

APPENDIX K - LISTS

Piping Service & Specification Index

0	2022-05-18	Issued For Construction	JP	<i>JP</i>
Revision	Date	Issued For	By	Approved
City of Winnipeg				
NEWPCC Interim Phosphorous Removal				
Document Number	LST-M-003	Revision	0	

Project Name: NEWPCC Interim Phosphorous Removal
 Project Number: 21-0107-015
 Client: City of Winnipeg
 Document No: LST-M-003
 Issue Date: 2022-05-18
 Rev: 0

Piping Service & Specification Index



Rev	Service		Piping Specification					Insulation	Insulation Type	Operating Conditions		Design Conditions		Testing		
	Fluid Service Code	Description	Flange Class (ASME B16.5)	Material Spec Code	Material	Exposure	Size Range	Description		(YES/NO)	Temperature (°C)	Pressure (psig)	Temperature (°C)	Pressure (psig)	Test Type	Pressure (PSIG)
0	DCW	DOMESTIC COLD WATER	N/A	CU01	Copper	Buried Chemical Storage Railcar Shelter Tunnels	10mm (3/8") - 65mm (2-1/2")	Type L Copper Pipe	YES	E - Elastomeric - Flexible Pipe Insulation, Closed Cell Structure (ASTM C534)	0 to 5	50 to 70	0 to 100	100	Hydro	150
0	DHW	DOMESTIC HOT WATER	N/A	CU01	Copper	Chemical Storage Railcar Shelter	10mm (3/8") - 65mm (2-1/2")	Type L Copper Pipe	YES	E - Elastomeric - Flexible Pipe Insulation, Closed Cell Structure (ASTM C534)	40 to 60	50 to 70	0 to 100	100	Hydro	150
0	DHR	DOMESTIC HOT WATER RETURN	N/A	CU01	Copper	Chemical Storage Railcar Shelter	10mm (3/8") - 65mm (2-1/2")	Type L Copper Pipe	YES	E - Elastomeric - Flexible Pipe Insulation, Closed Cell Structure (ASTM C534)	40 to 60	50 to 70	0 to 100	100	Hydro	150
0	FC	FERRIC CHLORIDE (37% to 42%)	150	PV05	PVC	Chemical Storage Railcar Shelter Not Over Containment Area	15 mm (1/2") - 80 mm (3")	PVC SCH80 for Pressure Application within PVC SCH40 Secondary Containment Pipe	NO	N/A	15 to 30	60	-10 to 50	100	Hydro	150
				PV04	PVC	Chemical Storage Railcar Shelter Over Containment Area	15 mm (1/2") - 80 mm (3")	PVC SCH80 for Pressure Application								
				PD03	HDPE	Buried Tunnels	15 mm (1/2") - 50 mm (2")	HDPE DR11 within HDPE DR17 Secondary Containment Pipe	YES (Applicable to all buried or outood above ground process chemical lines)	P - Polyurethane - Rigid Closed Cell Foam Insulation, (ASTM D1622) Include black polyethylene jacket (50mils) with UV inhibitor System shall be heat traced.						
0	FSW	FLUSHING WATER	N/A	CU01	Copper Type L	Chemical Storage Railcar Shelter Tunnels	15mm (1/2") - 50mm (2")	Type L Copper Pipe	YES	E - Elastomeric - Flexible Pipe Insulation, Closed Cell Structure (ASTM C534)	0 to 5	50 to 70	0 to 100	100	Hydro	150
0	GS	GLYCOL SUPPLY	N/A	CS11	Carbon Steel	Chemical Storage	< 80 mm (3")	Black carbon steel, ASTM A106/A106M Grade B seamless, or ASTM A53/A53M Grade B seamless or ERW, conforming to ASME B36.10M. External coating: Liquid Epoxy; Factory Applied Primer, 75-100 micron (AWWA C210), Field Applied Finish Coat	YES	F - Fiber Glass, UL Rated, Prefomed, Kraft Paper with Aluminum Foil Vapour Barrier Jacket	-40 to +60	0 to 15	-40 to +100	100	Hydro	150
0	GR	GLYCOL RETURN	N/A	CS11	Carbon Steel	Chemical Storage	< 80 mm (3")	Schedule 40 Black carbon steel, ASTM A106/A106M Grade B seamless, or ASTM A53/A53M Grade B seamless or ERW, conforming to ASME B36.10M. External coating: Liquid Epoxy; Factory Applied Primer, 75-100 micron (AWWA C210), Field Applied Finish Coat	YES	F - Fiber Glass, UL Rated, Prefomed, Kraft Paper with Aluminum Foil Vapour Barrier Jacket	-40 to +60	0 to 15	-40 to +100	100	Hydro	150
0	NG	NATURAL GAS	N/A	CS11	Carbon Steel SCH40	Buried Chemical Storage Railcar Shelter	< 65 mm (2.5")	Schedule 40 Black carbon steel, ASTM A106/A106M Grade B seamless, or ASTM A53/A53M Grade B seamless or ERW, conforming to ASME B36.10M. External coating: Liquid Epoxy; Factory Applied Primer, 75-100 micron (AWWA C210), Field Applied Finish Coat	NO	N/A	-40 to +60	0 to 25	-40 to +100	100	Hydro	150
0	OF	OVERFLOW	N/A	PV02	PVC	Chemical Storage Railcar Shelter	100mm (4") - 250mm (10")	PVC-DWV for Non-Pressure Application	NO	N/A	0 to 20	Atmosphere	0 to 50	20	Hydro	50
0	PD	PROCESS DRAIN	N/A	PV02	PVC	Buried Chemical Storage Railcar Shelter	100mm (4") - 250mm (10")	PVC-DWV for Non-Pressure Application	NO	N/A	0 to 20	Atmosphere	0 to 50	20	Hydro	50
0	PW	POTABLE WATER	N/A	CU01	Copper	Chemical Storage Railcar Shelter	10mm (3/8") - 65mm (2-1/2")	Type L Copper Pipe	YES	E - Elastomeric - Flexible Pipe Insulation, Closed Cell Structure (ASTM C534)	0 to 5	50 to 70	0 to 100	100	Hydro	150

Project Name: NEWPCC Interim Phosphorous Removal
 Project Number: 21-0107-015
 Client: City of Winnipeg
 Document No: LST-M-003
 Issue Date: 2022-05-18
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Piping Service & Specification Index



