

JEA Water and Wastewater Approved Materials Manual

VOLUME III

January 1, 2023 – Edition

“Foundation for the Future – Water & Wastewater Standards”

Table of Contents

TABLE OF CONTENTS 2

WATER & RECLAIMED WATER APPROVED MATERIALS 10

PIPE..... 11

 AW-101: DUCTILE IRON PIPE 11

 AW-102: PVC PIPE (DR14 & DR18)..... 12

 AW-103: PVC PIPE (SDR-21) 13

 AW-104: PVC PIPE (SCH 40 & SCH 80) 14

 AW-105: POLYETHYLENE TUBING 15

 AW-106: GALVANIZED PIPE..... 16

 AW-107: HDPE PIPE 17

FITTINGS 18

 AW-201: DUCTILE IRON FITTING..... 18

 AW-202: IRON TAPPING SLEEVE 19

 AW-203: STAINLESS STEEL TAPPING SLEEVE 20

 AW-204: PVC SOLVENT WELD FITTING 21

 AW-205: SDR 21 PUSH ON JOINT FITTING 22

 AW-206: PVC PRESSURE FITTING..... 23

VALVES, HYDRANTS 24

 AW-301: VALVE BOX AND COVER..... 24

 AW-302: GATE VALVE 25

 AW-303: CONTROL VALVE 26

 AW-304: TAPPING VALVE..... 27

 AW-305: CORPORATION STOP..... 28

 AW-306: INSERTION VALVE 29

 AW-307: CURB STOP 30

AW-308: FIRE HYDRANT.....	31
SERVICE PIPE ACCESSORIES.....	32
AW-401: BOLTLESS COUPLING.....	32
AW-402: BRASS ADAPTER & COUPLER	33
AW-403: SERVICE SADDLE, DOUBLE STRAP	34
AW-404: SERVICE SADDLE, SINGLE STRAP	35
AW-405: PAIR ADAPTORS	36
AW-406: METER BOX	37
AW-408: FUSED POLY SERVICE SADDLES	39
LARGE PIPE ACCESSORIES	40
AW-501: CAST COUPLING	40
AW-502: FULL CIRCLE REPAIR CLAMP.....	41
AW-503: ACCESSORY PACK.....	42
AW-504: RESTRAINTS FOR PVC & D.I. PIPE.....	43
AW-505: PVC & D.I. BELL RESTRAINING DEVICE	44
AW-506: MECHANICAL JOINT FASTENERS.....	45
AW-507: FLANGE ADAPTER	46
AW-508: CASING SPACER.....	47
LOCATE WIRE.....	48
AW-601: LOCATE WIRE	48
AW-602: DIRECT BURY LUG	49
AW-603: LOCATE WIRE TESTING EQUIPMENT.....	50
MISC MATERIALS	51
AW-701: ADMIXTURES.....	51
AW-702: METALWORK FINISHES	52
WASTEWATER APPROVED MATERIALS.....	53
PIPE.....	54
AS-101: HDPE PIPE	54
AS-102: PVC PRESSURE (DR18 & DR25) PIPE	55

AS-103: PVC GRAVITY PIPE.....	56
AS-104: PVC PIPE (SCH 40 & SCH 80)	57
AS-105: FIBERGLASS REINFORCED POLYMER MORTAR PIPE.....	58
FITTINGS	59
AS-201: DUCTILE IRON FITTINGS.....	59
AS-202: STAINLESS STEEL TAPPING SLEEVE	60
AS-203: PVC SOLVENT WELD FITTING.....	61
AS-204: PVC GRAVITY FITTING (SDR26)	62
AS-205: PVC PRESSURE FITTING.....	63
AS-206: EPOXY LINING	64
VALVES	65
AS-301: VALVE BOX AND COVER.....	65
AS-302: GATE VALVE	66
AS-303: TAPPING VALVE	67
AS-304: PLUG VALVE	68
AS-305: CHECK VALVE	69
AS-306: AIR VALVE	70
AS-307: INSERTION VALVE	71
PIPE ACCESSORIES	72
AS-401: FULL CIRCLE 2" TAPPING SADDLE FOR ARVS.....	72
AS-402: RESTRAINTS FOR PVC OR D.I. PIPE	73
AS-403: PVC OR D.I. BELL RESTRAINING DEVICE.....	74
AS-404: ACCESSORY PACK.....	75
AS-405: MECHANICAL JOINT FASTENER	76
AS-406: FLANGE ADAPTER	77
AS-407: CASING SPACER	78
AS-408: PIPE COUPLING	79
AS-409: FULL CIRCLE REPAIR CLAMP	80
MANHOLES	81
AS-501: MANHOLE AND ACCESSORIES	81



AS-502: PROTECTIVE COATING 82

AS-503: MANHOLE ADJUSTMENT RING..... 83

AS-504: MANHOLE FRAME AND COVER 84

AS-505: MANHOLE MONITOR..... 85

AS-506: MANHOLE JOINT SEALANT 86

PUMP STATIONS 87

AS-601: ALUMINUM HATCH (FRAME AND COVER) 87

AS-602: CONCRETE LINER 88

AS-603: WASTEWATER PUMP..... 89

AS-604: ELECTRICAL, CONTROL PANEL, VFD & SCADA 90

AS-605: TRANSFER SWITCH 91

AS-606: ENGINE-DRIVEN EMERGENCY PUMP 92

AS-607: COMMUNICATIONS RADIO 93

VACUUM SYSTEM 94

AS-701: VACUUM SEWER VALVE 94

LOCATE WIRE..... 95

AS-801: LOCATE WIRE 95

AS-802: DIRECT BURY LUG 96

AS-803: LOCATE WIRE TESTING EQUIPMENT 97

MISC MATERIALS 98

AS-901: ADMIXTURES 98

AS-902: METALWORK FINISH..... 99

WASTEWATER TREATMENT PLANT APPROVED MATERIALS .. 100

PROTECTIVE COATING 101

WWT-101: PROTECTIVE COATING 101

ELECTRICAL, CONTROL PANEL, VFD & SCADA 102

WWT-201: ELECTRICAL CONTROL PANEL AND MCC 102

WWT-203: VARIABLE FREQUENCY DRIVES 104

SCREENS 105

WWT-301: WWTP SCREENS.....	105
UV SYSTEMS	106
WWT-401: UV DISINFECTION EQUIPMENT.....	106
ODOR CONTROL.....	107
WWT-402: ODOR CONTROL.....	107
GATES	108
WWT-501: SLUICE/SLIDE GATES	108
STAINLESS STEEL GATES: STAINLESS STEEL GATES LARGER THAN 24 INCHES ARE LIMITED TO WRF AERATION BASINS AND DOWN STREAM LOCATIONS ONLY. ALL OTHER LOCATIONS MUST NOT EXCEED A MAXIMUM OF 24 INCHES.....	108
AIR SCRUBBERS.....	109
WWT-601: PLANT AIR SYSTEM	109
WWT-602: AIR FILTRATION CARBON	110
TANKS	111
WWT-701: FLAT ALUMINUM TANK COVERS	111
WWT-702: GLASS FUSED/STEEL TANKS	112
WWT-703: PRESTRESS STORAGE TANKS.....	113
WWT-704: FUEL TANKS.....	114
WWT-705: LINERS FOR CORROSION PROTECTION.....	115
EFFLUENT FILTERS.....	116
WWT-801: CLOTH DISK FILTERS.....	116
CENTRIFUGES.....	117
WWT-901: CENTRIFUGES.....	117
AERATION DIFFUSERS	118
WWT-1001: FINE BUBBLE DIFFUSERS.....	118
VALVE ACTUATORS	119
WWT-1101: ACTUATOR	119
CHEMICAL FEED SKIDS	120
WWT-1201: CHEMICAL METERING FEED PUMP SKID	120

FLOW METERS 121

 WWT-1301: MAGNETIC FLOW METERS..... 121

 WWT-1302: ULTRASONIC FLOW METERS..... 122

 WWT-1303: SLUDGE/BIOSOLIDS DENSITY METER 123

PUMPS 124

 WWT-1401: CHEMICAL METERING PUMPS..... 124

 WWT-1402: RECYCLE/EFFLUENT PUMPS..... 125

 WWT-1403: GRINDER PUMPS..... 126

 WWT-1404: REUSE VERTICAL TURBINE PUMPS 127

 WWT-1405: SELF-PRIMING RAW SEWAGE PUMPS 128

 WWT-1406: PROGRESSIVE CAVITY PUMPS..... 129

 WWT-1407: VACUUM PUMP 130

 WWT-1408: SLUDGE PUMP 131

VALVES 132

 WWT-1501: PLUG VALVES 132

 WWT-1502: CHECK VALVES 133

 WWT-1503: BALL VALVES 134

VALVE POSITION MONITOR 135

 WWT-1601: ROTARY POSITION MONITOR 135

CONVEYOR..... 136

 WWT-1701: CONVEYOR SYSTEM 136

INSTRUMENTATION 137

 GENERAL 137

 ANALYZERS..... 138

 CONTROLLERS 139

 PROBES..... 140

 SAMPLERS 141

 SENSORS..... 142

 TRANSMITTERS 143

WATER TREATMENT PLANT APPROVED MATERIALS..... 144

- PROTECTIVE COATINGS..... 145
 - WT-101: PROTECTIVE COATING..... 145
- OIL 146
 - WT-201: OIL 146
- SLEEVE BEARINGS AND MECHANICAL SEALS..... 147
 - WT-301: SLEEVE BEARINGS..... 147
 - WT-302: MECHANICAL SEALS 148
- PUMPS..... 149
 - WT-401: PUMPS..... 149
- ELECTRICAL-ELECTRONICS-INSTRUMENTATION..... 150
 - WT-501: ELECTRICAL EQUIPMENT 150
 - WT-502: INSTRUMENTATION EQUIPMENT 150
 - WT-503: ELECTRONIC EQUIPMENT..... 153
- STORAGE TANKS 155
 - WT-601: STORAGE TANKS..... 155
- FANS 156
 - WT-701: FANS AND INTAKE HOOD 156
- FLOW METERS 157
 - WT-801: FLOW METERS AND RELATED EQUIPMENT 157
- VALVES 158
 - WT-901: AIR RELEASE/VACUUM VALVES..... 158
 - WT-902: BALL VALVES..... 159
 - WT-903: BUTTERFLY VALVES 160
 - WT-904: CHECK VALVES..... 161
 - WT-905: GATE VALVES..... 162
 - WT-906: PRESSURE REGULATING VALVES..... 163
 - WT-907: MISC. VALVE TYPES 164



MISCELLANEOUS..... 165
WT-1001: MISC MATERIALS..... 165

WATER & RECLAIMED WATER APPROVED MATERIALS

PIPE

AW-101: DUCTILE IRON PIPE

Note: Push on joint shown as example only. (For additional joints, see specifications)

DESCRIPTION: Ductile Iron Pipe (D.I.P), cement lined. See Chapter III.1. - Section 350 of the current JEA Standards for specifications and requirements. See Chapter V.1. - Section 701 for Reclaimed Water specifications and requirements.

SIZE	MANUFACTURER	MODEL #
3-inch & larger	American Cast Iron Pipe Company	N/A
3-inch & larger	McWane Ductile	N/A
3-inch & larger	U.S. Pipe	N/A

AW-102: PVC PIPE (DR14 & DR18)

DESCRIPTION: DR14 & DR18 Pipe. See Chapter III. 1. - Section 350 of the current JEA Standards for specifications and requirements. See Chapter V.1. - Section 701 for Reclaimed Water specifications and requirements.

SIZE	MANUFACTURER	MODEL #
4 – 12-inch	Diamond Plastics	N/A
4 – 12-inch	JM Eagle	N/A
4 – 12-inch	National Pipe & Plastics/National PVC)	N/A
4 – 12-inch	Westlake fka NAPCO	N/A
4 – 12-inch	Ipex	N/A
4 – 12-inch	Sanderson Pipe Corporation	N/A

AW-103: PVC PIPE (SDR-21)

DESCRIPTION: PVC 1120, SDR 21 Pipe. See Chapter III.1. - Section 350 of the current JEA Standards for specifications and requirements. See Chapter V.1. - Section 701 for Reclaimed Water specifications and requirements.

