Approved Materials List for Water Distribution Potable System Materials Testing and Inclusion Procedures 8/9/2022

Manufacturers who would like materials considered for the approved materials list shall:

1. Comply with all the design criteria set forth for the approved materials.
2. Supply, at the manufacturer's expense, the materials to be tested. (Quantity to be determined by the City of Goodyear Environmental Services Department)
3. Any project using brass or bronze service material that comes in contact with potable water must meet AWWA C-800, NSF 61-8 and Federal Law.
4. Preference will be given to materials manufactured and assembled in the United States.

Once the materials have been received, the Water Distribution Division will visually inspect materials for defects and compliance with all City standards. The Water Distribution Division will install or oversee the installation of all materials in the distribution system or other test sites as determined to be in the best interest of the City. Materials will be tested and evaluated for a minimum of one year, commencing on the date of installation. Evaluations will include but are not limited to:

1. Ease of installation
2. Availability of parts
3. Operational issues
4. Quality of manufactured materials
5. Number of moving parts
6. Reliability of service

If the materials supplied, at any time in the testing period fail, the testing will be concluded immediately. If the materials successfully complete the testing period, Water Distribution will recommend the product to be included in the City of Goodyear Approved Materials List.

The Approved Materials List will be updated annually at the first of each year. New Manufacturers and Models that have been approved by the City for inclusion on the list will be added at that time.

A maximum number of manufacturers will be approved for each category. Once a category has been satisfied, manufacturers successfully completing the test requirements will be added to a Pending

Approved Materials list. Pending materials will be listed sequentially according to successful completion of testing. Materials presently on the Approved Materials List may be omitted from the list due to:

1. Change in service/availability.
2. Change in product design.
3. Bankruptcy
4. Consistent product failure
5. Any other reason as deemed appropriate by the Water Distribution Division

If an approved material is taken off the list for any of the above reasons, the first pending material will be added to the list.

Water Distribution Materials

Fire Hydrants (4 Manufacturers)

Requirements

- Meet AWWA Standard C502 and C550
- UL 246 approved
- Dry barrel hydrant
- Method of lubrication shall be food grade oil or grease
- Operating nut shall be 1-1/2 inches pentagon (standard)
- Direction of opening shall be counterclockwise (left)
- Hose and pumper threads (male) shall be brass and field replaceable
- Threads shall be "National Standard"
- 2 hose nozzles (2-1/2 inches) and 1 pumper nozzle (4-1/2 inches)
- Inlet connection shall be mechanical joint
- Shall include "traffic flange"
- Size of hydrant valve opening shall be 5-1/4 inches
- All public hydrants shall be painted yellow
- All private hydrants shall be painted red

Manufacturer	Model
Clow	Medallion
Mueller	Super Centurion
Kennedy	Guardian K81D
Waterous	WB-67

Fire Hydrant Grade Adjustments (1 Manufacturers)

Requirements

- Extensions shall not be used to reach finish grade for new fire hydrant installations.

- Where the finish grade around an existing fire hydrant is changed, an extension kit, installed per the manufacturer's specifications, may be used.
- Only one extension may be used per hydrant. The extension kit must be manufactured by the original fire hydrant manufacturer; no aftermarket parts are allowed.
- Vertical shoe hydrants are preferred over Grade-Loc grade adjustments.

Manufacturer	Model
Assured Flow Sales	Grade Loc

Fire Hydrant Locks (2 Manufacturers)

Requirements

- Must prevent unauthorized operating of hydrants
- Readily attaches to all hydrant makes and models
- Must be strong enough to withstand vandalism and weather extremes
- Hydrant must be operated without removal of lock utilizing magnetic type wrench only

Manufacturer	Model
Hydra-Shield	Custodian
USA Blue Book	Hydrant Lok

Fire Hydrant Grease (2 Manufacturers)

Manufacturer	Model
Mystik	FG-2 Food Machinery Grease
Clarion	Food Machinery Grease, No.