Rev	Service		Piping Specification					Insulation	Insulation Type	Operating Conditions		Design Conditions		Testing		
	Fluid Service Code	Description	Flange Class (ASME B16.5)	Material Spec Code	Material	Exposure	Size Range	Description		(YES/NO)	Temperature (°C)	Pressure (psig)	Temperature (°C)	Pressure (psig)	Test Type	Pressure (PSIG)
0	SAN	SANITARY DRAIN	N/A	PV02	PVC	Buried Chemical Storage Railcar Shelter	100mm (4") - 250mm (10")	PVC-DWV for Non-Pressure Application	NO	N/A	0 to 20	Atmosphere	0 to 50	20	Hydro	30
0	SEA	SERVICE AIR	N/A	CJ01	Copper	Buried Chemical Storage Railcar Shelter Tunnels	10mm (3/8") - 65mm (2-1/2")	Type L Copper Pipe	NO	N/A	0 to 30	0 to 100	-40 to 100	150	Pneumatic	150
0	SHD	SODIUM HYDROXIDE (50%)	N/A	PV04	PVC	Chemical Storage Railcar Shelter Over Containment Area	15mm (1/2") - 50mm (2")	PVC SCH80 for Pressure Application	NO	N/A	25 to 35	60	20 to 40	100	Hydro	150
				PD03	HDPE	Buried Tunnels	15mm (1/2") - 50mm (2")	HDPE DR11 within HDPE DR17 Secondary Containment Pipe	YES (Applicable to all buried or outood above ground process chemical lines)	P - Polyurethane - Rigid Closed Cell Foam Insulation, (ASTM D1622) Include black polyethylene jacket (50ms) with UV inhibitor System shall be heat traced.						
0	RW	RAIN/ ROOF WATER	N/A	PV02	PVC	Chemical Storage Railcar Shelter	80mm (3") - 150mm (6")	PVC-DWV for Rainwater Non-Pressure Application	YES	F - Fiber Glass, UL Rated, Preformed, Kraft Paper with Aluminum Foil Vapour Barrier Jacket	-40 TO 40	Atmosphere	0 to 50	20	Hydro	30
0	TW	TEMPERED WATER	N/A	CJ01	Copper	Chemical Storage Railcar Shelter	10mm (3/8") - 65mm (2-1/2")	Type L Copper Pipe	YES	E - Elastomeric - Flexible Pipe Insulation, Closed Cell Structure (ASTM C534)	30 to 40	50 to 70	0 to 100	100	Hydro	150
0	VTA	VENT TO ATMOSPHERE	N/A	PV02	PVC	Chemical Storage Railcar Shelter Outdoor	100mm (4") - 250mm (10")	PVC-DWV for Process Vent Non-Pressure Application	YES	E - Elastomeric - Flexible Pipe Insulation, Closed Cell Structure (ASTM C534)	0 to 20	Atmosphere	0 to 50	20	Hydro	30
0	WAS	WASTE ACTIVATED SLUDGE	150	PV04	PVC	Tunnels	100mm (4") - 300mm (12")	PVC SCH80 for Pressure Application	NO	N/A	0 to 25	50 to 70	0 to 100	100	Hydro	150

Process Valve List

0	2022-05-18	Issued For Construction	JP	<i>JP</i>
Revision	Date	Issued For	By	Approved
City of Winnipeg				
NEWPCC Interim Phosphorous Removal				
Document Number	LST-M-004	Revision	0	

Project Name: NEWPCC Interim Phosphorous Removal
Project Number: 21-0107-015
Client: City of Winnipeg
Document No: LST-M-004
Issue Date: 2022-05-18
Revision: 0



Process Valve List

NOTE: FINAL QUANTITY OF VALVES SHALL BE DETERMINED BY CONTRACTOR THROUGH A COMBINED REVIEW OF ALL TENDER DOCUMENTS (IE: DRAWINGS, LISTS, ETC). CONTRACTOR'S BID SHALL ASSUME THE HIGHEST COST OPTIONS OR QUANTITY SPECIFIED IN THE TENDER DOCUMENTS.