SIZE	MANUFACTURER	MODEL #
2-inch only	Diamond Plastics	N/A
2-inch only	JM Eagle	N/A
2-inch only	Westlake fka NAPCO	N/A
2-inch only	National Pipe & Plastics	N/A
2-inch only	Sanderson Pipe	N/A

AW-104: PVC PIPE (SCH 40 & SCH 80)

DESCRIPTION: PVC SCH 40 & SCH 80 Pipe. See Chapter III.1. - Section 350 of the current JEA Standards for specifications and requirements. See Chapter V.1. - Section 701 for Reclaimed Water specifications and requirements.

SIZE	MANUFACTURER	MODEL #
2-inch only	JM Eagle Manufacturing	N/A
2-inch only	National Pipe and Plastics	N/A
2-inch only	Westlake fka NAPCO	N/A
2-inch only	Universal 100 / Accord	N/A
2-inch only	Charlotte Pipe and Foundry Co	N/A
2-inch only	Ipex	N/A

AW-105: POLYETHYLENE TUBING

DESCRIPTION: PE 4710, SDR-9, Copper Tube Size, Polyethylene Tubing. See Chapter III.1. - Section 350 of the current JEA Standards for specifications and requirements. See Chapter V.1. - Section 701 for Reclaimed Water specifications and requirements.

SIZE	MANUFACTURER	MODEL #
2-inch & smaller	Endot, LLC	EndoPure – Blue (Potable) Only
2-inch & smaller	Endot, LLC	EndoCore – Purple (Reclaim) Only
2-inch & smaller	Phillips Driscopipe/Performance Pipe	N/A
2-inch & smaller	Charter Plastics	Blue Ice
2-inch & smaller	Silver-Line Plastics	N/A
2-inch & smaller	Advanced Drainage System	ADS PolyFlex

AW-106: GALVANIZED PIPE

Note: For use in Contaminated Soil Sites only.

DESCRIPTION: Galvanized Pipe. See Chapter III.1. - Section 350 of the current JEA Standards for specifications and requirements. See Chapter V.1. - Section 701 for Reclaimed Water specifications and requirements.

SIZE	MANUFACTURER	MODEL #
3-inch & smaller	Grinnell Corporation	N/A
4-inch & smaller	Wheatland Tube	N/A

AW-107: HDPE PIPE

DESCRIPTION: AWWA C906 Polyethylene (PE) Pressure Pipe and Fittings, 4-inch through 63-inch, for Water Distribution American Society for Testing and Materials (ASTM) Standards.

SIZE	MANUFACTURER	MODEL #
4-inch and larger		N/A

FITTINGS

AW-201: DUCTILE IRON FITTING

Note: Mechanical Joint, bend, shown as example only (for additional joints & fittings, see specifications).

DESCRIPTION: Ductile Iron Fitting, cement-lined or JEA approved equal. See Chapter III.1. - Section 350 of the current JEA Standards for specifications and requirements. See Chapter V.1. - Section 701 for Reclaimed Water specifications and requirements.

SIZE	MANUFACTURER	MODEL #
3-inch & larger	Tyler Union	N/A
4-inch & larger	Star Pipe Products	N/A
3-inch & larger	Sigma Corp. (Russell Pipe)	N/A
3-inch & larger	SIP Industries	N/A

AW-202: IRON TAPPING SLEEVE

Note: Mechanical Joint Shown as example only (for additional joints, see specifications).

DESCRIPTION: Iron Tapping Sleeve. See Chapter III. 2. - Section 351 of the current JEA Standards for specifications and requirements. See Chapter V.2. – Section 702 for Reclaimed Water specifications and requirements. This sleeve shall not be utilized on PVC pipe larger than 12-inch.

SIZE	MANUFACTURER	MODEL #
4-inch & larger	American Cast Iron Pipe Company	1004
4-inch & larger	Clow Valve	F-5205
4-inch & larger	M & H Valve Company	1574
4-inch & larger	Mueller Company	H-615, H-616, H-619
4-inch & larger	Tyler Union	5-149-CI
4-inch & larger	US Pipe	N/A
30-inch & larger	Smith-Blair (Carbon Steel)	623

AW-203: STAINLESS STEEL TAPPING SLEEVE

Note: Must be all stainless steel, no dissimilar metals allowed.

DESCRIPTION: Stainless Steel Tapping Sleeve. See Section 351 of the current JEA Standards for specifications and requirements. See Section 702 for Reclaimed Water specifications and requirements.

SIZE	MANUFACTURER	MODEL #
4-inch & larger	Cascade Waterworks Mfg.	CST-EX
4-inch & larger	Dresser Inc./GE	630
4-inch & larger	Ford Meter Box Company	FAST Series, FTSS
4-inch & larger	JCM Industries, Inc.	432, 439, 452 (14-inch and larger)
4-inch & larger	Power Seal	3490, 3490 MJ (8-inch and smaller)
4-inch & larger	Romac Industries, Inc.	SST
4-inch & larger	Smith-Blair	663 & 665
4-inch & larger	Mueller	H304

AW-204: PVC SOLVENT WELD FITTING

DESCRIPTION: Schedule 40 & 80 Solvent Weld Fittings. See Chapter III.1. - Section 350 of the current JEA Standards for specifications and requirements. See Chapter V.1. - Section 701 for Reclaimed Water specifications and requirements.

SIZE	MANUFACTURER	MODEL #
2-inch only	Chemtrol/NIBCO	N/A
2-inch only	Ipex	N/A
2-inch only	Lasco Fittings, Inc.	N/A
2-inch only	Georg Fisher Sloane Manufacturing (GF Piping Systems)	N/A
2-inch only	Spears Manufacturing	N/A
2-inch only	Charlotte Pipe and Foundry Co	N/A

AW-205: SDR 21 PUSH ON JOINT FITTING

DESCRIPTION: PVC 1120, SDR 21 Push On Joint Fittings. See Chapter III.1. - Section 350 of the current JEA Standards for specifications and requirements. See Chapter V.1. - Section 701 for Reclaimed Water specifications and requirements.

SIZE	MANUFACTURER	MODEL #
2-inch	Ipex	N/A

AW-206: PVC PRESSURE FITTING

DESCRIPTION: PVC C900, DR18 Injection Molded, Push on Joint (pressure) Fittings. See Chapter III.1. - Section 350 of the current JEA Standards for specifications and requirements. See Chapter V.1. - Section 701 for Reclaimed Water specifications and requirements.

SIZE	MANUFACTURER	MODEL #
4-inch-12	Harrington Corporation (HARCO)	N/A
4-inch-12	Ipex	N/A
4-inch-12	Multi-Fittings	N/A

VALVES, HYDRANTS

AW-301: VALVE BOX AND COVER

DESCRIPTION: Valve Box and Cover. See Section 351 of the current JEA Standards for specifications and requirements. See Section 702 for Reclaimed Water specifications and requirements.

SIZE	MANUFACTURER	MODEL #
N/A	Tyler Pipe	461-S, Heavy Duty
N/A	Sigma Corp. (Russell Pipe)	VB-26, Heavy Duty
N/A	U.S. Foundry	7500, Heavy Duty
N/A	East Jordan Iron Works	461S, Heavy Duty
N/A	Star Pipe Products	VB 461 SHD, Heavy Duty
N/A	SIP	6004/6004CL35, Heavy Duty

AW-302: GATE VALVE

Note: All valves shall open by turning to the left. Mechanical joint shown as example only. See specifications for additional joints.

DESCRIPTION: Resilient Seat Gate Valve. See Chapter III. 2. - Section 351 of the current JEA Standards for specifications and requirements. See Chapter V. 2. - Section 702 for Reclaimed Water specifications and requirements.

Size	Manufacturer	M.Jt. Model #
3-inch to 12-inch	United Water Products	2010
3-inch & larger	American Flow Control (American Cast Iron Co)	2500 Series ALHA w/Restraint Joint
3-inch & larger	AVK (S/S Stem Only)	Series 45
3-inch & larger	Clow Valve	F-6100
3-inch & larger	Kennedy Valve Company	8571
3-inch & larger	Mueller	A2361
3-inch & larger	M & H Valve Company	4067
3-inch & larger	U.S. Pipe	250
3-inch & larger	Mueller Co	A-2361 Series
3-inch & larger	American – RD (Product line of Kennedy Valve)	D100

AW-303: CONTROL VALVE

DESCRIPTION: Pressure control valves. Specification required by design engineer.

Size	Manufacturer	Model #
4-inch & larger	Bernad	730

AW-304: TAPPING VALVE

DESCRIPTION: See Chapter III. 2. - Section 351 of the current JEA Standards for specifications and requirements.
See Chapter V. 2. - Section 702 for Reclaimed Water specifications and requirements.

SIZE	MANUFACTURER	MODEL #
3-inch & larger	American Flow Control (American cast iron company)	N/A
3-inch & larger	AVK (S/S Stem Only)	25/30081
3-inch & larger	Clow Valve	F-6114, 2638
3-inch & larger	Kennedy Valve Company	950-X
3-inch & larger	M & H Valve	4751
3-inch & larger	Mueller	T-2360, T-2361
3-inch & larger	U.S. Pipe	5860
3-inch & larger	Mueller-Aqua Grip	A-2361-76
3-inch & larger	American – RD (Product line of Kennedy valve)	N/A

AW-305: CORPORATION STOP

Note: Only full port valves are allowed.

DESCRIPTION: Corporation Stop Chapter III. 2. - Section 351 of the current JEA Standards for specifications and requirements. See Chapter V. 2. - Section 702 for Reclaimed Water specifications and requirements.

SIZE	MANUFACTURER	MODEL #
2-inch & smaller	Ford Meter Box Company	1000 Series
2-inch & smaller	A.Y. McDonald Mfg.	4700 Series
2-inch & smaller	Mueller	H Series
2-inch & smaller	Mueller	B Series
2-inch & smaller	James Jones Company	N/A
2-inch & smaller	Cambridge Brass	N/A

AW-306: INSERTION VALVE

DESCRIPTION: See Chapter IV.4. - Section 430 of the current JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
4-inch thru 8-inch	ROMAC	310 Sleeve w/ 361 valve
10" thru 12"	ROMAC	311 Sleeve w/ 358 valve
4" thru 12"	Hydra-Stop	Insta-Valve
14-inch & larger	Submittal and JEA Approval	Special Case

AW-307: CURB STOP

DESCRIPTION: Curb Stop, Ball Valve. See Chapter III.2. - Section 351 of the current JEA Standards for specifications and requirements. See Chapter V.2. - Section 702 for Reclaimed Water specifications and requirements. Only full port valves are allowed.

SIZE	MANUFACTURER	MODEL #
2-inch & smaller	Ford Meter Box Company	B11 Series (w/lockwing, FIPxFIP)
2-inch & smaller	Ford Meter Box Company	B41 Series (w/lockwing)
2-inch & smaller	McDonald A.Y. McDonald Mfg	6100 Series (w/lockwing)
2-inch & smaller	Mueller	B20200 (w/lockwing, FIPxFIP)
2-inch & smaller	Mueller	B25170 (w/lockwing)
2-inch & smaller	James Jones	N/A
2-inch & smaller	Cambridge Brass	N/A

AW-308: FIRE HYDRANT

DESCRIPTION: 5¼" Fire Hydrant. See Chapter III.2. - Section 351 of the current JEA Standards for specifications and requirements.

MANUFACTURER	MODEL #
American Flow Control (American Cast Iron Company)	B-84-B
M & H Valve Company	129
Mueller Co	A-423
US Pipe/Muller	Met M94
AVK	2780
EJ WaterMaster	5CD250

SERVICE PIPE ACCESSORIES

AW-401: BOLTLESS COUPLING

DESCRIPTION: Boltless Coupling (Long or Short type). See Chapter III. 1. - Section 350 of the current JEA Standards for specifications and requirements. See Chapter V.1. - Section 701 for Reclaimed Water specifications and requirements.

Size	Manufacturer	Model #
2-inch & smaller	Dresser Inc./GE	Style 65
2-inch & smaller	Smith-Blair	525
2-inch & smaller	TPS	Series 6000

AW-402: BRASS ADAPTER & COUPLER

DESCRIPTION: Brass Adapters & Couplers. See Chapter III.1. - Section 350 of the current JEA Standards for specifications and requirements. See Chapter V.1. - Section 701 for Reclaimed Water specifications and requirements.