Gate Valves (5 Manufacturers)

Requirements

- Meet AWWA Standards C515 and C550
- Valves body shall be ductile iron and meet or exceed reduced wall standards
- Valve wedge shall be fully encapsulated with nitrile rubber
- Valves shall be epoxy-coated inside and out
- Stem o-rings shall be replaceable with the valve fully open at rated working pressure
- Direction of open shall be counterclockwise (left)
- All fasteners shall be stainless steel

Manufacturer	Model
Clow	Style 2638 or 2639
American Flow Control	AFC 2500-1
Mueller	Series 2361 or 2362
M&H	Style 7000
Kennedy	Style 7000
US Pipe	Model USP1

Insertion Valves (1 Manufacturers)

Manufacturer	Model
AVT	EZ Valve

Butterfly Valves (4 Manufacturers)

Requirements

- Butterfly valves are required on distribution mains larger than 16 inches.
- Meet applicable AWWA Standards C504 Standard
- The valve disc shall be fully encapsulated in nitrile rubber
- Valves shall be epoxy coated inside and out
- All fasteners shall be stainless steel
- Direction of open shall be counterclockwise (left)

Manufacturer	Model
Mueller	Lineseal III
Clow	Series 4500 or 1450
Kennedy	Series 4500 or 1450
M&H	Series 4500 or 1450

Pressure Reducing, Sustaining and Altitude Valves (2 Manufacturers)

Requirements

- Ductile iron body
- Diaphragm type, class 150
- Epoxy coated inside and out
- Tested at a minimum pressure of 175 psi
- 150 lb flanged ends

Manufacturer	Model
CLA-VAL	No. 92-01, 50-01, and 650-01
Ames	LF910GD/LF610GD, LF912GD/LF612GD, and LF920GD/LF620GD

Air/Vacuum Release Valves (1 Manufacturers)

Requirements

Manufacturer	Model
ARI	No. D-060C HF – Combination air valve (potable use) sized appropriately
ARI	No. D-025P Threaded Combination Air Valve Nylon Body 1-1/2” x 2” ARI Bug Screen (Raw Water Use) sized appropriately
ARI	No. D-025SS Threaded Combination Air Valve 316 Stainless Steel Body 1-1/2” x 2” ARI Bug Screen (Raw Water Use) sized appropriately

Water Meters (1 Manufacturer)

Requirements

• Appropriate make, model, and manufacturer is to be determined by the Water Distribution Department. All meters are supplied by Water Distribution.

Manufacturer	Model
Positive Displacement Meters ¾” to 2”	
Neptune	T10
Turbo Meters 1.5” to 6”	
Neptune	HP Turbine
Compound Meters 3” to 6”	
Neptune	Tru/Flo
Fireline Fire System Meters 6” to 8”	
Neptune	HP Protectus
Detector Check Meters	
Neptune	T10
Fire Hydrant Meters	

Neptune	3” Trident Fire Hydrant Meter

Radio Read Meter Reading Devices (1 Manufacturer)

Manufacturer	Model
Neptune	E-coder R900i

Water Service Saddles (3 Manufacturers)

Requirements

- Meet applicable AWWA C800 and NSF 61 Standards
- Double strap brass saddle
- Thread shall be female iron pipe

Manufacturer	Model
Ford	Style 202B
AY McDonald	3826
Mueller/Jones	BR2B/J-979

Corporation Stops (3 Manufacturers)

Requirements

- Meet applicable AWWA C800 and NSF 61 Standards
- Inlet threads shall be iron pipe
- Shall utilize a ball valve
- For service line installations, the outlet shall utilize a compression style pack joint with a set screw
- For downstream end of blow off installations, the outlet shall utilize male iron pipe threads

Manufacturer	Model
Ford	FBRW1100-TA
AY McDonald	4104B-22
Mueller/Jones	P25028-10/E-1935

Water Service Lines

Requirements

- Minimum size service line is 1"
- Services 2" and smaller require type "K" soft seamless annealed copper or Blue Municipex Tubing PexA w/ Steel Inserts - tracer wire required
- Under 3” services must be 1” or 2” only – no 1.5” services will be allowed
- Services 3" and larger require ductile iron pipe

Meter Valves/Curb Stops (3 Manufacturers)

Requirements

- Meet applicable AWWA C800 and NSF 61 Standards
- Angle stop ball valve with 90 degree Tee Head rotation
- Padlock wings
- The inlet shall utilize a compression style pack joint with set screw
- 1" curb stops shall have a swivel meter coupling to allow for meter installation
- 2" curb stops shall be flanged, have elongated bolt holes allowing for either 2" and 1 1/2" meters, and allow for drop in rubber gaskets