Rev	Valve Tag	Valve Type	Valve Size	Location	P&ID	Valve Spec Code (Refer to)	Comments
0	HV-F0695A	BALL VALVE	25	ROOM 101A	1-0101-PPID-F001-001	SECTION 22 15 00	
0	XV-F8700	MOTORIZED VALVE	80	ROOM 101A	1-0101-PPID-F001-001	BV07	REFER TO VALVE DATASHEETS
0	HV-F8700A	BALL VALVE	80	ROOM 101A	1-0101-PPID-F001-001	BV07	
0	HV-F8700B	BALL VALVE	80	ROOM 101A	1-0101-PPID-F001-001	BV07	
0	HV-F8700C	BALL VALVE	15	ROOM 101A	1-0101-PPID-F001-001	BV06	
0	HV-F0700A	BALL VALVE	25	ROOM 101B	1-0101-PPID-F002-001	SECTION 22 15 00	
0	HV-F0700B	BALL VALVE	25	ROOM 101B	1-0101-PPID-F002-001	SECTION 22 15 00	
0	HV-F0700C	BALL VALVE	25	ROOM 101B	1-0101-PPID-F002-001	SECTION 22 15 00	
0	CV-F0700A	CHECK VALVE	25	ROOM 101B	1-0101-PPID-F002-001	CV05	
0	HV-F8701A	BALL VALVE	25	ROOM 101B	1-0101-PPID-F002-001	SECTION 22 15 00	
0	HV-F8701B	BALL VALVE	50	ROOM 101B	1-0101-PPID-F002-001	SECTION 22 15 00	
0	HV-F8701C	BALL VALVE	50	ROOM 101B	1-0101-PPID-F002-001	SECTION 22 15 00	
0	HV-F8701D	BALL VALVE	25	ROOM 101B	1-0101-PPID-F002-001	SECTION 22 15 00	
0	HV-F8701E	BALL VALVE	25	ROOM 101B	1-0101-PPID-F002-001	SECTION 22 15 00	
0	HV-F8701F	BALL VALVE	25	ROOM 101B	1-0101-PPID-F002-001	SECTION 22 15 00	
0	HV-F8701G	BALL VALVE	50	ROOM 101B	1-0101-PPID-F002-001	SECTION 22 15 00	
0	HV-F8711A	BALL VALVE	15	ROOM 101B	1-0101-PPID-F002-001	SECTION 22 15 00	
0	HV-F8711B	BALL VALVE	15	ROOM 101B	1-0101-PPID-F002-001	SECTION 22 15 00	
0	HV-F8712A	BALL VALVE	15	ROOM 101B	1-0101-PPID-F002-001	SECTION 22 15 00	
0	HV-F8712B	BALL VALVE	15	ROOM 101B	1-0101-PPID-F002-001	SECTION 22 15 00	
0	HV-F8713A	BALL VALVE	15	ROOM 101B	1-0101-PPID-F002-001	SECTION 22 15 00	
0	HV-F8713B	BALL VALVE	15	ROOM 101B	1-0101-PPID-F002-001	SECTION 22 15 00	
0	HV-F0703A	BALL VALVE	80	ROOM 101B	1-0101-PPID-F002-001	BV07	
0	CV-F0703A	CHECK VALVE	80	ROOM 101B	1-0101-PPID-F002-001	CV10	
0	HV-F0703B	BALL VALVE	15	ROOM 101B	1-0101-PPID-F002-001	BV06	
0	HV-F0703C	BALL VALVE	80	ROOM 101B	1-0101-PPID-F002-001	BV07	
0	HV-F0703D	BALL VALVE	15	ROOM 101B	1-0101-PPID-F002-001	BV06	
0	HV-F5120A	BALL VALVE	32	ROOM 101B	1-0101-PPID-F002-001	SECTION 22 11 16	
0	HV-F5121A	BALL VALVE	32	ROOM 101B	1-0101-PPID-F002-001	SECTION 22 11 16	
0	HV-F0780U	BALL VALVE	15	ROOM 100	1-0101-PPID-F003-001	BV06	
0	XV-F8710	MOTORIZED VALVE	25	ROOM 100	1-0101-PPID-F003-001	BV06	REFER TO VALVE DATASHEETS
0	XV-F8711	MOTORIZED VALVE	25	ROOM 100	1-0101-PPID-F003-001	BV06	REFER TO VALVE DATASHEETS
0	HV-F8703A	BALL VALVE	20	ROOM 101C	1-0101-PPID-F004-001	BV06	
0	HV-F8703B	BALL VALVE	20	ROOM 101C	1-0101-PPID-F004-001	BV06	
0	HV-F0730A	BALL VALVE	50	ROOM 101C	1-0101-PPID-F004-001	BV06	
0	HV-F0730B	BALL VALVE	50	ROOM 101C	1-0101-PPID-F004-001	BV06	
0	HV-F0730C	BALL VALVE	50	ROOM 101C	1-0101-PPID-F004-001	BV06	
0	HV-F0730D	BALL VALVE	50	ROOM 101C	1-0101-PPID-F004-001	BV06	
0	HV-F0730E	BALL VALVE	50	ROOM 101C	1-0101-PPID-F004-001	BV06	
0	HV-F0730F	BALL VALVE	20	ROOM 101C	1-0101-PPID-F004-001	BV06	SUPERVISED LOCKED OPEN
0	HV-F0730G	GATE VALVE	100	ROOM 101C	1-0101-PPID-F004-001	GV01	EXTENDED STEM WITH T-WRENCH
0	HV-F0740A	BALL VALVE	50	ROOM 101C	1-0101-PPID-F004-001	BV06	
0	HV-F0740B	BALL VALVE	50	ROOM 101C	1-0101-PPID-F004-001	BV06	
0	HV-F0740C	BALL VALVE	50	ROOM 101C	1-0101-PPID-F004-001	BV06	
0	HV-F0740D	BALL VALVE	50	ROOM 101C	1-0101-PPID-F004-001	BV06	
0	HV-F0740E	BALL VALVE	50	ROOM 101C	1-0101-PPID-F004-001	BV06	
0	HV-F0740F	BALL VALVE	20	ROOM 101C	1-0101-PPID-F004-001	BV06	SUPERVISED LOCKED OPEN
0	HV-F5220A	BALL VALVE	32	ROOM 101C	1-0101-PPID-F004-001	SECTION 22 11 16	
0	HV-F5220B	BALL VALVE	32	ROOM 101C	1-0101-PPID-F004-001	SECTION 22 11 16	
0	HV-F5221A	BALL VALVE	32	ROOM 101C	1-0101-PPID-F004-001	SECTION 22 11 16	
0	XV-F8702	MOTORIZED VALVE	80	ROOM 101C	1-0101-PPID-F004-001	BV07	REFER TO VALVE DATASHEETS

Project Name: NEWPCC Interim Phosphorous Removal
Project Number: 21-0107-015
Client: City of Winnipeg
Document No: LST-M-004
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Process Valve List

NOTE: FINAL QUANTITY OF VALVES SHALL BE DETERMINED BY CONTRACTOR THROUGH A COMBINED REVIEW OF ALL TENDER DOCUMENTS (IE: DRAWINGS, LISTS, ETC). CONTRACTOR'S BID SHALL ASSUME THE HIGHEST COST OPTIONS OR QUANTITY SPECIFIED IN THE TENDER DOCUMENTS.

Rev	Valve Tag	Valve Type	Valve Size	Location	P&ID	Valve Spec Code (Refer to)	Comments
0	XV-F8703	MOTORIZED VALVE	80	ROOM 101C	1-0101-PPID-F004-001	BV07	REFER TO VALVE DATASHEETS
0	XV-F8704	MOTORIZED VALVE	80	ROOM 101C	1-0101-PPID-F004-001	BV07	REFER TO VALVE DATASHEETS
0	XV-F8717	MOTORIZED VALVE	80	ROOM 101C	1-0101-PPID-F004-001	BV07	REFER TO VALVE DATASHEETS
0	XV-F8705	MOTORIZED VALVE	80	ROOM 101C	1-0101-PPID-F004-001	BV07	REFER TO VALVE DATASHEETS
0	HV-F8800A	BALL VALVE	80	BUILDING 102	1-0101-PPID-F005-001	BV07	
0	HV-F8800B	BALL VALVE	25	BUILDING 102	1-0101-PPID-F005-001	BV06	
0	HV-F8800C	BALL VALVE	50	BUILDING 102	1-0101-PPID-F005-001	BV06	
0	HV-F8800D	GATE VALVE	150	BUILDING 102	1-0101-PPID-F005-001	GV01	EXTENDED STEM WITH T-WRENCH
0	CV-F8800A	CHECK VALVE	80	BUILDING 102	1-0101-PPID-F005-001	CV10	
0	HV-F0810A	BALL VALVE	50	BUILDING 102	1-0101-PPID-F005-001	BV06	
0	HV-F0810B	BALL VALVE	50	BUILDING 102	1-0101-PPID-F005-001	BV06	
0	HV-F0810C	BALL VALVE	50	BUILDING 102	1-0101-PPID-F005-001	BV06	
0	HV-F0810D	BALL VALVE	50	BUILDING 102	1-0101-PPID-F005-001	BV06	
0	HV-F0810E	BALL VALVE	50	BUILDING 102	1-0101-PPID-F005-001	BV06	
0	HV-F0810F	BALL VALVE	20	BUILDING 102	1-0101-PPID-F005-001	BV06	
0	HV-F0820A	BALL VALVE	50	BUILDING 102	1-0101-PPID-F005-001	BV06	
0	HV-F0820B	BALL VALVE	50	BUILDING 102	1-0101-PPID-F005-001	BV06	
0	HV-F0820C	BALL VALVE	50	BUILDING 102	1-0101-PPID-F005-001	BV06	
0	HV-F0820D	BALL VALVE	50	BUILDING 102	1-0101-PPID-F005-001	BV06	
0	HV-F0820E	BALL VALVE	50	BUILDING 102	1-0101-PPID-F005-001	BV06	
0	HV-F0820F	BALL VALVE	20	BUILDING 102	1-0101-PPID-F005-001	BV06	
0	HV-F5320A	BALL VALVE	32	BUILDING 102	1-0101-PPID-F005-001	SECTION 22 11 16	
0	HV-F5320B	BALL VALVE	32	BUILDING 102	1-0101-PPID-F005-001	SECTION 22 11 16	
0	HV-F5321A	BALL VALVE	32	BUILDING 102	1-0101-PPID-F005-001	SECTION 22 11 16	
0	XV-F8800	MOTORIZED VALVE	80	BUILDING 102	1-0101-PPID-F005-001	BV07	REFER TO VALVE DATASHEETS
0	XV-F8801	MOTORIZED VALVE	80	BUILDING 102	1-0101-PPID-F005-001	BV07	REFER TO VALVE DATASHEETS
0	HV-F8706A	BALL VALVE	50	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F8706B	BALL VALVE	50	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F8706C	BALL VALVE	50	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F8706D	BALL VALVE	50	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F8707A	BALL VALVE	50	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0770A	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0770B	BALL VALVE	20	ROOM 101C	1-0101-PPID-F007-001	BV01	
0	HV-F0770C	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0770D	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0770E	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0770F	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0770G	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0770H	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0770J	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0770K	BALL VALVE	20	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0770L	BALL VALVE	25	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0770M	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0770N	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0770P	BALL VALVE	20	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0770R	BALL VALVE	20	ROOM 101C	1-0101-PPID-F007-001	BV01	
0	HV-F0770S	BALL VALVE	20	ROOM 101C	1-0101-PPID-F007-001	BV01	
0	HV-F0770T	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	CV-F0770A	CHECK VALVE	15	ROOM 101C	1-0101-PPID-F007-001	CV09	
0	HV-F0771A	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0771B	BALL VALVE	20	ROOM 101C	1-0101-PPID-F007-001	BV01	