Size	Manufacturer	Model #
2-inch & smaller	The Ford Meter Box Co, Inc	
2-inch & smaller	McDonald A.Y. McDonald Mfg	
2-inch & smaller	Mueller	
2-inch & smaller	James Jones	
2-inch & smaller	Cambridge Brass	

AW-403: SERVICE SADDLE, DOUBLE STRAP

Note: Select desired saddle O.D. range which specifically matches outside diameter of pipe. Saddles for C-900 shall be sized to the exact O.D. size for proper fit. A double strap saddle will be required for all wet taps and are acceptable for installation on dry water supply mains (all sizes).

DESCRIPTION: Service Saddle shall be epoxy or poly coated with double stainless steel straps. See Chapter IV.6. - Section 351 of the current JEA Standards for specifications and requirements. See Chapter V.2. - Section 702 for Reclaimed Water specifications and requirements.

Outlet Size	Manufacturer	Model #
2-inch & smaller	Cascade Waterworks Mfg.	CDS2/CDS-LD
2-inch & smaller	Dresser Inc./GE	291DS
2-inch & smaller	The Ford Meter Box Co.	FC – 202, 202BS
2-inch & smaller	JCM Industries	406
2-inch & smaller	Smith Blair	317
2-inch & smaller	Mueller	DR 25
2-inch & smaller	Power Seal	3417, 3409

AW-404: SERVICE SADDLE, SINGLE STRAP

Note: Select desired saddle O.D. range which specifically matches outside diameter of pipe. Saddles for C-900 shall be sized to the exact O.D. size for proper fit. Single Strap Saddle is approved for new 1-inch water services only which are installed on dry water main, sized 4-inch through 10 inch.

DESCRIPTION: Service Saddle shall be epoxy or poly coated with single stainless steel straps. See Chapter IV.6. - Section 351 of the current JEA Standards for specifications and requirements. See Chapter V.2. - Section 702 for Reclaimed Water specifications and requirements.

Outlet Size	Manufacturer	Model #
1-inch & smaller	Cascade Waterworks Mfg.	CDS2
1-inch & smaller	Dresser Inc./GE	291-SS
1-inch & smaller	Ford Meter Box Company	FC-101
1-inch & smaller	JCM Industries	405
1-inch & smaller	Smith Blair	315
1-inch & smaller	Mueller	DR1S
1-inch & smaller	Power Seal	3417, 3409

AW-405: PAIR ADAPTORS

DESCRIPTION: Brass adaptor to change 3/4" meter to 5/8" meter spud size

SIZE	MANUFACTURER	MODEL #
3/4" to 5/8"	Ford	A13

AW-406: METER BOX

DESCRIPTION: Meter Box. See Chapter III.2. - Section 351 of the current JEA Standards for specifications and requirements. See Chapter V.2. - Section 702 for Reclaimed Water specifications and requirements.

Size	Box	Model #
N/A	Glassmasters	N/A
N/A	Southern Meter Box	N/A
N/A	Pentek	N/A

AW-407: METER

Size	Manufacturer	Contact
N/A	Badger Meter	Rebecca Loomans (414)426-7387

AW-408: FUSED POLY SERVICE SADDLES

DESCRIPTION: See Chapter III.5.2. - Section 350 of the current JEA Standards for specifications and requirements for use on water or reuse service connections to HDPE Pipe.

Size	Box	Model #
2" and Smaller	Frialen VA or VA-TL	VA or VA-TL

LARGE PIPE ACCESSORIES

AW-501: CAST COUPLING

DESCRIPTION: Cast Coupling. See Chapter III.1. - Section 350 of the current JEA Standards for specifications and requirements. See Chapter V.1. Section 701 for Reclaimed Water specifications and requirements.

Size	Manufacturer	Model #
4-inch & larger	Cascade Waterworks Mfg.	CDC, CRC, CRFA
4-inch & larger	Dresser Inc./GE	153, 262
4-inch & larger	Ford Meter Box	FC2A, FC2W
4-inch & larger	JCM Industries	210
4-inch & larger	PowerSeal	3501, 3501B, 3521
4-inch & larger	Romac	501
4-inch & larger	Smith-Blair	441
4-inch & larger	TPS, Hymax	2000
2-inch & larger	Mueller	MAXIFIT
4-inch & larger	Mueller Aqua Grip	
4-inch & larger	Gripper Gasket LLC	Maxadaptor

AW-502: FULL CIRCLE REPAIR CLAMP

DESCRIPTION: Full Circle Repair Clamp (stainless steel). See Chapter III.1. - Section 350 of the current JEA Standards for specifications and requirements. See Chapter V.1. - Section 701 for Reclaimed Water specifications and requirements.

Size	Manufacturer	Model #
All Sizes	Cascade Waterworks Mfg.	CDR1, CDR2, CDR3
All Sizes	Dresser Inc./GE	360
All Sizes	The Ford Meter Box Co, Inc	"F", "FS" Series
All Sizes	JCM Industries	101, 131
All Sizes	JCM Industries	102, 132
All Sizes	Powerseal	3121, 3122
All Sizes	Romac	"SS", "CL" Series
All Sizes	Smith Blair	Series 226, 256
All Sizes	Smith Blair	Series 228, 263
All Sizes	TPS, EZ-MAX	Model 4000
All Sizes	Mueller	500, 510, 540, 550
All Sizes	TPS Bell Encapsulation	Ultra-Sleeve

AW-503: ACCESSORY PACK

DESCRIPTION: Accessory Pack: See Chapter III.1. - Section 350 of the current JEA Standards for specifications and requirements. See Chapter V.1. - Section 701 for Reclaimed Water specifications and requirements.

Size	Manufacturer	Model #
3-inch & larger	American Cast Iron Pipe Company	N/A
3-inch & larger	Clow Valve	N/A
3-inch & larger	Tyler Union	N/A
3-inch & larger	Sigma	N/A
3-inch & larger	U.S. Pipe	N/A
3-inch & larger	Star Pipe Products	N/A
3-inch & larger	SIP	N/A

AW-504: RESTRAINTS FOR PVC & D.I. PIPE

DESCRIPTION: Restraints for PVC or D.I. Pipe. See Chapter III.1. - Section 350 of the current JEA Standards for specifications and requirements. See Chapter V.1. - Section 701 for Reclaimed Water specifications and requirements.

Size	Manufacturer	Model #
All Sizes	EBAA Iron	1100 (Ductile Pipe Only)
All Sizes	EBAA Iron	2000 PV, 2000 SV (PVC Pipe Only)
All Sizes	The Ford Meter Box Co, Inc (Uniflange)	1400 (Ductile Pipe Only)
All Sizes	The Ford Meter Box Co, Inc (Uniflange)	1500 (PVC Pipe Only)
All Sizes	Sigma (Russell Pipe)	One-Lok SLCE (PVC Pipe Only)
All Sizes	Sigma (Russell Pipe)	One-Lok SLDE (Ductile Pipe Only)
All Sizes	Star Pipe Products	Stargrip 3000 (Ductile Pipe Only)
All Sizes	Star Pipe Products	AllGrip (Ductile/PVC Pipe)
All Sizes	Star Pipe Products	Stargrip 4000 (PVC Pipe)
All Sizes	Tyler Union	TUFGrip (Ductile-TLD/PVC-TLP Pipe)
All Sizes	SIP	EZPVC/EZVCU(PVC) EZD (DIP)

AW-505: PVC & D.I. BELL RESTRAINING DEVICE

DESCRIPTION: Bell Restraining Devices. See Chapter III.1. - Section 350 of the current JEA Standards for specifications and requirements. See Chapter V.1. - Section 701 for Reclaimed Water specifications and requirements.

Size	Manufacturer	Model #
All Sizes	EBAA Iron	1500, 1600 Series (PVC/Ductile)
All Sizes	EBAA Iron	2500 Series (PVC Only)
All Sizes	EBAA Iron	2800 Series (PVC Only)
All Sizes	The Ford Meter Box Co, Inc (Uniflange)	1300 Series (PVC/Ductile)
All Sizes	The Ford Meter Box Co, Inc (Uniflange)	1350, 1360 Series (PVC Only)
All Sizes	The Ford Meter Box Co, Inc (Uniflange)	1390 Series (PVC/Ductile)
All Sizes	JCM	610 Series (PVC/Ductile)
All Sizes	JCM	621 Series (PVC/Ductile)
All Sizes	Romac	Grip Ring (PVC/Ductile)
All Sizes	Star Pipe Products, Inc.	1000, 1100 (PVC/Ductile), 1200 (PVC Only) Series
All Sizes	Star Pipe Products, Inc.	ALLGRIP 3600 (PVC/Ductile),
All Sizes	Star Pipe Products, Inc.	Stargrip 3100(Ductile only), 4100 (PVC Only)
All Sizes	Sigma (Russell Pipe)	PWP(PVC/Ductile)
All Sizes	Tyler Union	3000 (PVC Only)
All Sizes	SIP	PTPVC (PVC Only)

AW-506: MECHANICAL JOINT FASTENERS

DESCRIPTION: Mechanical Joint Fasteners. See Chapter III.1. - Section 350 of the current JEA Standards for specifications and requirements. See Chapter V.1. - Section 701 for Reclaimed Water specifications and requirements.

Size	Manufacturer	Model #
	Tie Lugs:	
	See Specifications	
	All Thread Rods:	
	See Specifications	
	Eye Bolts:	
	See Specifications	
	Nuts & Washers:	
	See Specifications	

AW-507: FLANGE ADAPTER

Note: The use of flange adapters shall be limited to areas specifically approved by JEA on a project-by-project basis.

DESCRIPTION: Flange Adapters. See Section 350 of the current JEA Standards for specifications and requirements. See Section 701 for Reclaimed Water specifications and requirements.

Size	Manufacturer	Model #
3-inch & larger	EBAA	Series 1000 DIP
3-inch & larger	EBAA	Series 2100 DIP
3-inch & larger	The Ford Meter Box Co, Inc (Uniflange)	200 C & S
3-inch & larger	The Ford Meter Box Co, Inc (Uniflange)	400 C & S
3-inch & larger	The Ford Meter Box Co, Inc (Uniflange)	900 C & S
3-inch & larger	The Ford Meter Box Co, Inc (Uniflange)	UFA-200 DIP
3-inch & larger	The Ford Meter Box Co, Inc (Uniflange)	UFA-900 PVC
3-inch & larger	Star Pipe	Series 200G
3-inch & larger	Star Pipe	Series 400G

AW-508: CASING SPACER

DESCRIPTION: Casing Spacers. See Chapter III.1. - Section 350 of the current JEA Standards for specifications and requirements. See Chapter VI.1. - Section 701 for Reclaimed Water specifications and requirements.

Size	Manufacturer	Model #
Varies	Cascade Waterworks Mfg.	CCS
Varies	EnPro Industries, Inc.	S/S Type
Varies	EnPro Industries, Inc.	PVC Coated Steel
Varies	RACI	High Density Polyethylene
Varies	Advanced Products & Systems, Inc.	SSI, SI, CI
Varies	BWM Company	
Varies	CCI Pipeline Systems	CSC, CSS

LOCATE WIRE

AW-601: LOCATE WIRE

DESCRIPTION: Locate wiring for direct bury. See Chapter II.6. - Section 350 of the current JEA Standards for specifications and requirements

SIZE	MANUFACTURER	MODEL #
12-gauge	Copper Head Industries	Soloshot – 1230BHS500
12-gauge	Pro-Line Safety Products Co.	Protrace-744120232

AW-602: DIRECT BURY LUG

DESCRIPTION: Direct bury lug is for use with tracer lines.

SIZE	MANUFACTURER	MODEL #
	DRYCONN	90120-DB Lug Yellow

AW-603: LOCATE WIRE TESTING EQUIPMENT

DESCRIPTION: Cable/Fault Locator – Precisely locates sheath or ground faults on both long and short cable sections.

MANUFACTURER	MODEL #
3M Dynatel	2273
Metrotech	9800XT
Ditch Witch	950 R/T

MISC MATERIALS

AW-701: ADMIXTURES

SIZE	MANUFACTURER	MODEL #
N/A	Hercules Power Company of Wilmington, Delaware	
N/A	Dewey and Almy Chemical Company, Cambridge Mass	
N/A	Master Builders Company, Cleveland Ohio	
N/A	L. Sonneborn Sons, Inc. 80 Eighth Avenue, New York, NY 10011	

AW-702: METALWORK FINISHES

Manufacturer	Contact	Model #
Alumilite		

WASTEWATER APPROVED MATERIALS

PIPE

AS-101: HDPE PIPE

DESCRIPTION: AWWA C906 Polyethylene (PE) Pressure Pipe and Fittings, 4-inch through 63-inch, for Water Distribution American Society for Testing and Materials (ASTM) Standards.

