBC4-14-BODY (BOX)	DFEB40C25-4A-LID (LID)
6" Service (Compound Meters)	No DFW Equivalent	
6" Service (Turbo Meters)	DFWB40WBC4-14-BODY (BOX)	DFEB40C25-4A-LID (LID)
8" Service & 4" Blowoff	No DFW Equivalent	

****Table 5: Landscape & Sidewalk or Driveway (H-20 Loading) - Old Castle Box and Lid

Service	Landscape – Old Castle Box/Lid	Sidewalk (*) or Driveway (H-20 Loading) – Old Castle Box/Lid
Regulated 3/4"	N40 w/ B40E2 & RL	B2436 w/ Lock Lid
Regulated 1"	N48 w/ B48E2 & RL	B2436 w/ Lock Lid
1-1/2" Regulated (SER-2r)	N48w/ B48EF3 Cover & RL	B3048 w/ Lockdown Cover
2" Regulated (Ser-2r)	N52 w/ B52M3 Cover & RL	R17P24 w/ R17-52HT Cover
3" Service w/ Check Valve	N48 w/ B48EF3 Cover & RL	B3048 w/ Lockdown Cover
3" Service w/ Regulator & CV	N52 w/ B52M3 Cover & RL	R17P24 w/ R17-52HT Cover
4" Service (Compound Meters)	N48 w/ B48EF3 Cover & RL	B3048 w/ Lockdown Cover
4" Service (Turbo Meters)	N40 w/ B40E2 & RL	B2436 w/ Lock Lid
6" Service (Compound Meters)	N48 w/ B48EF3 Cover & RL	B3048 w/ Lockdown Cover
8" Service (Compound Meters)	N52 w/ B52M3 Cover & RL	R17P24 w/ R17-52HT Cover
8" Service (Turbo Meters)	N48 w/ B48EF3 Cover & RL	B3048 w/ Lockdown Cover
4" Blowoff	No Old Castle Box and Lid Equivalent	B1730 w/Lockdown Cover & Extension

RL = Reading Lid

* = Box can be non-traffic-rated in sidewalk (if no vehicular traffic is expected) if it has a bolt-down vandal-resistant cover with a reading lid cut into cover if not provided by manufacturer.

** = Nicor lids approved as retrofit lids for AMI meter upgrade

***= DFW box/lid approved for all meter upgrades and new meter installations

****=Where no Nicor or DFW equivalent lid is available

33. STRAIGHT METER COUPLING (Flange Meter Coupling)

Size	Type	Mueller	Ford (x=size)	AY McDonald	Jones	Std. Dwg.
3/4"	MSN x MIPT	H-10890N	MN-2 NL	4624N	E134	Ser-1c, 1p, 1r
1"	MSN x MIPT	H-10890N	MN-4 NL	4624N	E134	Ser-1c, 1p, 1r
1-1/2"	METER FLG x MIPT	H-10129-M	CF38-66-2 NL	7610M	E129M	Ser-2c, 2p, 2r
2"	METER FLG x MIPT	H-10129-M	CF38-77-1-937NL	7610M	E129M	Ser-2c, 2p, 2r, Ser-3

Short Lengths typical

34. ANGLE METER STOPS

<u>Size</u>	<u>Type</u>	<u>Mueller</u>	<u>Ford (x=size)</u>	<u>AY McDonald</u>	<u>Jones</u>	<u>Std. Dwg.</u>
3/4"	MSN x FLR	B-24255N	BA23-332W NL	74602B	E1964W	Ser-1c
1"	MSN x FLR	B-24255N	BA23-444W NL	74602B	E1964W	Ser-1c
3/4"	MSN x COM	B-24267N	BA63-332WU NL	74602BH	E1963WSG	Ser-1p
1"	MSN x COM	B-24267N	BA63-444WU NL	74602BH	E1963WSG	Ser-1p
3/4" & 1"	FIPT x FLR	B-24275N	BA21-xxxW-NL	74606B	E1965W	Ser-1r
1-1/2"	METER FLG x FLR	B-24277N	BFA23-666W NL	74602B	E1973W	Ser-2c & 2r
2"	METER FLG x FLR	B-24277N	BFA23-777W NL	74602B	E1973W	Ser-2c, 2r & 3
1-1/2"	METER FLG x COM	B-24276N	BFA43-666WG NL	74602BG/74602BQ	E1975WSG	Ser-2p & 2r
2"	METER FLG x COM	B-24276N	BFA43-777WG NL	74602BG/74602BQ	E1975WSG	Ser-2p, 2r & 3