Project Name: NEWPCC Interim Phosphorous Removal
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Process Valve List

NOTE: FINAL QUANTITY OF VALVES SHALL BE DETERMINED BY CONTRACTOR THROUGH A COMBINED REVIEW OF ALL TENDER DOCUMENTS (IE: DRAWINGS, LISTS, ETC). CONTRACTOR'S BID SHALL ASSUME THE HIGHEST COST OPTIONS OR QUANTITY SPECIFIED IN THE TENDER DOCUMENTS.

Rev	Valve Tag	Valve Type	Valve Size	Location	P&ID	Valve Spec Code (Refer to)	Comments
0	HV-F0771C	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0771D	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0771E	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0771F	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0771G	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0771H	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0771J	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0771K	BALL VALVE	20	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0771L	BALL VALVE	25	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0771M	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0771N	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	CV-F0771A	CHECK VALVE	15	ROOM 101C	1-0101-PPID-F007-001	CV09	
0	HV-F0772A	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0772B	BALL VALVE	20	ROOM 101C	1-0101-PPID-F007-001	BV01	
0	HV-F0772C	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0772D	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0772E	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0772F	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0772G	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0772H	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	HV-F0772J	BALL VALVE	15	ROOM 101C	1-0101-PPID-F007-001	BV06	
0	CV-F0772A	CHECK VALVE	15	ROOM 101C	1-0101-PPID-F007-001	CV09	
0	XV-F8706	MOTORIZED VALVE	50	ROOM 101C	1-0101-PPID-F007-001	BV06	REFER TO VALVE DATASHEETS
0	XV-F8707	MOTORIZED VALVE	50	ROOM 101C	1-0101-PPID-F007-001	BV06	REFER TO VALVE DATASHEETS
0	XV-F8802	MOTORIZED VALVE	50	BUILDING 102	1-0101-PPID-F007-001	BV06	REFER TO VALVE DATASHEETS
0	XV-F8803	MOTORIZED VALVE	50	BUILDING 102	1-0101-PPID-F007-001	BV06	REFER TO VALVE DATASHEETS
0	HV-F8802A	BALL VALVE	50	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F8802B	BALL VALVE	50	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F8802C	BALL VALVE	50	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F8802D	BALL VALVE	50	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F8803A	BALL VALVE	50	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0830A	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0830B	BALL VALVE	20	BUILDING 102	1-0101-PPID-F008-001	BV01	
0	HV-F0830C	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0830D	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0830E	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0830F	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0830G	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0830H	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0830J	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0830K	BALL VALVE	20	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0830L	BALL VALVE	25	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0830M	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0830N	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0830P	BALL VALVE	20	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0830Q	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0830T	BALL VALVE	40	BUILDING 102	1-0101-PPID-F008-001	SECTION 22 11 16	
0	HV-F0830U	BALL VALVE	20	BUILDING 102	1-0101-PPID-F008-001	BV01	
0	HV-F0830V	BALL VALVE	20	BUILDING 102	1-0101-PPID-F008-001	BV01	
0	CV-F0830A	CHECK VALVE	15	BUILDING 102	1-0101-PPID-F008-001	CV09	
0	HV-F0831A	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	

Project Name: NEWPCC Interim Phosphorous Removal
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Client: City of Winnipeg
Document No: LST-M-004
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Process Valve List