SIZE	MANUFACTURER	MODEL #
4-inch and larger		N/A

AS-102: PVC PRESSURE (DR18 & DR25) PIPE

DESCRIPTION: DR18 & DR25 PVC Pipe. See Chapter IV.2. - Section 428 & Chapter IV.3. - Section 429 of the current JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
4-inch – 36	Diamond Plastics	N/A
4-inch – 36	JM Eagle	N/A
4-inch – 36	National Pipe & Plastics	N/A
4-inch – 36	Westlake fka NAPCO	N/A
4-inch – 48	Ipex	N/A
4-inch – 24	Sanderson Pipe Corporation	N/A

AS-103: PVC GRAVITY PIPE

DESCRIPTION: PVC SDR 26: See Chapter IV.2. - Section 428 of the current JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
6-inch & larger	Charlotte Pipe	N/A
6-inch & larger	Diamond Plastics Corp	N/A
6-inch & larger	JM Eagle	N/A
6-inch & larger	National Pipe & Plastics	N/A
6-inch & larger	Westlake fka NAPCO	N/A
6-inch & larger	Sanderson Pipe Co.	N/A
6-inch & larger	HAWK Plastics Corporation	SDR-26

AS-104: PVC PIPE (SCH 40 & SCH 80)

DESCRIPTION: PVC SCH 40 or 80 Pipe. See Chapter IV.3. - Section 429 of the current JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
3-inch & smaller	JM Eagle	N/A
3-inch & smaller	National Pipe & Plastics	N/A
3-inch & smaller	Westlake fka NAPCO	N/A
3-inch & smaller	Sanderson Pipe Company	N/A
3-inch & smaller	Accord Industries	N/A
3-inch & smaller	Charlotte Pipe & Foundry	N/A
3-inch & smaller	Ipex	N/A

AS-105: FIBERGLASS REINFORCED POLYMER MORTAR PIPE

SIZE	MANUFACTURER	MODEL #
18"-48"	HOBAS Pipe USA, Inc	

FITTINGS

AS-201: DUCTILE IRON FITTINGS

Note: Mechanical joint, 90-degree bend & fittings, flange fitting shown as example only (for additional joints, see specifications).

DESCRIPTION: Ductile Iron Fitting, epoxy-lined. See Sections 428 & Chapter IV.3. - Section 429 of the current JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
3-inch & larger	Tyler Union	N/A
3-inch & larger	Star Pipe Products	N/A
3-inch & larger	Sigma Corporation (Russell Pipe)	N/A
3-inch & larger	SIP Industries	N/A
3-inch & larger	US Pipe	N/A

AS-202: STAINLESS STEEL TAPPING SLEEVE

Note: Must be all stainless steel, no dissimilar metals allowed.

DESCRIPTION: Stainless Steel Tapping Sleeve. See Section 430 of the current JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
4-inch & larger	Cascade Waterworks Mfg.	CST-EX
4-inch & larger	Dresser Inc./GE	630
4-inch & larger	Ford Meter Box Company	FAST Series, FTSS
4-inch & larger	JCM Industries, Inc.	432, 439, 452, (taps 14-inch and larger)
4-inch & larger	Power Seal	3490, 3490MJ (8-inch and smaller)
4-inch & larger	Romac Industries, Inc.	SST
4-inch & larger	Smith-Blair	N/A
4-inch & larger	Mueller	H304

AS-203: PVC SOLVENT WELD FITTING

DESCRIPTION: Schedule 40 and 80 Solvent Weld Fittings. See Chapter IV.3. - Section 429 of the current JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
3-inch & smaller	Ipex	
3-inch & smaller	LASCO Fittings, Inc.	
3-inch & smaller	Nibco	
3-inch & smaller	Georg Fischer Sloane (GF Piping Systems)	
3-inch & smaller	Spears	
3-inch & smaller	Charlotte Pipe & Foundry	

AS-204: PVC GRAVITY FITTING (SDR26)

DESCRIPTION: PVC Gravity Fitting (SDR26). See Chapter IV.2. - Section 428 of the current JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
6-inch & larger	GPK Products, Inc	
6-inch & larger	Harco Inc.	
6-inch & larger	Multi Fittings	
6-inch & larger	Tigre-ADS USA	
6-inch & larger	Plastic Trends (Royal Building Projects)	

AS-205: PVC PRESSURE FITTING

DESCRIPTION: For 12-inch and smaller (Pressure Fittings) - PVC C900, DR18 Injection Molded, Push-On Joint Fittings. See Chapter IV.3. - Section 429 of the current JEA Standards for specifications and requirements. For 14-inch and larger (pressure Fittings) - PVC C905 Fabricated Fittings (no Tee Fitting). See Chapter IV.3. - Section 429 of the current JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
4-inch – 12-inch	Harco Inc.	N/A
4-inch – 12-inch	Multi-Fittings	N/A
4-inch & larger	Ipex	N/A
14-inch & larger	Galaxy Plastics	N/A
14-inch & larger	Plastic Trends (Royal Building Projects)	N/A

AS-206: EPOXY LINING

DESCRIPTION: For use on the interior surfaces of ductile iron pipe and fittings used in wastewater applications. See Chapter II.4 - Section 429 of the current JEA Standards for specifications and requirements.

Application	MANUFACTURER	MODEL #
DI Pipe and DI Fittings	Permax-CTF	N/A
DI Pipe and DI Fittings	Protecto 401 Ceramic	N/A
DI Pipe and DI Fittings	Tnemec Permashield	N/A

VALVES

AS-301: VALVE BOX AND COVER

DESCRIPTION: Valve Box and Cover. See Section 430 of the current JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
N/A	Tyler Union	461-S, Heavy Duty
N/A	Sigma (Russell Pipe)	VB-26, Heavy Duty
N/A	U.S. Foundry	7500, Heavy Duty
N/A	East Jordon Iron Works	461S, Heavy Duty
N/A	Star Pipe Products	VB 461 SHD, Heavy Duty
N/A	SIP	6004/6004CL35, Heavy Duty

AS-302: GATE VALVE

Note: All valves shall open by turning to the left. Mechanical joint shown as example only. See specifications for additional joints.

DESCRIPTION: Resilient Seat Gate Valve. See Section 430 of the current JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	M.Jt. MODEL #
3-inch & larger	AVK (S/S Stem Only)	Series 45
3-inch & larger	American Flow Control (American Cast Iron Pipe Company)	2500 Series
3-inch & larger	Clow Valve	F-6100
3-inch & larger	Kennedy Valve Company	8571
3-inch & larger	M & H Valve Company	4067
3-inch & larger	Mueller	, 2361
3-inch & larger	U.S. Pipe	250
3-inch & larger	American – RD (Kennedy Valve)	D 100
3-inch to 12-inch	United Water Products	2010

AS-303: TAPPING VALVE

Note: All valves shall open by turning to the left.

DESCRIPTION: Tapping Valve. See Section 430 of the current JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
3-inch & larger	American Flow Control (American Cast Iron Pipe Company)	N/A
3-inch & larger	AVK (S/S Stem Only)	25/30081
3-inch & larger	Clow Valve	F-6114
3-inch & larger	Kennedy Valve Company	8950
3-inch & larger	M & H Valve	4751
3-inch & larger	Mueller	T-2360, 2361
3-inch & larger	U.S. Pipe	5860
3-inch & larger	Mueller – Aqua Grip	A-2361-76
3-inch & larger	American – RD (Kennedy Valve)	N/A

DESCRIPTION: Insert-A-Valve: See Section 430 of the JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
4" thru 8"	ROMAC	310 Sleeve w/361 valve
10" thru 12"	ROMAC	311 Sleeve w/358 valve
4" thru 12"	Hydrastop	Insta-Valve
14"	Submittal and JEA Approval	Special Case

AS-304: PLUG VALVE

Note: Flange joint shown as example only. (For additional joints, see specifications.)

DESCRIPTION: Plug Valve. See Section 430 of the current JEA Standards for specifications and requirements. Actuator may be required to achieve 150 P.S.I. drip tight shut-off in both directions. Contact valve manufacturer for requirements.

SIZE	MANUFACTURER	MODEL #
3-inch & larger	Clow Valve /Kennedy	N/A
3-inch & larger	Dezurik	N/A
3-inch & larger	TYCO/Keystone	Eccentric Valve
3-inch & larger	Milliken Valve or Mueller Water Products	600 N (MJ)
3-inch & larger	Milliken Valve/Mueller Water Products	601 N (FLG)
3-inch & larger	Henry Pratt Co	N/A
3-inch & larger	Val-Matic	N/A
3-inch & larger	Golden Anderson	N/A
3-inch & larger	Homestead	N/A
3-inch & larger	VSI Waterworks	Series PVII/PVIF

AS-305: CHECK VALVE

DESCRIPTION: Check Valve. See Section 430 of the current JEA Standards for specifications and requirements. Only external swing checks approved; internal check valves must be submitted through standards exception process.

SIZE	MANUFACTURER	MODEL #
3-inch & larger	American Flow Control (American Cast Iron Pipe Company)	50SC-LW
3-inch & larger	Clow Valve/Kennedy	106LW
3-inch & larger	M & H Valve	159-02
3-inch & larger	Mueller/Henry Pratt/Milliken	8001
3-inch & larger	NIBCO	F938-31-BL&W
3-inch & larger	Matco-Norca	
3-inch & larger	Golden Anderson	
3-inch & larger	United	
3-inch & larger	VSI Waterworks	Series CVIX
3-inch & larger	Pratt	

AS-306: AIR VALVE

DESCRIPTION: Air Valve. See Section 430 of the current JEA Standards for specifications and requirements. It should be noted that, per the specification, valves may require back wash feature, stainless steel body or other requirements.

SIZE	MANUFACTURER	MODEL #
Standard Body	A.R.I. USA	D-26 NS / D-025L ST
Standard Body	H-TEC USA	Series 986/988
Standard Body	International Valve	Vent-Tech SWG
*Short Body	Vent-O-Mat	Series RGX II
*Short Body	A.R.I. USA	D-025-ST
*Short Body	H-TEC USA	Series 989

* Short Body ARVs are only to be used with specific permission from JEA (fix this wording)

AS-307: INSERTION VALVE

DESCRIPTION: See Chapter IV.4. - Section 430 of the current JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
4" thru 8"	ROMAC	310 Sleeve w/ 361 valve
10" thru 12"	ROMAC	311 Sleeve w/ 358 valve
4"-12"	Hydra-Stop	Insta-Valve
14" & larger	Submittal and JEA Approval	Special Case

PIPE ACCESSORIES

AS-401: FULL CIRCLE 2” TAPPING SADDLE FOR ARVS

DESCRIPTION: Full Circle 2” Tapping Sleeve 316 Stainless Steel for ARVs. See Chapter V.3. - Section 430 and Chapter III - Section 351 of the current JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
3” to 48”	Ford Meter Box, Co	FAST-Q or FTSS-Q series
4” to 24”	JCM Industries, Inc.	6438 Series

AS-402: RESTRAINTS FOR PVC OR D.I. PIPE

DESCRIPTION: Restraints for PVC or D.I. Pipe. See Section 429 of the current JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
3-inch & larger	EBAA Iron	1100 (Ductile Pipe Only)
3-inch & larger	EBAA Iron	2000 PV, 2000 SV (PVC Pipe Only)
3-inch & larger	The Ford Meter Box Co, Inc (Uniflange)	1400 (Ductile Pipe Only)
3-inch & larger	The Ford Meter Box Co, Inc (Uniflange)	1500 (PVC Pipe Only)
3-inch to 10-inch	Sigma (Russell Pipe)	One-Lok SLCE – (PVC pipe only)
12-inch & larger	Sigma (Russell Pipe)	One-Lok SLCE – (PVC pipe only)
3-inch & larger	Sigma (Russell Pipe)	One-Lok SLDE – (Ductile Pipe Only)
3-inch & larger	Star Pipe	Stargrip 3000 (Ductile Pipe Only)
3-inch & larger	Star Pipe	Stargrip 4000 (PVC Pipe)
3-inch & larger	Tyler Union	TUFGrip (Ductile-TLD/PVC-TLP Pipe)
3-inch & larger	SIP	EZPVC/EZVCU (PVC) EZD (DIP)