Manufacturer	Model
Ford	BFA43-777W, BA43-444W
AY McDonald	4602B-22
Mueller/Jones	P-24258, P-24276/E-1963, E-1975

Water Mains (2 Manufacturers)

Requirements

- All mains shall be ductile iron pipe
- Meet ANSI/AWWA Standard C151/A21.51-02
- Minimum class 150

Manufacturer	Model
McWayne Ductile	N/A
American Cast Iron Pipe Co.	N/A
U.S. Pipe	N/A

Tapping Sleeves (2 Manufacturers)

Requirements

- Meet AWWA C223-02

- No Size on size applications

Manufacturer	Model
Powerseal	3490AS
Smith Blair	663

Full Circle Repair Clamps (3 Manufacturers)

Manufacturer	Model
Romac	SS1, SL1
Ford (Single Band)	F1
Smith-Blair	221, 226, 229, 238

Flex Couplings (3 Manufacturers)

Manufacturer	Model
Romac	XR-501 Extended Range
Ford	FC2W Transition Coupling
Total Piping Solutions	HyMax 2 Series

Restrained Flange Coupling Adapters (3 Manufacturers)

Manufacturer	Model
Smith-Blair	912
Romac	FC400/FCA 501/RFCA
Ford	FFCA

Restrained Joints Mechanical Style (5 Manufacturers)

Manufacturer	Model
EBBA Iron	1100 Series
Romac	Roma Grip
Ford	UFR 1400
Star Pipe Products	Stargrip Series 3000
Tyler Union	Tuf Grip

Restrained Joints Gasket Style (4 Manufacturers)

Manufacturer	Model
American Cast Iron Pipe Co.	Flex Ring Joint
American Pipe	Fast Grip Gasket
McWane	Sure Stop 350 Gasket
US Pipe	Field Lock Gasket

Water Boxes

Requirements

3/4" - 2" Meter Boxes

- Pre-cast concrete meter boxes
- Armorcast – Rotocast Polymer Concrete boxes
- Polymer Concrete Lid with recessed meter antenna location for walkway areas only
- Stamped Steel lid with a 1-7/8" pre-drilled hole for all other locations
- #2 meter box shall be used for 3/4" and 1" water meters
- #4 meter box shall be used for 1-1/2" and 2" water meters and Air Relief Valves (ARV)

Valve Boxes

- 8" blue PVC C-900 Riser Material
- Seamless pipe
- In applications that require a seam a sealed bell joint is required
- Installed per M.A.G. Detail 391-1 Type A with cast iron frame and cover with concrete collar

Air Release Valves

- Pre-cast concrete meter boxes
- Stamped Steel lid with no hole
- #4 meter box

Water Meter Vaults 3" and above

- A pre-cast concrete vault with aluminum lids per City of Goodyear detail G-3314

Debris Caps (1 Manufacturer)

Requirements

- Hollow member having a cylindrical outer surface
- Flexible skirt that provides an outward seal
- Rated to 50 pounds at a loading rate of 1 inch / minute
- Molded per General Electric ABS #HIM 4500
- Retaining prong for locating coil
- 3M locating device
- Blue handle

Manufacturer	Model
SW Services Inc.	DC825 (blue handle) w/3M EMF 1413-XR Locating Coil

Backflow and Cross-Connection Devices

Requirements

• Refer to the approved assemblies list published by the USC Foundation for Cross-Connection Control and Hydraulic Research for backflow prevention and cross-connection devices and assemblies that are approved for use in the City.

Water Quality Sampling Station (1 Manufacturer)

Requirements

- Koraleen XLT Sampling Station
- Flush mounted lock
- Sample valve stainless steel, ball valve 1/2” x 3/8” 800 psi
- Flush mounted gem cam lock with tubular key
- All units keyed alike
- The sampling station shall be 4 feet tall and 6 inches in diameter

Manufacturer	Model
Koraleen Enterprises	0001-3

Automatic Flushing Device (1 Manufacturers)

Requirements

- All fittings must be brass
- Built-in sampling port
- Lockable and all units are keyed alike

Manufacturer	Model
Kupferle	9800-WC Eclipse