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Rev	Valve Tag	Valve Type	Valve Size	Location	P&ID	Valve Spec Code (Refer to)	Comments
0	HV-F0831B	BALL VALVE	20	BUILDING 102	1-0101-PPID-F008-001	BV01	
0	HV-F0831C	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0831D	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0831E	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0831F	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0831G	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0831H	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0831J	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0831K	BALL VALVE	20	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0831L	BALL VALVE	25	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0831M	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0831N	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	CV-F0831A	CHECK VALVE	15	BUILDING 102	1-0101-PPID-F008-001	CV09	
0	HV-F0832A	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0832B	BALL VALVE	20	BUILDING 102	1-0101-PPID-F008-001	BV01	
0	HV-F0832C	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0832D	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0832E	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0832F	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0832G	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0832H	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	HV-F0832J	BALL VALVE	15	BUILDING 102	1-0101-PPID-F008-001	BV06	
0	CV-F0832A	CHECK VALVE	15	BUILDING 102	1-0101-PPID-F008-001	CV09	
0	HV-F0780A	BALL VALVE	25	ROOM 101C	1-0101-PPID-F009-001	BV06	
0	HV-F0780B	BALL VALVE	20	ROOM 101C	1-0101-PPID-F009-001	BV01	
0	HV-F0780C	BALL VALVE	25	ROOM 101C	1-0101-PPID-F009-001	BV06	
0	HV-F0780D	BALL VALVE	15	ROOM 101C	1-0101-PPID-F009-001	BV06	
0	HV-F0780E	BALL VALVE	25	ROOM 101C	1-0101-PPID-F009-001	BV06	
0	HV-F0780F	BALL VALVE	20	ROOM 101C	1-0101-PPID-F009-001	BV06	
0	HV-F0780G	BALL VALVE	25	ROOM 101C	1-0101-PPID-F009-001	BV06	
0	HV-F0780H	BALL VALVE	25	ROOM 101C	1-0101-PPID-F009-001	BV06	
0	HV-F0780J	BALL VALVE	20	ROOM 101C	1-0101-PPID-F009-001	BV06	
0	HV-F0780L	BALL VALVE	25	ROOM 101C	1-0101-PPID-F009-001	BV06	
0	HV-F0780M	BALL VALVE	25	ROOM 101C	1-0101-PPID-F009-001	BV06	
0	HV-F0780N	BALL VALVE	50	ROOM 101C	1-0101-PPID-F009-001	BV06	
0	HV-F0780P	BALL VALVE	20	ROOM 101C	1-0101-PPID-F009-001	BV01	
0	HV-F0780Q	BALL VALVE	20	ROOM 101C	1-0101-PPID-F009-001	BV01	
0	HV-F0780R	BALL VALVE	50	ROOM 101C	1-0101-PPID-F009-001	BV06	
0	HV-F0780S	BALL VALVE	50	ROOM 101C	1-0101-PPID-F009-001	BV06	
0	HV-F0780T	BALL VALVE	15	ROOM 101C	1-0101-PPID-F009-001	BV06	
0	HV-F0780V	BALL VALVE	15	ROOM 101C	1-0101-PPID-F009-001	BV06	
0	HV-F0780X	BALL VALVE	15	ROOM 101C	1-0101-PPID-F009-001	BV06	
0	CV-F0780A	CHECK VALVE	25	ROOM 101C	1-0101-PPID-F009-001	CV09	
0	HV-F07803	BALL VALVE	50	ROOM 101C	1-0101-PPID-F009-001	BV06	
0	HV-F0781A	BALL VALVE	15	ROOM 101C	1-0101-PPID-F009-001	BV06	
0	HV-F0781B	BALL VALVE	20	ROOM 101C	1-0101-PPID-F009-001	BV01	
0	HV-F0781C	BALL VALVE	15	ROOM 101C	1-0101-PPID-F009-001	BV06	
0	HV-F0781D	BALL VALVE	15	ROOM 101C	1-0101-PPID-F009-001	BV06	
0	HV-F0781E	BALL VALVE	15	ROOM 101C	1-0101-PPID-F009-001	BV06	
0	HV-F0781F	BALL VALVE	25	ROOM 101C	1-0101-PPID-F009-001	BV06	
0	CV-F0781A	CHECK VALVE	15	ROOM 101C	1-0101-PPID-F009-001	CV09	

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Rev	Valve Tag	Valve Type	Valve Size	Location	P&ID	Valve Spec Code (Refer to)	Comments
0	HV-F07813	BALL VALVE	15	ROOM 101C	1-0101-PPID-F009-001	BV06	
0	HV-G0750A	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G012-001	BV06	
0	HV-G0750B	FLOW CONTROL VALVE	15	GRIT REMOVAL	1-0101-PPID-G012-001	SECTION 40 00 56	WITH HAND CONTROL
0	HV-G0751A	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G012-001	BV06	
0	HV-G0751B	BALL VALVE	20	GRIT REMOVAL	1-0101-PPID-G012-001	BV01	
0	HV-G0751C	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G012-001	BV06	
0	HV-G0751D	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G012-001	BV06	
0	HV-G0751E	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G012-001	BV06	
0	HV-G0751F	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G012-001	BV06	
0	HV-G0751G	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G012-001	BV06	
0	HV-G0751H	BALL VALVE	20	GRIT REMOVAL	1-0101-PPID-G012-001	BV01	
0	HV-G0751J	BALL VALVE	20	GRIT REMOVAL	1-0101-PPID-G012-001	BV01	
0	HV-G0751K	BALL VALVE	20	GRIT REMOVAL	1-0101-PPID-G012-001	BV06	
0	HV-G0751L	BALL VALVE	25	GRIT REMOVAL	1-0101-PPID-G012-001	BV06	
0	HV-G0751M	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G012-001	BV06	
0	HV-G0751N	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G012-001	BV06	
0	HV-G0751P	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G012-001	BV06	
0	HV-G0751Q	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G012-001	BV06	
0	HV-G0751R	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G012-001	BV06	
0	HV-G0751S	BALL VALVE	25	GRIT REMOVAL	1-0101-PPID-G012-001	BV06	
0	HV-G0751T	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G012-001	BV06	
0	CV-G0751A	CHECK VALVE	15	GRIT REMOVAL	1-0101-PPID-G012-001	CV09	
0	HV-F5520A	BALL VALVE	32	GRIT REMOVAL	1-0101-PPID-G012-001	SECTION 22 11 16	
0	HV-F5520B	BALL VALVE	32	GRIT REMOVAL	1-0101-PPID-G012-001	SECTION 22 11 16	
0	XV-F87090	MOTORIZED VALVE	15	GRIT REMOVAL	1-0101-PPID-G012-001	BV06	REFER TO VALVE DATASHEETS
0	XV-F87095	MOTORIZED VALVE	15	GRIT REMOVAL	1-0101-PPID-G012-001	BV06	REFER TO VALVE DATASHEETS
0	HV-Y0790A	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0790B	FLOW CONTROL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	SECTION 40 00 56	WITH HAND CONTROL
0	HV-Y0790C	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0790D	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0790E	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0790F	BALL VALVE	20	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0791A	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0791B	BALL VALVE	20	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV01	
0	HV-Y0791C	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0791D	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0791E	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0791F	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0791G	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0791H	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0791J	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0791K	BALL VALVE	20	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0791L	BALL VALVE	25	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0791M	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0791N	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0791P	BALL VALVE	20	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0791Q	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0791R	BALL VALVE	20	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV01	
0	HV-Y0791S	BALL VALVE	20	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV01	
0	CV-Y0791A	CHECK VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	CV09	
0	HV-Y0792A	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	