AS-403: PVC OR D.I. BELL RESTRAINING DEVICE

DESCRIPTION: Bell Restraining Devices. See Section 429 of the current JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
3-inch & larger	EBAA Iron	1500 Series (PVC/Ductile)
3-inch & larger	EBAA Iron	1600 Series (PVC/Ductile)
3-inch & larger	EBAA Iron	2500 Series (PVC Only)
3-inch & larger	EBAA Iron	2800 Series (PVC Only)
3-inch & larger	The Ford Meter Box Co, Inc (Uniflange)	1300 Series (PVC/Ductile)
3-inch & larger	The Ford Meter Box Co, Inc (Uniflange)	1350 Series (PVC Only)
3-inch & larger	The Ford Meter Box Co, Inc (Uniflange)	1360 Series (PVC Only)
3-inch & larger	The Ford Meter Box Co, Inc (Uniflange)	1390 Series (PVC/Ductile)
3-inch & larger	JCM Industries	610 Series (PVC/Ductile)
3-inch & larger	JCM Industries	621 Series (PVC/Ductile)
3-inch & larger	Romac	Grip Ring (PVC/Ductile)
3-inch & larger	Star Pipe Products, Inc.	ALLGRIP 3600 (PVC/Ductile)
3-inch & larger	Star Pipe Products, Inc.	1000, 1100 (PVC/Ductile), 1200 (PVC Only) Series
3-inch & larger	Star Pipe Products, Inc.	Stargrip 3100 (Ductile Only), 4100 (PVC Only)
3-inch & larger	Tyler Union	3000 (PVC Only)
3-inch & larger	Sigma (Russell Pipe)	PWP(PVC/Ductile)
3-inch & larger	SIP	PTPVC (PVC Only)

AS-404: ACCESSORY PACK

DESCRIPTION: Accessory Pack. See Chapter IV.3. - Section 429 of the current JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
3-inch & larger	American Cast Iron Pipe Company	N/A
3-inch & larger	Clow Valve	N/A
3-inch & larger	Tyler Union	N/A
3-inch & larger	U.S. Pipe and Foundry	N/A
3-inch & larger	Sigma	N/A
3-inch & larger	Star Pipe Products	N/A
3-inch & larger	SIP	N/A

AS-405: MECHANICAL JOINT FASTENER

DESCRIPTION: Mechanical Joint Fasteners. See Chapter IV.3. - Section 429 of the current JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
	Tie Lugs	
	All Thread Rods	
	Eye Bolts	
	Nuts & Washers	

AS-406: FLANGE ADAPTER

DESCRIPTION: Flange Adapters. See Section 429 of the current JEA Standards for specifications and requirements. The use of flange adapters shall be limited to areas specifically approved by JEA on a project-by-project basis.

SIZE	MANUFACTURER	MODEL #
3-inch & larger	EBAA	Series 1000 DIP only
3-inch & larger	EBAA Iron	Series 2100 PVC or DI
3-inch & larger	The Ford Meter Box Co, Inc (Uniflange)	200 C & S 400 C & S 900 C & S
3-inch & larger	The Ford Meter Box Co, Inc (Uniflange)	UFA-200 DIP UFA-900 PVC
3-inch & larger	Star Pipe	Series 200G Series 400G

DESCRIPTION: Flanged Couple Adapters. See Section 429 of the current JEA Standards for specifications and requirements. A restrained ductile iron flanged coupling adapter (flanged X MJ) with special interior coating may be utilized to transition between different pipe materials (PVC to S/S).

SIZE	MANUFACTURER	MODEL #
	Romac PVC-RFCA	

AS-407: CASING SPACER

DESCRIPTION: Casing Spacers. See Sections 428 & Chapter IV.3. - Section 429 of the current JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
Varies	Cascade Waterworks Mfg.	CCS
Varies	Pipeline Seal & Insulator, Co (EnPro Industries, Inc.)	S/S Type
Varies	Pipeline Seal & Insulator, Co (EnPro Industries, Inc.)	PVC Coated Steel
Varies	Pipeline Seal & Insulator, Co (EnPro Industries, Inc.)	Ranger II
Varies	Raci Spacers	High Density Polyethylene
Varies	BWM Company	N/A
Varies	Advanced Products & Systems	SSI, SI, CI
Varies	CCI Pipeline Systems	CSC, CSS

AS-408: PIPE COUPLING

DESCRIPTION: Cast Coupling. See Chapter IV.2. - Section 428 of the current JEA Standards for specifications and requirements, including coating requirements.

SIZE	MANUFACTURER	MODEL #
4-inch & larger	Cascade Waterworks Mfg.	CDC, CRC, CRFA
4-inch & larger	Dressler Inc./GE	153
4-inch & larger	Ford Meter Box	FC2A, FC2N
4-inch & larger	JCM	210
4-inch & larger	PowerSeal	3501, 3501B, 3506, 3521
4-inch & larger	Romac	501
4-inch & larger	Smith-Blair	441
4-inch & larger	TPS, Hymax	2000
4-inch & larger	Mueller	MAXIFIT
4-inch & larger	Mueller Co	N/A
4-inch & larger	FERNCO	1000
4-inch & larger	Gripper Gasket LLC	Maxadaptor

AS-409: FULL CIRCLE REPAIR CLAMP

DESCRIPTION: Full Circle Repair Clamp (stainless steel). See Chapter IV. 3. - Section 429 of the current JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
All Sizes	Ford Meter Box, Co	"F" or "FS" Series
All Sizes	Dresser Inc./GE	360
All Sizes	JCM Industries	101 or 131
All Sizes	JCM Industries	102 or 132
All Sizes	Powerseal	3121 or 3122
All Sizes	Romac	"SS" or "CL" Series
All Sizes	Smith Blair	Series 226 or 256
All Sizes	Smith Blair	Series 228 or 263
All Sizes	TPS, EZ-MAX	Model 4000
All Sizes	Mueller Co.	500, 510, 540, 550

MANHOLES

AS-501: MANHOLE AND ACCESSORIES

DESCRIPTION: Manhole and Accessories. See Section 427 of the current JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
Precast Manhole		
Varies	Old Castle	N/A
Varies	Del Zotto Precast	N/A
Varies	Rinker Materials (previously Forterra)	N/A
Varies	Select Precast	N/A
Varies	American Precast	N/A
Poly-Concrete		
Varies	Armorock	N/A
Varies	USCP (Steel Reinforced)	N/A
Manhole General Coating		
12 mils thick	Con-Seal	CS-55
12 mils thick	PRO-Tec Coatings, Inc.	EW1-Aquapoxy
Fiberglass		
Varies	L. F. Manufacturing Inc	
Varies	Containment Solutions Inc (Flowlite) Fiberglass Manhole	N/A
Varies	Associated Fiberglass Enterprises	N/A
Manhole Boots – with double-banded 316 SS Clamps		
Varies	Kor-N-Seal	I EX Series
Varies	PSX Nylo Drive	
Varies	PSX Direct Drive	

AS-502: PROTECTIVE COATING

DESCRIPTION: Water Wastewater Protective Coating. See Section 447 of the current JEA Standards for specifications and requirements.

COMPANY NAME	CONTACTS	PHONE	EMAIL
The Sherwin-Williams Company	Josh Hinson	904-591-3137	swrep4538@sherwin.com
Corrocoat Usa, Inc.	Josh Tankersley	904-472-0768	Josht@corrocoat.com
PPG Protective & Marine Coatings	Jim Hartley	904-626-6382	jim.hartley@ppg.com
Tnemec (Capital Only)			

AS-503: MANHOLE ADJUSTMENT RING

DESCRIPTION: Manhole (adjustment rings) Collars. See Section 427 of the current JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
Varies	Old Castle	
Varies	Lad Tech, HDPE Rings	
Varies	EJ, Steel Adjustment Ring	
Varies	EJ, infra-riser	
Varies	Cretex Pro-Ring, EPP Adjustment Ring	

AS-504: MANHOLE FRAME AND COVER

DESCRIPTION: Manhole Frame and Cover (with rubber "T" Gaskets). See Section 427 of the current JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
32-inch	U.S. Foundry	USF-655
32-inch	East Jordan Iron Works	N/A

AS-505: MANHOLE MONITOR

DESCRIPTION: Manhole Monitor. See Section 427 of the current JEA Standard for manhole specifications and requirements.

TYPE	MANUFACTURER	MODEL #
Continuous	ADS	

AS-506: MANHOLE JOINT SEALANT

DESCRIPTION: Manhole Joint Sealant. See Section 427 of the current JEA Standards for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
Manhole Joint Sealant		
1-inch	Con-Seal	CS102, 202
1-1/2 inch	Ram-Nek/Henry Company	Ram-Nek
	NPC Bidco /Trelleborg	C-56
1-inch	Evergrip	990
1-inch	Crete Stik Butyl Sealant	
Exterior Joint Sealant Tape		
0.1 inch X 8 inch W (minimum)	Con Seal	CS-300, CS-212
6 inch W (minimum)	EZ-WRAP Plastic Backed	Varies based on width
9 inch W (minimum)	Rub-R-Nek/ Henry Company	N/A
18 inch W (minimum)	Wrapid Seal (CCI Pipeline systems)	N/A

PUMP STATIONS

AS-601: ALUMINUM HATCH (FRAME AND COVER)

DESCRIPTION: Aluminum Hatch Frame and Cover. See Section 433 of the current JEA Standard for specifications and requirements.

SIZE	MANUFACTURER	MODEL #
Varies	US Fabrication/US Foundry	
Varies	Halliday Products, Inc.	

AS-602: CONCRETE LINER

DESCRIPTION: Concrete Liner. See Section 446 of the current JEA Standards for specifications and requirements.

MANUFACTURER	MODEL #
Associated Fiberglass Enterprises	Hard Shell Liner (*****)
Concrete Conservation, Inc.	Spectra-Shield (***)
L. F. Manufacturing, Inc.	Hard Shell Liner (*****)
LarFarge/ Kerneos Inc. Calcium Aluminates	SEWPERCOAT (**)
GML Coatings, LLC.	Green Monster (***)
Derakane	8084 Resin (*)
Armorock	Rehabilitation Insert (*****)
Sprayroq	Spraywall™ (*****)
Quadex®	GEOKRETE® GEOPOLYMER MORTAR (**)
Quadex®	Structure Guard® 100% Solids Epoxy (***)
Warren Environmental	301-14 High Performance Epoxy (*****)

- NOTES:
- (*) Denotes Surface Primer
 - (**) Denotes Cementitious or Polymer Modified Cementitious Coating
 - (***) Denotes Epoxy, Polyurea or Polyurethane Corrosion Inhibiting Coating
 - (****) Denotes Epoxy, Polyurea or Polyurethane Structural Coating
 - (*****) Denotes Fiberglass or Polymer Concrete Liner Material



AS-603: WASTEWATER PUMP

DESCRIPTION: Wastewater Pump. See Section 433 of the current JEA Standards for specifications and requirements.

MANUFACTURER		POINT OF CONTACT		CONTACT NUMBER
SUBMERSIBLE WASTEWATER PUMPS				
	Low Speed	High Speed		
Flygt	YES	YES	David Williams	(239) 825-8384
Myers	YES	YES	Scott Strong – Custom Pump	(904) 858-9605
WILO-EMU,	YES	NO	PSI Technologies	(904) 588-2132
KSB	YES	YES	Barney's Pump	(904) 260-0669
Hydromatic	YES	NO	Barney's Pump	(904) 260-0669
Shinmaywa	YES	NO	David Lee	(904) 228-7602
Sulzer	YES	YES	Rex Smith – Hydra Service	(850) 630-0117
DRY-PIT WASTEWATER PUMPS				
WILO-EMU		PSI Technologies		(904) 588-2132
Flow Serve (MSX		Carter & Ver Planck		(813) 287-0709
KSB		Barney's Pump		(904) 260-0669
Flygt		David Williams		(239) 825 8384
FLOODED SUCTION SOLIDS HANDLING PUMPS				
Fairbanks Nijhuis (fka Fairbanks Morse)		Barney's Pumps, Inc.		(904) 260-0669
Worthington		Carter & Ver Planck		(813) 287-0709
Allis Chalmers		David Williams		(239) 825-8384
LOW PRESSURE SYSTEM (LPS)				
Myers MW50		Scott Strong – Custom Pump		(904) 858-9605
Champion Pumps CPWH 5V & 5A		Mike Biletzskov		(912) 266-6545
Barmesa Pumps 2BSE511AU		Tyler Self - Custom Pump		(904) 858-9605

AS-604: ELECTRICAL, CONTROL PANEL, VFD & SCADA

DESCRIPTION: Pump Station Electrical and Control Panel including (RTU) and Variable Frequency Drives (VFD).
See Section 433 of the current JEA Standards for specifications and requirements.