Mueller COM (3/4" & 1") = Insta-Tite & Mueller COM (1-1/2" & 2") = Mueller 110 Compression

Ford COM, U = Ultra-Tite & G = Grip-Joint

Jones COM = 110 Compression Connection (SG)

AY McDonald COM, Q = McQuik, G = McGrip & H = Handy-Loc

35. COUPLINGS (Extensions)

<u>Size</u>	<u>Type</u>	<u>Mueller</u>	<u>Ford (x=size)</u>	<u>AY McDonald</u>	<u>Jones</u>	<u>Std. Dwg.</u>
All	FLR x COM	H-15450N/H-15428N	C24-xx-Q-NL	74758CQ		Ser-1c, 2c
3/4"	FLR x COM	H-15450N/H-15424N	C26-33U NL	74758C-3H/74758CQ		Ser-1c
1"	FLR x COM	H-15450N/H-15424N	C26-44U	74758C-3H/74758CQ		Ser-1c
All	FLR x FLR	H-15400N	C22-44-NL	74758	E1528	Ser-1c, 2c
1-1/2" & 2"	COM	H-15403N	C44-66G/C44-77G NL	74758G/74758Q	E2609SG	Ser-1p, 2c
3/4" & 1"	COM	H-15406N	C44-33U/C44-44UNL	74758H/74758Q	E2609SG	Ser-1p
3/4", 1"	MIPT x COM	H-15424N	C86-33U/C86-44UNL	74753H	E2605SG	Ser-1p
1-1/2"	MIPT x COM	H-15428N	C84-66G NL	74753G/74753Q	E2605SG	Ser-2p
2" 2"	MIPT x COM	H-15428N	C84-77G NL	74753G/74753Q	E2605SG	Ser-2p
Ext	COM x COM	H-15403N	C44-66G NL	74758G/74758Q		
1 1/2"	COM	H-15403N	C44-66G NL	74758G/74758Q	E2609SG	Ser-1p

Mueller COM (3/4" & 1") = Insta-Tite & Mueller COM (1-1/2" & 2") = Mueller 110 Compression

Ford COM, U = Ultra-Tite & G = Grip-Joint

Jones COM = 110 Compression Connection (SG)

AY McDonald COM, Q = McQuik & H = Handy-Loc

36. REGULATORS

<u>Size</u>	<u>Type</u>	<u>Model</u>	<u>Std. Dwg.</u>	<u>Notes</u>
3/4" to 2"	Watts	223HP	Ser-1r & 2r	HP = High Pressure

37. STRAINERS

<u>Size</u>	<u>Type</u>	<u>Model</u>	<u>Std. Dwg.</u>	<u>Notes</u>
3/4" to 2"	Watts	300 WSP	Ser-1r & 2r	WSP = Working Std. Pressure

38. TAPPING SLEEVE

<u>Size</u>	<u>Type</u>	<u>Make & Model</u>	<u>Std. Dwg.</u>
3"	Tapping Sleeve	Romac SST III	Ser-3

39. STRAIGHT METER VALVE (Ball Type)

Size	Type	Mueller	Ford (x=size)	AY McDonald	Jones	Std. Dwg.
3/4"	FIPT x FIPT	B-20200N	B11-333W NL	76101W	E1900W	Ser-1r
1"	FIPT x FIPT	B-20200N	B11-444W NL	76101W	E1900W	Ser-1r
1-1/2"	FIPT x FIPT	B-20200N	B11-666W NL	76101W	E1900W	Ser-2r
1-1/2"	METER FLG x FLR	B-24334N	BF23-666W NL	76100MW	E1933W	Ser-2M
2"	FIPT x FIPT	B-20200N	B11-777W NL	76101W		Ser-2r & 3

All Straight Meter Valves shall have padlock wings (W)

40. CHECK VALVE w/ RESILIENT SEAT

<u>Size</u>	<u>Connection</u>	<u>Make & Model No.</u>	<u>Std. Dwg.</u>
1/2"	per MAIN-AVpvt	Tideflex Series 2633 Apollo Ball 61-LF Kitz Wafer 250CWP	MAIN-AVpvt
3/4" to 2"	FIPT x FIPT	NIBCO T-413-LF	All

41. 4" BLOW-OFF:

- 4" Camlock: Dixon Vent-Lock Type A Cam and Groove Adaptor – aluminum body
- 4" Camlock Dust Cap: Dixon Vent-Lock Dust Cap - aluminum body
- 4" Close Nipple: Spears SCH 80 PVC
- 4" Companion Flange: Tyler Union

END OF SECTION