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0	HV-Y0792B	BALL VALVE	20	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV01	
0	HV-Y0792C	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0792D	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0792E	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0792F	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0792G	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0792H	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0792J	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0792K	BALL VALVE	20	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0792L	BALL VALVE	25	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0792M	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0792N	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	CV-Y0792A	CHECK VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	CV09	
0	HV-Y0793A	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0793B	BALL VALVE	20	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV01	
0	HV-Y0793C	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0793D	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0793E	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0793F	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0793G	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0793H	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0793J	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0793K	BALL VALVE	20	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0793L	BALL VALVE	25	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0793M	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-Y0793N	BALL VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	CV-Y0793A	CHECK VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	CV09	
0	HV-Y5522A	BALL VALVE	32	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV01	
0	HV-Y5522B	BALL VALVE	32	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV01	
0	XV-Y87150	MOTORIZED VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	XV-Y87155	MOTORIZED VALVE	15	JUNCTION CHAMBER	1-0101-PPID-Y001-001	BV06	
0	HV-D0810X	BALL VALVE	25	PRIMARY DIGESTERS	1-0101-PPID-D001-001	BV06	
0	HV-D0810Y	BALL VALVE	25	PRIMARY DIGESTERS	1-0101-PPID-D001-001	BV06	
0	HV-D0810Z	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D001-001	BV06	
0	HV-D0811A	BALL VALVE	50	PRIMARY DIGESTERS	1-0101-PPID-D001-001	SECTION 40 00 56	INJ-D0811 DRAIN VALVE
0	HV-D0811B	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D001-001	SECTION 40 00 56	INJ-D0811 AT INJECTION PORT
0	HV-D0811C	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D001-001	SECTION 40 00 56	INJ-D0811 AT INJECTION PORT
0	HV-D0811D	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D001-001	SECTION 40 00 56	INJ-D0811 AT INJECTION PORT
0	HV-D0811E	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D001-001	SECTION 40 00 56	INJ-D0811 AT INJECTION PORT
0	HV-D0811F	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D001-001	SECTION 40 00 56	INJ-D0811 AT MANIFOLD ASSEMBLY
0	HV-D0811G	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D001-001	SECTION 40 00 56	INJ-D0811 AT MANIFOLD ASSEMBLY
0	HV-D0811H	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D001-001	SECTION 40 00 56	INJ-D0811 AT MANIFOLD ASSEMBLY
0	HV-D0811I	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D001-001	SECTION 40 00 56	INJ-D0811 AT MANIFOLD ASSEMBLY
0	HV-D0812A	BALL VALVE	50	PRIMARY DIGESTERS	1-0101-PPID-D001-001	SECTION 40 00 56	INJ-D0812 DRAIN VALVE
0	HV-D0812B	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D001-001	SECTION 40 00 56	INJ-D0812 AT INJECTION PORT
0	HV-D0812C	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D001-001	SECTION 40 00 56	INJ-D0812 AT INJECTION PORT
0	HV-D0812D	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D001-001	SECTION 40 00 56	INJ-D0812 AT INJECTION PORT
0	HV-D0812E	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D001-001	SECTION 40 00 56	INJ-D0812 AT INJECTION PORT
0	HV-D0812F	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D001-001	SECTION 40 00 56	INJ-D0812 AT MANIFOLD ASSEMBLY
0	HV-D0812G	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D001-001	SECTION 40 00 56	INJ-D0812 AT MANIFOLD ASSEMBLY
0	HV-D0812H	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D001-001	SECTION 40 00 56	INJ-D0812 AT MANIFOLD ASSEMBLY

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0	HV-D0812I	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D001-001	SECTION 40 00 56	INJ-D0812 AT MANIFOLD ASSEMBLY
0	HV-D0770W	BALL VALVE	25	PRIMARY DIGESTERS	1-0101-PPID-D002-001	BV06	
0	HV-D0770X	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D002-001	BV06	
0	HV-D0830W	BALL VALVE	25	PRIMARY DIGESTERS	1-0101-PPID-D002-001	BV06	
0	HV-D0830X	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D002-001	BV06	
0	HV-D0771A	BALL VALVE	50	PRIMARY DIGESTERS	1-0101-PPID-D002-001	SECTION 40 00 56	INJ-D0771 DRAIN VALVE
0	HV-D0771B	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D002-001	SECTION 40 00 56	INJ-D0771 AT INJECTION PORT
0	HV-D0771C	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D002-001	SECTION 40 00 56	INJ-D0771 AT INJECTION PORT
0	HV-D0771D	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D002-001	SECTION 40 00 56	INJ-D0771 AT INJECTION PORT
0	HV-D0771E	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D002-001	SECTION 40 00 56	INJ-D0771 AT INJECTION PORT
0	HV-D0771F	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D002-001	SECTION 40 00 56	INJ-D0771 AT MANIFOLD ASSEMBLY
0	HV-D0771G	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D002-001	SECTION 40 00 56	INJ-D0771 AT MANIFOLD ASSEMBLY
0	HV-D0771H	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D002-001	SECTION 40 00 56	INJ-D0771 AT MANIFOLD ASSEMBLY
0	HV-D0771I	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D002-001	SECTION 40 00 56	INJ-D0771 AT MANIFOLD ASSEMBLY
0	HV-D0831A	BALL VALVE	50	PRIMARY DIGESTERS	1-0101-PPID-D002-001	SECTION 40 00 56	INJ-D0831 DRAIN VALVE
0	HV-D0831B	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D002-001	SECTION 40 00 56	INJ-D0831 AT INJECTION PORT
0	HV-D0831C	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D002-001	SECTION 40 00 56	INJ-D0831 AT INJECTION PORT
0	HV-D0831D	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D002-001	SECTION 40 00 56	INJ-D0831 AT INJECTION PORT
0	HV-D0831E	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D002-001	SECTION 40 00 56	INJ-D0831 AT INJECTION PORT
0	HV-D0831F	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D002-001	SECTION 40 00 56	INJ-D0831 AT MANIFOLD ASSEMBLY
0	HV-D0831G	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D002-001	SECTION 40 00 56	INJ-D0831 AT MANIFOLD ASSEMBLY
0	HV-D0831H	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D002-001	SECTION 40 00 56	INJ-D0831 AT MANIFOLD ASSEMBLY
0	HV-D0831I	BALL VALVE	15	PRIMARY DIGESTERS	1-0101-PPID-D002-001	SECTION 40 00 56	INJ-D0831 AT MANIFOLD ASSEMBLY
0	HV-G0751U	BALL VALVE	25	GRIT REMOVAL	1-0101-PPID-G013-001	BV06	
0	HV-G0751V	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G013-001	BV06	
0	HV-G0751W	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G013-001	BV06	
0	HV-G0751X	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G013-001	BV06	
0	HV-G0751Y	PLUG VALVE	300	GRIT REMOVAL	1-0101-PPID-G013-001	PV01	WASTE ACTIVATED SLUDGE
0	HV-G0751Z	BALL VALVE	50	GRIT REMOVAL	1-0101-PPID-G013-001	SECTION 40 00 56	INJ-G0751 DRAIN VALVE
0	HV-G0751AA	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G013-001	SECTION 40 00 56	INJ-G0751 AT INJECTION PORT
0	HV-G0751AB	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G013-001	SECTION 40 00 56	INJ-G0751 AT INJECTION PORT
0	HV-G0751AC	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G013-001	SECTION 40 00 56	INJ-G0751 AT INJECTION PORT
0	HV-G0751AD	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G013-001	SECTION 40 00 56	INJ-G0751 AT INJECTION PORT
0	HV-G0751AE	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G013-001	SECTION 40 00 56	INJ-G0751 MANIFOLD ASSEMBLY
0	HV-G0751AF	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G013-001	SECTION 40 00 56	INJ-G0751 MANIFOLD ASSEMBLY
0	HV-G0751AG	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G013-001	SECTION 40 00 56	INJ-G0751 MANIFOLD ASSEMBLY
0	HV-G0751AH	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G013-001	SECTION 40 00 56	INJ-G0751 MANIFOLD ASSEMBLY
0	HV-G0752A	BALL VALVE	50	GRIT REMOVAL	1-0101-PPID-G013-001	SECTION 40 00 56	INJ-G0752 DRAIN VALVE
0	HV-G0752B	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G013-001	SECTION 40 00 56	INJ-G0752 AT INJECTION PORT
0	HV-G0752C	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G013-001	SECTION 40 00 56	INJ-G0752 AT INJECTION PORT
0	HV-G0752D	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G013-001	SECTION 40 00 56	INJ-G0752 AT INJECTION PORT
0	HV-G0752E	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G013-001	SECTION 40 00 56	INJ-G0752 AT INJECTION PORT
0	HV-G0752F	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G013-001	SECTION 40 00 56	INJ-G0752 AT MANIFOLD ASSEMBLY
0	HV-G0752G	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G013-001	SECTION 40 00 56	INJ-G0752 AT MANIFOLD ASSEMBLY
0	HV-G0752H	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G013-001	SECTION 40 00 56	INJ-G0752 AT MANIFOLD ASSEMBLY
0	HV-G0752I	BALL VALVE	15	GRIT REMOVAL	1-0101-PPID-G013-001	SECTION 40 00 56	INJ-G0752 AT MANIFOLD ASSEMBLY
0	HV-Y0791U	BALL VALVE	25	JUNCTION CHAMBER	1-0101-PPID-Y002-001	BV06	
0	HV-Y0791V	BALL VALVE	25	JUNCTION CHAMBER	1-0101-PPID-Y002-001	BV06	
0	HV-Y0791W	BALL VALVE	25	JUNCTION CHAMBER	1-0101-PPID-Y002-001	BV06	
0	HV-F6250A	BALL VALVE	20	ROOM 101C	1-0101-PPID-F015-001	SECTION 23 21 13.02	
0	HV-F6250B	BALL VALVE	20	ROOM 101C	1-0101-PPID-F015-001	SECTION 23 21 13.02	