For approved MCC manufacturers refer to the wastewater treatment plant section

COMPANY NAME	CONTACT	PHONE	EMAIL
ECS*	Ralph Sinn	(904)367-5000	ralph@ecs31.com
EG Controls, Inc.*	Thelma Ewell	(904)292-0110	EGSales@egcontrols.com
Suncoast*	Brendan Dinkelmeyer	(904)693-3318	Bdinkelmeyer@suncoastcontrols.biz
Dynamic Motor Controls, Inc*	Brian Dail	(904)693-3318	bdail@dynamicmotorcontrols.com
Sun State System, Inc.*	Tony Rhodes	(904)269-2544	trhodes@sunstatesystems.com
Information Technologies Group (ITG) * **	Anthony Gatehouse	(904)598-4843	agatehouse@itgtec.com
DSI Innovations LLC* **	Sean Patterson	(904)895-5980	spatterson@dsiinnovations.com
Tesco Controls**	Richard Ercolini	(225)910-4573	rercolini@tescocontrols.com
AWC Inc**	Sam Hope	(904)610-1097	sam.hope@awc-inc.com
MR Systems***	Kyle Hady	(470)303-6455	Kyle.hady@inframark.com

NOTES:

* Approved electrical control panel manufacturers

** Approved SCADA integrators

*** Approved Second Tier SCADA integrators

VFD	SCADA	DEMARICATION BOX ENCLOSURE
Siemens G120X	Siemens	Schaefer's Electrical Enclosures Orange Park Machine Universal Enclosure Systems
Danfoss Aqua Drive		
ABB ACQ580		
Schneider Altivar Process ATV630		
Toshiba VF-AS3		

AS-605: TRANSFER SWITCH

DESCRIPTION: Manual Transfer Switch: See Section 433 and 435 of the current JEA Standards for specifications and requirements. Automatic Transfer Switch: See Facilities Standard Division 26 36 23 – Automatic Transfer Switches

Manual Transfer Switch Manufacturer	Model/Series
Cutler Hammer	JTD364SSMCQC – 200 AMP JTD365SSMCQC – 400 AMP
ESL Power Systems	SSDX-200-C-200-C-240-311-SS - 200 AMP @ 240V SSDX-200-C-200-C-480-311-SS - 200 AMP @ 480V SSDX-400-C-400-C-240-311-SS - 400 A @ 240V SSDX-400-C-400-C-480-311-SS - 400 A @ 480V

Automatic Transfer Switch Manufacturer	Model/Series
ASCO	300/7000
Russelectric	RTS-3

AS-606: ENGINE-DRIVEN EMERGENCY PUMP

DESCRIPTION: Emergency Pump Engines: See Section 470 of the current JEA Standards for specifications and requirements.

PUMP MANUFACTURER	CONTACTS	PHONE	EMAIL
Thompson Pump	Brian Lee	(386) 212-6999	blee@thompsonpump.com
Holland Pump	Eugene Lant	(321) 297-6372	eugene@hollandpump.com
Godwin Pump	Lee Hilbert	(904) 349-5503	lee.hilbert@xyleminc.com

ENGINE MANUFACTURER	4" PUMP/SET	6" PUMP/SET	8" PUMP/SET	10" PUMP/SET	12" PUMP/SET
John Deere	N/A	4045T280-SP2	4045T285-SP2	6068H285-SP2	6090H485-SP1
Caterpillar (C18 Tier3)*	2.2T-SP	C4.4T-SP	C4.4E-TA-SP	C6.65E-SP	C9-SP
Mitsubishi	S4Q2-VS/14A	N/A	N/A	N/A	N/A
Cummins	QSF2.8 (49)	QSF2.8 (65)	QSB4.5	QSB4.5 OR QSB6.7	QSB6.7 OR QSB9
Izuzu	4LE2T	4LE2X	N/A	N/A	N/A
Yanmar	3TNV88F-EPMT	N/A	N/A	N/A	N/A

*Optional for greater than 12" pump/set

AS-607: COMMUNICATIONS RADIO

DESCRIPTION: Refer to Section 433 Submersible Wastewater Pumping Stations III.4.7 and Section 435 Booster Wastewater Pumping Stations III.4.5 for radio selection and antenna height requirement instructions.

MANUFACTURER	MODEL #
GE MDS	*Transnet 900
GE MDS	*SD9
GE MDS	*Transnext
MDS	**Orbit

*A radio survey must be completed prior to radio selection. Contact the radio survey contractor below to arrange radio survey.

**Orbit Radio for future applications or special cases as instructed or approved by JEA

*CURRENT RADIO SURVEY CONTRACTOR	PHONE #
Advantage Contracting Group	904-219-3556

VACUUM SYSTEM

AS-701: VACUUM SEWER VALVE

DESCRIPTION: Vacuum sewer pod including valve and controller.

VACUUM MANUFACTURER	CONTACTS	PHONE	EMAIL
Flovac	Michael Pringle	(386) 319-0350	MPringle@flovac.com
Airvac	Becky Murphy; Aqseptence Group, Inc.	(574) 208-5904	

LOCATE WIRE

AS-801: LOCATE WIRE

Description: Locate wiring for direct bury.

SIZE	MANUFACTURER	MODEL #
12-Gauge	Copper Head Industries	Soloshot-1230GHS500
12-Gauge	Pro Line Safety Products Co.	Pro-Trace 744120532

AS-802: DIRECT BURY LUG

DESCRIPTION: Direct bury lug is for use with tracer lines, solid copper or steel copper. Lug is made of high conductivity aluminum and plated with tin.

SIZE	MANUFACTURER	MODEL #
	DRYCONN	90120-DB Lug Yellow – 5 pc bag

AS-803: LOCATE WIRE TESTING EQUIPMENT

DESCRIPTION: Cable/Fault Locator – Precisely locates sheath or ground faults on both long and short cable sections.

SIZE	MANUFACTURER	MODEL #
	3M Dynatel	2273
	Metrotech	9800XT
	Ditch Witch	950 r/t

MISC MATERIALS

AS-901: ADMIXTURES

SIZE	MANUFACTURER	MODEL #
	Hercules Power Company of Wilmington, Delaware	
	Dewey and Almy Chemical Company, Cambridge Mass	
	Master Builders Company, Cleveland Ohio	
	L. Sonneborn Sons, Inc. 80 Eighth Avenue, New York, NY 10011	

AS-902: METALWORK FINISH

MANUFACTURER	CONTACTS	PHONE	EMAIL
Alumilite			

WASTEWATER TREATMENT PLANT APPROVED MATERIALS

PROTECTIVE COATING

WWT-101: PROTECTIVE COATING

DESCRIPTION: Water Wastewater Protective Coating. See Section 447 of the current JEA Standards for specifications and requirements.

COMPANY NAME	CONTACTS	PHONE	EMAIL
The Sherwin-Williams Company	Josh Hinson	904-591-3137	swrep4538@sherwin.com
Corrocoat Usa, Inc.	Josh Tankersley	904-472-0768	Josht@corrocoat.com
Carboline			
PPG Protective & Marine Coatings	Jim Hartley	904-626-6382	jim.hartley@ppg.com

ELECTRICAL, CONTROL PANEL, VFD & SCADA

WWT-201: ELECTRICAL CONTROL PANEL AND MCC

DESCRIPTION:

COMPANY NAME	CONTACT	PHONE	EMAIL
ECS	Ralph Sinn	(904)367-5000	ralph@ecs31.com
EG Controls, Inc.	Lucie Navratilova	(904)292-0110	EGSales@egcontrols.com
Suncoast	Mark Owens	(904)693-3318	mowens@suncoastcontrols.biz
Dynamic Motor Controls, Inc*	Brian Dail	(904)693-3318	bdail@dynamicmotorcontrols.com
DSI Innovations LLC.	Sean Patterson	(904)895-5980	spatterson@dsiinnovations.com
Information Technologies Group (ITG)	James Ruiz	(904)425-4760	jruiz@itgtec.com

MCC	Draw out breakers required	<ul style="list-style-type: none"> * Eaton * Schneider Electric * Siemens * ABB
-----	----------------------------	---

DESCRIPTION: **Approved Tier One Integrators**

COMPANY NAME	CONTACT	PHONE	EMAIL
Information Technologies Group (ITG)	Anthony Gatehouse	(904) 598-4843	agatehouse@itgtec.com
DSI Innovations LLC.	Sean Patterson	(904)895-5980	spatterson@dsiinnovations.com
Tesco Controls	Richard Ercolini	(916) 395-8800	rercolini@tescocontrols.com
AWC Inc	Sam Hope	(904) 610-1097	sam.hope@awc-inc.com
MR Systems, an Inframark Company	Kyle Hady	(678) 982-7227	kyle.hady@inframark.com

SCADA SYSTEM	CONTACT	PHONE	EMAIL
Siemens			

WWT-203: VARIABLE FREQUENCY DRIVES

DESCRIPTION:

COMPANY NAME AND MODEL	CONTACT	PHONE	EMAIL
ABB ACQ580	Sean Connaway	(904)325-4940	Sean.connaway@us.abb.com
Danfoss Aqua Drive	David Lee	(904)228-7602	dlee@powerandpumps.com
Siemens G120X	Samuel Hope	(904)610-1097	Samuel.hope@awc-inc.com
Schneider Altivar Process ATV630	John Tice	(321)695-8198	John.tice@graybar.com
Toshiba VF-AS3	David Lee	(904)228-7602	dlee@powerandpumps.com

SCREENS

WWT-301: WWTP SCREENS

DESCRIPTION: Mechanisms to retain debris contained in flow streams in order to protect equipment or processes located downstream.

Contact Water Wastewater Systems Standards for procurement instructions

UV SYSTEMS

WWT-401: UV DISINFECTION EQUIPMENT

DESCRIPTION: Technology capable of providing effective WWTP effluent disinfection while reducing safety and environmental toxicity issues.

SIZE	MANUFACTURER	MODEL #
	Trojan Technologies Inc.	N/A

ODOR CONTROL

WWT-402: ODOR CONTROL

DESCRIPTION: Equipment designed to remove odor-causing compounds eliminating nuisance odors.

Contact Water Wastewater Systems Standards for procurement instructions

GATES

WWT-501: SLUICE/SLIDE GATES

DESCRIPTION: Sluice/Slide gates are used to control the flow of fluid through openings under seating or unseating head.

SIZE	MANUFACTURER	MODEL #
	Ashbrook Simon-Hartley Coplastix	N/A
	R. W. Gate Company	N/A
	Plasti-Fab	N/A

STAINLESS STEEL GATES: STAINLESS STEEL GATES LARGER THAN 24 INCHES ARE LIMITED TO WRF AERATION BASINS AND DOWN STREAM LOCATIONS ONLY. ALL OTHER LOCATIONS MUST NOT EXCEED A MAXIMUM OF 24 INCHES.

AIR SCRUBBERS

WWT-601: PLANT AIR SYSTEM

DESCRIPTION: Plant air systems remove corrosive gases, toxic vapors and odors.

SIZE	MANUFACTURER	MODEL #
	Purafil	N/A
	Pure Air	N/A

WWT-602: AIR FILTRATION CARBON

DESCRIPTION: Carbon media for handling odor and corrosive gases.

SIZE	MANUFACTURER	MODEL #
	MeadWestvaco	N/A
	Heyward Florida Incorporated	N/A

TANKS

WWT-701: FLAT ALUMINUM TANK COVERS

DESCRIPTION: Provides the strength, durability, odor control and protection for municipal and industrial water and wastewater applications.

Contact Water Wastewater Systems Standards for procurement instructions

WWT-702: GLASS FUSED/STEEL TANKS

DESCRIPTION: This system is a storage tank made of sectional steel panels with glass molecularly bound (fused) to the steel surface. This provides a very durable, but flexible surface with excellent corrosion resistance, resulting in a tank, which can provide long life in a wide variety of applications.

Contact Water Wastewater Systems Standards for procurement instructions

WWT-703: PRESTRESS STORAGE TANKS

DESCRIPTION: Tanks are designed and built to AWWA and ACI standards and are made of low maintenance materials: concrete, stainless steel and fiberglass.

Contact Water Wastewater Systems Standards for procurement instructions

WWT-704: FUEL TANKS

DESCRIPTION: Protected aboveground tank for flammable and combustible liquids.

SIZE	MANUFACTURER	MODEL #
	ConVault	N/A
	Phoenix	N/A
	JRS	

WWT-705: LINERS FOR CORROSION PROTECTION

DESCRIPTION: Protects wastewater infrastructure from corrosion.

SIZE	MANUFACTURER	MODEL #
	Spectra Shield	N/A

EFFLUENT FILTERS

WWT-801: CLOTH DISK FILTERS

DESCRIPTION: Fixed filter disk used in removing solids from liquids. Structure allows for high efficient filtration, low backwash volume and is a reusable element.

Contact Water Wastewater Systems Standards for procurement instructions

CENTRIFUGES

WWT-901: CENTRIFUGES

DESCRIPTION: Used for sludge dewatering needs. The centrifuge can remove the water content from sludge by rotating it at a high speed, so sludge can be disposed of in a cost-efficient manner.

Contact Water Wastewater Systems Standards for procurement instructions

AERATION DIFFUSERS

WWT-1001: FINE BUBBLE DIFFUSERS

DESCRIPTION: Systems disperse the diffused gas volume to transfer an equivalent amount of oxygen as a coarse bubble system.

Contact Water Wastewater Systems Standards for procurement instructions

VALVE ACTUATORS

WWT-1101: ACTUATOR

DESCRIPTION: Allows for a valve to be automated.

SIZE	MANUFACTURER	MODEL #
	Rotork	N/A
	EIM	N/A
	Auma	N/A
	Limitorque	N/A
	Morin	N/A

CHEMICAL FEED SKIDS

WWT-1201: CHEMICAL METERING FEED PUMP SKID

DESCRIPTION: Designed to feed one or more chemicals into the system.

SIZE	MANUFACTURER	MODEL #
	Carl Eric Johnson	N/A
	Guardian Equipment	N/A
	Barrett Supply	N/A

FLOW METERS

WWT-1301: MAGNETIC FLOW METERS

DESCRIPTION: Inline instrument with no moving parts designed to measure the flow of a liquid through a pipe.

SIZE	MANUFACTURER	MODEL #
	Krohne	Enviromag
	Endress and Hauser	Promag W 500

WWT-1302: ULTRASONIC FLOW METERS

DESCRIPTION: Instrument attached to the outside of a pipe with no moving parts designed to measure the flow of a liquid through a pipe.

SIZE	MANUFACTURER	MODEL #
	Flexim Americas	F721

WWT-1303: SLUDGE/BIOSOLIDS DENSITY METER

DESCRIPTION: Sludge Density Meter

SIZE	MANUFACTURER	MODEL #
	Valmet	TS-Model 4G

PUMPS

WWT-1401: CHEMICAL METERING PUMPS

DESCRIPTION: Pump designed to precisely pump and measure the flow of a liquid such as sodium hypochlorite, sodium hydroxide or other liquid chemicals.

SIZE	MANUFACTURER	MODEL #
	Alldoes/Grundfos	N/A

WWT-1402: RECYCLE/EFFLUENT PUMPS

DESCRIPTION:

SIZE	MANUFACTURER	MODEL #
	Flygt	N/A
	KSB	

WWT-1403: GRINDER PUMPS

DESCRIPTION:

SIZE	MANUFACTURER	MODEL #
	JWC	N/A
	Moyno	
	Franklin Miller	

WWT-1404: REUSE VERTICAL TURBINE PUMPS

DESCRIPTION: Centrifugal pumps specially designed to move water from an underground well or reservoir.

SIZE	MANUFACTURER	MODEL #
	Flowserve	N/A
	Goulds	
	Peerless	
	Aurora	

WWT-1405: SELF-PRIMING RAW SEWAGE PUMPS

DESCRIPTION: Designed with a large reservoir surrounding the pump casing which allows the pump to retain enough water internally to not need additional manual priming.

SIZE	MANUFACTURER	MODEL #
	Gorman Rupp	N/A

WWT-1406: PROGRESSIVE CAVITY PUMPS

DESCRIPTION: A positive displacement pump that transfers fluid by means of the progress, through the pump, of a sequence of small, fixed shape, discrete cavities, as its rotor is turned.

SIZE	MANUFACTURER	MODEL #
	Moyno	N/A
	Seepex	

WWT-1407: VACUUM PUMP

DESCRIPTION:

SIZE	MANUFACTURER	MODEL #
	Nash_Elmo	N/A
	Busch USA	N/A



WWT-1408: SLUDGE PUMP

DESCRIPTION:

SIZE	MANUFACTURER	MODEL #
	GERBER/GPI	DISCFLO

VALVES

WWT-1501: PLUG VALVES

DESCRIPTION:

SIZE	MANUFACTURER	MODEL #
	Crispin K-Flow Valve	Series 800
	Kennedy Full Port	N/A

WWT-1502: CHECK VALVES

DESCRIPTION: Swing check valves only

SIZE	MANUFACTURER	MODEL #
3-inch & larger	Crispin	SWC Series
3-inch & larger	Kennedy	N/A
3-inch & larger	Clow	N/A
3-inch & larger	VSI Waterworks	Series CVIX

WWT-1503: BALL VALVES

DESCRIPTION:

SIZE	MANUFACTURER	MODEL #
	Flo-Tite	N/A
	Hanskraft Runxin Ceramic Core	N/A

VALVE POSITION MONITOR

WWT-1601: ROTARY POSITION MONITOR

DESCRIPTION:

SIZE	MANUFACTURER	MODEL #
	Westlock	AccuTrak 9358/9044

CONVEYOR

WWT-1701: CONVEYOR SYSTEM

DESCRIPTION:

Contact Water Wastewater Systems Standards for procurement instructions

INSTRUMENTATION

GENERAL

SCOPE OF INSTRUMENTATION DOCUMENT:

Approved Manufacturers and list of Standard instrumentation does not include specialized instrumentation and/or accessories required for the approved items below. Specialized instrumentation/accessories are site specific and shall be added to the approved instrument as needed.

ANALYZERS

TYPE	MANUFACTURER	MODEL #
Nitrate/Nitrite Analyzers	Hach	Analyzer 557
Ammonia Analyzers	Hach	Analyzer 517
Chlorine Analyzer	Hach	Hach CL17
Chlorine Analyzer	Wallace & Tiernan	Depolox
Phosphate Analyzer	Hach	Hach Phosphax
Chlorine Analyzer (colorimetric)	Hach	CL17 series (total or free)
Chlorine Analyzer (amperometric)	Hach	CL10 series (total or free)
Phosphate Analyzer Sampler	Hach	PHOSPHAX SC
Turbidity/TSS Analyzer	Solitax	TSS Sensor
Turbidity/TSS Analyzer	Hach	Highline sc SS wiper w/sc 200
Spectrophotometer	Hach	DR 6000

CONTROLLERS

TYPE	MANUFACTURER	MODEL #
Controller	Hach	200
Controller	Hach	1000
Controller	Hach	4500

PROBES

TYPE	MANUFACTURER	MODEL #
Ammonia Probe	Hach	Hach NH4D Ammonia Sensor
DO Probes	Hach	LDO Probe
pH Probes	Hach	pHD sc, Differential pH Digital Sensor
pH Probes	Rosemount	Solucomp II Analyzer
Sludge Level Probe	Hach	Sonatax sc Probe

SAMPLERS

TYPE	MANUFACTURER	MODEL #
Refrigerated Sampler	ISCO	6712FR
Refrigerated Sampler	ISCO	5800
Refrigerated Sampler	Sigma	
Refrigerated Sampler	Emerald Coast Manufacturing	The Wave
Sample Conditioning Filter System	Hach	Filtra
Ammonia Analyzer Sampler	Hach	AMTAX SC
Samplers	Hach	AS950 series

SENSORS

TYPE	MANUFACTURER	MODEL #
TSS Sensor	Cerlic	ITX Suspended Solids
TSS Sensor	Hach	Hach
MLSS Sensor	Hach	Hach Solitax Solids Analyzer
Turbidity Sensor	Hach	Hach Solitax Turbidity/TSS
Nitrate/Nitrite Sensor	Hach	NITRATAX Plus SC
Ammonia Sensor	Hach	AISE sc Ammonium probe with RFID Technology
Dissolved Oxygen Sensor/Probe	Hach	LDO Model 2
Differential pH Sensor	Hach	pHD SC
UV Absorb/Trans Sensor	Hach	UVAS Plus SC Suspended Solids/Turbidity Sensor Hach
Suspended Solids/Turbidity Sensor	Hach	SOLITAX SC
Conductivity Sensor	Hach	3700 Inductive Conductivity Sensor
ORP Sensor	Hach	ORP Differential Sensor
Suspended Solids Sensor	Cerlic	LC sensor
UV Transmittance	Hach	UVAS sc sensor
pH Sensor	Rosemount	Solucomp II Analyzer
Pressure	Red Valve	series 48

TRANSMITTERS

TYPE	MANUFACTURER	MODEL #
Pressure Transmitter - Air	Rosemount	
Temperature Gauge - Air	Rosemount	
Level Transmitters	Milltronics	Hydro Ranger
Level Transmitters	GP:50 Automation Products Group (APG) VEGA VEGA	GP:50 w/cage PT500 w/cage VEGAWELL 52 VEGAPULS 31
Pressure Transmitter	Rosemount	
Temperature Transmitter	Rosemount	
Force Main Pressure Transducer	Automation Products Group (APG)	PT500A
Potable Water Pressure Transducer	Alia	APT8000
	Kobold	PAS
	KROHNE	Optibar PC 5060 C
	Rosemount	3051
	UE	One Series 1XTX00
	Siemens	SITRANS P320

WATER TREATMENT PLANT APPROVED MATERIALS

PROTECTIVE COATINGS

WT-101: PROTECTIVE COATING

DESCRIPTION: NSF Compliant Coatings

COMPANY NAME	CONTACTS	PHONE	EMAIL	APPROVED MATERIALS
The Sherwin-Williams Company	Josh Hinson	904-591-3137	swrep4538@sherwin.com	*Dura-Plate 2300 *Dura-Plate UHS *Dura-Plate UHS Primer *Steel Seam FT910 *Loxon XP(smooth) *GP3830 Resuprime MVT Primer GP3741 Novo-Flo Epoxy
Tnemec Co.				*Series 218 *Series 217 *Series N140 *Series 22 *Series 156 Enviro-Crete *Series 201 Epoxoprime *Series 282 Tneme-Glaze



OIL

WT-201: OIL

DESCRIPTION:

COMPANY NAME	CONTACTS	PHONE	EMAIL	APPROVED MATERIALS
Lubrication Engineers, Inc.				Monolec Turbine Oil

SLEEVE BEARINGS AND MECHANICAL SEALS

WT-301: SLEEVE BEARINGS

DESCRIPTION:

COMPANY NAME	CONTACTS	PHONE	EMAIL	APPROVED MATERIALS
Vesco Plastics				Vesconite HiLube

WT-302: MECHANICAL SEALS

DESCRIPTION:

EQUIPMENT	TYPE	MANUFACTURERS/MODEL
Mechanical Seals	Cartridge or Bellows Type	*The John Crane Company *Chesterton

PUMPS

WT-401: PUMPS

DESCRIPTION:

PUMP TYPE	TYPES or ADD-ONS	MANUFACTURERS
Well Pump	Discharge head motor and column package	<ul style="list-style-type: none"> *Flowserve Corporation * Goulds Water Technology * Peerless Pumps * National Pump Company * American-Marsh Pumps * Aurora Pumps * Boesch VTP Pumps
High Service Pumps	Horizontal, Split Case, Centrifugal	<ul style="list-style-type: none"> * Goulds Water Technology * Aurora Pumps * Peerless Pumps * American-Marsh Pumps * Flowserve Corporation *Boesch VTP Pumps
Sump Pumps	Cast Iron Body	<ul style="list-style-type: none"> * Flgyt * Hydromatic
Sodium Hypochlorite Metering Pumps		<ul style="list-style-type: none"> * Grundfos Pumps Corp * SMART Digital DDA with E-Box for Profibus Connectivity
Sodium Hypochlorite Pump Skid System		<ul style="list-style-type: none"> *Class Engineering Inc *Guardian Equipment Inc *Blue Planet Environmental Systems, Inc.