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0	HV-F6250C	BALL VALVE	20	ROOM 101C	1-0101-PPID-F015-001	SECTION 23 21 13.02	EXPANSION TANK ISOLATION
0	HV-F6250D	BALL VALVE	15	ROOM 101C	1-0101-PPID-F015-001	SECTION 23 21 13.02	
0	HV-F6250E	BALL VALVE	15	ROOM 101C	1-0101-PPID-F015-001	SECTION 23 21 13.02	
0	HV-F6250F	BUTTERFLY VALVE	100	ROOM 101C	1-0101-PPID-F015-001	SECTION 23 21 13.02	
0	HV-F6250G	BUTTERFLY VALVE	100	ROOM 101C	1-0101-PPID-F015-001	SECTION 23 21 13.02	
0	HV-F6250H	BUTTERFLY VALVE	100	ROOM 101C	1-0101-PPID-F015-001	SECTION 23 21 13.02	
0	HV-F6250J	BUTTERFLY VALVE	100	ROOM 101C	1-0101-PPID-F015-001	SECTION 23 21 13.02	
0	HV-F6250K	BUTTERFLY VALVE	100	ROOM 101C	1-0101-PPID-F015-001	SECTION 23 21 13.02	
0	HV-F6250L	BUTTERFLY VALVE	100	ROOM 101C	1-0101-PPID-F015-001	SECTION 23 21 13.02	
0	CV-F6250A	CHECK VALVE	-	ROOM 101C	1-0101-PPID-F015-001	SECTION 23 21 13.02	SIZE BASED ON DESIGN FLOW RATE
0	BV-F6250A	BALANCING VALVE	100	ROOM 101C	1-0101-PPID-F015-001	SECTION 23 21 13.02	
0	HV-F6350A	BALL VALVE	20	BUILDING 102	1-0101-PPID-F015-001	SECTION 23 21 13.02	
0	HV-F6350B	BALL VALVE	20	BUILDING 102	1-0101-PPID-F015-001	SECTION 23 21 13.02	
0	HV-F6350C	BALL VALVE	20	BUILDING 102	1-0101-PPID-F015-001	SECTION 23 21 13.02	EXPANSION TANK ISOLATION
0	HV-F6350D	BALL VALVE	15	BUILDING 102	1-0101-PPID-F015-001	SECTION 23 21 13.02	
0	HV-F6350E	BALL VALVE	15	BUILDING 102	1-0101-PPID-F015-001	SECTION 23 21 13.02	
0	HV-F6350F	BUTTERFLY VALVE	80	BUILDING 102	1-0101-PPID-F015-001	SECTION 23 21 13.02	
0	HV-F6350G	BUTTERFLY VALVE	80	BUILDING 102	1-0101-PPID-F015-001	SECTION 23 21 13.02	
0	HV-F6350H	BUTTERFLY VALVE	80	BUILDING 102	1-0101-PPID-F015-001	SECTION 23 21 13.02	
0	HV-F6350J	BUTTERFLY VALVE	80	BUILDING 102	1-0101-PPID-F015-001	SECTION 23 21 13.02	
0	HV-F6350K	BUTTERFLY VALVE	80	BUILDING 102	1-0101-PPID-F015-001	SECTION 23 21 13.02	
0	HV-F6350L	BUTTERFLY VALVE	80	BUILDING 102	1-0101-PPID-F015-001	SECTION 23 21 13.02	
0	CV-F6350A	CHECK VALVE	-	BUILDING 102	1-0101-PPID-F015-001	SECTION 23 21 13.02	SIZE BASED ON DESIGN FLOW RATE
0	BV-F6350A	BALANCING VALVE	80	BUILDING 102	1-0101-PPID-F015-001	SECTION 23 21 13.02	
0	HV-F0700D	BALL VALVE	25	ROOM 101C	1-0101-PPID-F012-001	BV01	
0	HV-F0700E	BALL VALVE	25	ROOM 101C	1-0101-PPID-F012-001	BV01	
0	HV-F0700F	BALL VALVE	25	ROOM 101C	1-0101-PPID-F012-001	BV01	
0	HV-F0700G	BALL VALVE	25	ROOM 101C	1-0101-PPID-F012-001	BV01	
0	HV-F0700H	BALL VALVE	25	ROOM 101C	1-0101-PPID-F012-001	BV01	
0	HV-F0700J	BALL VALVE	25	ROOM 101C	1-0101-PPID-F012-001	BV01	
0	HV-F0700K	BALL VALVE	25	ROOM 101C	1-0101-PPID-F012-001	BV01	
0	HV-F0700L	BALL VALVE	25	ROOM 101C	1-0101-PPID-F012-001	BV01	
0	HV-F0700M	BALL VALVE	25	ROOM 101C	1-0101-PPID-F012-001	BV01	
0	HV-F0700N	BALL VALVE	25	ROOM 101B	1-0101-PPID-F012-001	BV01	
0	HV-F0700P	BALL VALVE	25	ROOM 101B	1-0101-PPID-F012-001	BV01	
0	HV-F0700Q	BALL VALVE	25	ROOM 101B	1-0101-PPID-F012-001	BV01	
0	HV-F5120B	BALL VALVE	40	ROOM 101B	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F5120C	BALL VALVE	40	ROOM 101B	1-0101-PPID-F013-001	SECTION 22 11 16	
0	XV-F5120A	THERMOSTATIC MIXING VALVE	40	ROOM 101B	1-0101-PPID-F013-001	SECTION 22 45 00	
0	BV-F5120A	BALANCING VALVE	20	ROOM 101B	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F5121B	BALL VALVE	40	ROOM 101B	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F5121C	BALL VALVE	40	ROOM 101B	1-0101-PPID-F013-001	SECTION 22 11 16	
0	XV-F5121A	THERMOSTATIC MIXING VALVE	40	ROOM 101B	1-0101-PPID-F013-001	SECTION 22 45 00	
0	BV-F5121A	BALANCING VALVE	20	ROOM 101B	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F5220C	BALL VALVE	40	ROOM 101C	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F5220D	BALL VALVE	40	ROOM 101C	1-0101-PPID-F013-001	SECTION 22 11 16	
0	XV-F5220A	THERMOSTATIC MIXING VALVE	40	ROOM 101C	1-0101-PPID-F013-001	SECTION 22 45 00	
0	BV-F5220A	BALANCING VALVE	20	ROOM 101C	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F5221B	BALL VALVE	40	ROOM 101C	1-0101-PPID-F013-001	SECTION 22 11 16	
0	XV-F5221A	THERMOSTATIC MIXING VALVE	40	ROOM 101C	1-0101-PPID-F013-001	SECTION 22 45 00	
0	BV-F5221A	BALANCING VALVE	20	ROOM 101C	1-0101-PPID-F013-001	SECTION 22 11 16	