ELECTRICAL-ELECTRONICS-INSTRUMENTATION

WT-501: ELECTRICAL EQUIPMENT

DESCRIPTION:

EQUIPMENT	TYPES or ADD-ONS	MANUFACTURERS/MODEL
MCC	Draw out breakers required	* Eaton * Schneider Electric * Siemens * ABB
VFD		* Siemens G120X * Danfoss Aqua Drive * ABB ACQ580 * Schneider Altivar Process ATV630 * Toshiba VF-AS3
Power Monitoring Equipment – Remote Applications		* Siemens PAC3200
Power Monitoring Equipment – Local Applications		* Siemens PAC4200 as provided by Switchgear manufacturer
Power Generators		JEA Contract Supplier
Automatic Transfer Switch		* ASCO 7000 Series * Russelectric RTS-3
Switchgear		JEA Contract Supplier
Soft Starters		* Eaton S811+ * Siemens 3rw55

WT-502: INSTRUMENTATION EQUIPMENT

DESCRIPTION:

EQUIPMENT	TYPES or ADD-ONS	MANUFACTURERS/MODEL
Manual Pressure Gauge	Raw Water Pump	* Ashcroft XLL Performance Plus! (4.5")
Electronic Pressure Transmitter	Raw Water Pump	* Rosemount 3051 TG2A
Pump Check Valve Limit Switch	Raw Water Pump	* Provided by valve manufacturer
Conductivity Element and Transmitter	Raw Water Pump	* Rosemount Model 228 * Sensor and Model 1056 * Transmitter, Endress Hauser Memosens CLS82D and Liquiline CM442 Transmitter
Flow Element and Transmitter	Raw Water Pump	* Endress Hauser W500, ABB WaterMaster
Level Element and Transmitter	Raw Water Pump	* Probe: PMC MTM 3213 Controller: Endress Hauser RIA46
Level Element and Transmitter	Ground Storage Tank/Ultrasonic	* Probe: Siemens SITRANS Probe LU (7ML52212DA14) * Controller: Siemens HydroRanger 200 * Radar: Magnetrol R-82
Level Element and Transmitter	Ground Storage Tank/Hydrostatic Pressure	* Rosemount 3051C
Level Element and Switch Electrodes	Ground Storage Tank	* B/W Controls, Inc. * Charles F. Warrick Co.
Junction Boxes	Ground Storage Tank	316 SST, NEMA 4X
Free Chlorine Residual Analyzer and Transmitter #1	High Service Pump Room	* Endress Hauser Liquiline CM444
Free Chlorine Residual Analyzer and Transmitter #2	High Service Pump Room	* Wallace & Tiernan Model DEPOLOX 400M
Pressure Gauge-Vacuum Gauge	High Service Pump Room	* Ashcroft XLL Performance Plus! (4.5")
Pump Check Valve Limit Switch	High Service Pump Room	* Provided by valve manufacturer



Level Float	High Service Pump Room	* As supplied by pump manufacturer
-------------	------------------------	------------------------------------

WT-503: ELECTRONIC EQUIPMENT

DESCRIPTION:

EQUIPMENT	TYPES or ADD-ONS	MANUFACTURERS/MODEL
Exhaust Fans, MAU, AHU	Hypochlorite Storage Tank	* Siemens
Level Element and Transmitter	Hypochlorite Storage Tank	* Mercold EDAW-N1E1-02T1 with Marquest Scientific Tuff Guard
Horn, Indoor/Outdoor	Hypochlorite Storage Tank	* Federal Signal Corp Model 50GC with Universal Tone Module (UTM)
Optical Leak Detection	Hypochlorite Storage Tank	As supplied by tank manufacturer
PLC – Water Plant	Electrical Room	* Siemens S7-400
PLC	Raw Water Pump	* Siemens S7 Series 300
PLC – As needed and approved by JEA	Electrical Room	* Siemens S7-1200 * Siemens S7-1500
PLC – Remote Wells	Electrical Room	* Siemens S7-300
UPS	Electrical Room	* Orion 2000KVA w/ relay card
Power Meter	Electrical Room	* Siemens PAC3200 w/ Profibus expansion model
Panel	Steel and FRP panel enclosures	* Hoffman * Schaffer * Rittal
HMI	Outdoor local panel display	* Siemens SIPLUS TP700 Comfort Outdoor HMI
HMI	Indoor local panel display	* Siemens Simatic HMI, TP 1200 Comfort
HMI Software	Version to be verified with JEA	* Siemens WinCC SCADA (TIA portal)
Profibus Connector with LEDs		* VIPA 972 Series

Communication Interface Units		* CIU ISO 150 for Profibus DP
Profibus Multirepeater		* VIPA 920 Series
DIN-rail power supplies for 1-phase systems		* Puls CP10.241 Series
Converters		* Puls PISA 11 Series
Ethernet Switch		* N-Tron 106FX2
Surge Protection		* Citel
Surge Protection	Surge protection for 24v 4-20 mA signals	* PR Electronics Universal Transmitter Model 4114 with model 4501 display

STORAGE TANKS

WT-601: STORAGE TANKS

DESCRIPTION:

EQUIPMENT	TYPES or ADD-ONS	MANUFACTURERS/MODEL
Ground Storage Tank	Accessories	Contact Water Wastewater Systems Standards for procurement instructions
Polyethylene Chemical Storage Tank		* Poly Processing Co * Assmann Corp. * Snyder Industries

FANS

WT-701: FANS AND INTAKE HOOD

DESCRIPTION:

EQUIPMENT	TYPES or ADD-ONS	MANUFACTURERS/MODEL
Ground Storage Tank	Fans and Intake Hood	* Aerovent (supplied by Markair, Inc)

FLOW METERS

WT-801: FLOW METERS AND RELATED EQUIPMENT

DESCRIPTION:

EQUIPMENT	TYPES or ADD-ONS	MANUFACTURERS/MODEL
Flow Element Venturi Tube Insert or Electromagnetic Flowmeter		*Endress Hauser W500 *Krohne Waterflux 3300 with IFC 300
Pressure Differential Transmitter	Electronic	*Rosemount Model 3051C
Pressure Gauge		*Ashcroft CLL Performance First (4.5")
Wallmount Enclosure and Back Panel	4X Polyester PJW Series, FRP	*Hammond Manufacturing
Flow Element and Transmitter		*Flexim Fluxus F721

VALVES

WT-901: AIR RELEASE/VACUUM VALVES

DESCRIPTION:

TYPE	SIZE	PROCESS LOCATION	MANUFACTURER S/MODEL
Air Release Valve	1" and larger	High Service Pump Station	*Val-Matic *Crispin
Air/Vacuum Valve	1" and smaller	Raw Water Well Pump	*Val-Matic "SuperValve"
Air/Vacuum Valve	2" and larger	Raw Water Well Pump	*Val-Matic
Angle Pattern Hose Valve	1"-3"	Chemical Building Portable Water System	*Powell "Fig 1254" *Walworth "Fig 8907F"
Angel Type Hose Valve	3/4"	Raw Water Well Pump Sample Tap	*Milwaukee "504" *Stockham "B-216" *Walworth "Fig 3059"
Back Pressure Valve	1" and smaller	Plant Service Water	*Cash Valve 13690
Back Pressure Valve	1" and smaller	Sodium Hypochlorite Metering Pump Discharge	*Griffco
Back Pressure Valve	3" and smaller	Sodium Hypochlorite Injection	*Plast-O-Matic

WT-902: BALL VALVES

DESCRIPTION:

TYPE	SIZE	PROCESS LOCATION	MANUFACTURER S/MODEL
Ball valve	2" and smaller	Hose Station/Potable Water System	*Conbraco Ind. "Apollo 70-100 Series" *Powell "Fig 42101" *Stockham "S-216"
Ball Valve	2" and smaller	Raw Water Well Pump Pitometer/Water Heater	*Conbraco Ind Apollo 70-100 Series" *Powell "Fig 42101" *Stockham "S-216"
Ball Valve	2" and smaller	Chlorine Residuel and pH analyzer	*ASAHI True Union
Ball Valve	3" and smaller	Sodium Hypochlorite Systems	*ASAHI True Union
Ball Valve	3" and smaller	Raw Water Well Pump/High Service Pump Station/Finished Water Venturi/Flowmeter Vault	*Conbraco Ind "Apollo 76F Series"
Ball Check Valve	3" and smaller	Chlorine Injection Vault	*ASAHI True Union

WT-903: BUTTERFLY VALVES

DESCRIPTION:

TYPE	SIZE	PROCESS LOCATION	MANUFACTURER S/MODEL
Butterfly Valve	6" and larger	Raw Water Well/High Service Pump Station	*GA Series 800 *Val-Matic 2000 Series
Butterfly Valve	6" and larger	Raw Water Well/High Service Pump	*GA Series 800, worm gear with handwheel *Val-Matic 2000 Series with handwheel

WT-904: CHECK VALVES

DESCRIPTION: External check valves only

TYPE	SIZE	PROCESS LOCATION	MANUFACTURERS/ MODEL
Check Valve	4" and smaller	Sodium Hypochlorite Line	*ASAHI True Union
Check Valve	3" and larger	Sanitary Lift Station	*Milwaukee F-2974 *Stockham G-931 VSI Waterworks CVIX
Check Valve	4"-24"	High Service Pump Raw Water Well	*Val-Matic, Surge-buster *GA 200-D
Check Valve	As required by line size	Ground Storage Tank	*Plast-O-Matic "Series CK" *Series VB Vacuum Breakers *Red Valve

WT-905: GATE VALVES

DESCRIPTION:

TYPE	SIZE	PROCESS LOCATION	MANUFACTURER S/MODEL
Gate Valve	3" and smaller	Backflow Preventer Assembly	
Gate Valve	4"-24"	Ground Storage Tank Potable Water Lines Finished Water Flow Meter High Service Pump Fire Hydrant Shut Off Valve Overflow Discharge Lines	*American Flow Control "2500 Series" *AVK (S/S Stem) "Series 45" *Clow Valve "F-6100" *Kennedy "8571" *Mueller "A2360, A2361" *M&H "4067" *US Pipe "250" *United Water Products "2010" American-RD "D100"

WT-906: PRESSURE REGULATING VALVES

DESCRIPTION:

Pressure Reducing Valve	2 ½" and smaller	Chlorine Residual and pH analyzer	*DanFoss Flomatic C150E
Pressure Reducing Valve	2" and smaller	Chemical Building	*DanFoss Flowmatic C101
Pressure Reducing Valve	2"-16"	WTP Discharge	*Bermad "720" *Watts-F115 DanFoss *Flomatic C401
Pressure-Reducing Valve	2" and smaller	Chlorine Residual and pH Analyzer	
Pressure Relief Valve	1" and smaller	Sodium Hypochlorite Metering Pump	
Pressure Regulating Valve	1" and smaller	Sodium Hypochlorite Metering Pump Discharge	*Plast-O-Matic
Reduced Pressure Backflow Preventer	4" and larger	Chemical Building Potable Water System	*DanFoss Flowmatic RPZ

WT-907: MISC. VALVE TYPES

DESCRIPTION:

TYPE	SIZE	PROCESS LOCATION	MANUFACTURER S/MODEL
Globe Valve	3" and smaller	Chemical Building	*Milwaukee "502" *Stockham "B-16" *Walworth "Fig 3058"
Plug Valve	3"-12"	Sanitary Lift Station	*APCO, Series 500
Fire Hydrant	5 ¼ Main Valve, 6" Bottom Connection	Yard Piping	*American MK-73 *Clow Valve F-2545 *Kennedy K81A *Mueller A-421 *US Pipe Met 250/M94 *Waterous WB-77

MISCELLANEOUS

WT-1001: MISC MATERIALS

DESCRIPTION:

EQUIPMENT	TYPE	MANUFACTURERS/MODEL
Chemical Tubing/Hose		*Pacific Echo Spiralite Spa-Flex
Chemical Injection Assembly		*Hydro Instruments
Fiberglass Grating		*Fibergrate *Strongwell
Asset Bar Code Stickers Used in ALL W/WW applications	AT-3089P-B HTC CId: 48.10.00.00 Adder: +3M 468MP Adhesive	MyAssetTag www.myassettag.com Alisha Parke alisha@smartsign.com