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Rev	Valve Tag	Valve Type	Valve Size	Location	P&ID	Valve Spec Code (Refer to)	Comments
0	HV-F5110A	BALL VALVE	40	ROOM 101A	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F5110B	BALL VALVE	20	ROOM 101A	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F5110C	BALL VALVE	40	ROOM 101C	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F5110D	BALL VALVE	20	ROOM 101C	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F5110E	BALL VALVE	20	ROOM 101C	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F5110F	BALL VALVE	40	ROOM 101C	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F5110G	BALL VALVE	40	ROOM 101C	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F5110H	BALL VALVE	40	ROOM 101B	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F5110I	BALL VALVE	40	BUILDING 101	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F5110J	BALL VALVE	40	ROOM 101B	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F5110K	BALL VALVE	32	ROOM 101B	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F5110L	BALL VALVE	32	ROOM 101B	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F5110M	BALL VALVE	20	ROOM 101B	1-0101-PPID-F013-001	SECTION 22 11 16	WATER HEATER DRAIN
0	HV-F5110N	BALL VALVE	32	ROOM 101B	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F5110P	BALL VALVE	20	ROOM 101B	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F5110Q	BALL VALVE	32	ROOM 101B	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F5110R	BALL VALVE	20	ROOM 101B	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F5110S	BALL VALVE	15	ROOM 101B	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F5110T	BALL VALVE	15	ROOM 101B	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F5110U	BALL VALVE	20	ROOM 101B	1-0101-PPID-F013-001	SECTION 22 11 16	
0	CV-F5110A	CHECK VALVE	32	ROOM 101B	1-0101-PPID-F013-001	SECTION 22 11 16	
0	CV-F5110B	CHECK VALVE	20	ROOM 101B	1-0101-PPID-F013-001	SECTION 22 11 16	
0	HV-F6110A	BALL VALVE	40	ROOM 101A	1-0101-PPID-F014-001	SECTION 23 11 23	
0	HV-F6110B	BALL VALVE	50	ROOM 101B	1-0101-PPID-F014-001	SECTION 23 11 23	
0	HV-F6110C	BALL VALVE	32	ROOM 101B	1-0101-PPID-F014-001	SECTION 23 11 23	
0	HV-F6140A	BALL VALVE	20	ROOM 101B	1-0101-PPID-F014-001	SECTION 23 11 23	
0	HV-F6141A	BALL VALVE	20	ROOM 101B	1-0101-PPID-F014-001	SECTION 23 11 23	
0	HV-F6210A	BALL VALVE	50	ROOM 101C	1-0101-PPID-F014-001	SECTION 23 11 23	
0	HV-F6210B	BALL VALVE	50	ROOM 101C	1-0101-PPID-F014-001	SECTION 23 11 23	
0	HV-F6420A	BALL VALVE	15	ROOM 101C	1-0101-PPID-F014-001	SECTION 23 11 23	
0	HV-F6421A	BALL VALVE	15	ROOM 101C	1-0101-PPID-F014-001	SECTION 23 11 23	
0	HV-F6422A	BALL VALVE	15	ROOM 101C	1-0101-PPID-F014-001	SECTION 23 11 23	
0	HV-F6423A	BALL VALVE	15	ROOM 101C	1-0101-PPID-F014-001	SECTION 23 11 23	
0	HV-F0600A	BALL VALVE	40	BUILDING 102	1-0101-PPID-F017-001	SECTION 22 15 00	
0	HV-F0601A	BALL VALVE	25	BUILDING 102	1-0101-PPID-F017-001	SECTION 22 15 00	
0	HV-F0601B	BALL VALVE	25	BUILDING 102	1-0101-PPID-F017-001	SECTION 22 15 00	
0	HV-F0601C	BALL VALVE	15	BUILDING 102	1-0101-PPID-F017-001	SECTION 22 15 00	
0	HV-F0601D	AIR HOSE COUPLING	25	BUILDING 102	1-0101-PPID-F017-001	SECTION 22 15 00	
0	HV-F0601E	AIR HOSE COUPLING	25	BUILDING 102	1-0101-PPID-F017-001	SECTION 22 15 00	
0	HV-F0602A	BALL VALVE	25	BUILDING 102	1-0101-PPID-F017-001	SECTION 22 15 00	
0	HV-F0602B	BALL VALVE	25	BUILDING 102	1-0101-PPID-F017-001	SECTION 22 15 00	
0	HV-F0602C	BALL VALVE	15	BUILDING 102	1-0101-PPID-F017-001	SECTION 22 15 00	
0	HV-F0602D	AIR HOSE COUPLING	25	BUILDING 102	1-0101-PPID-F017-001	SECTION 22 15 00	
0	HV-F0602E	AIR HOSE COUPLING	25	BUILDING 102	1-0101-PPID-F017-001	SECTION 22 15 00	
0	HV-F5320C	BALL VALVE	40	BUILDING 102	1-0101-PPID-F018-001	SECTION 22 11 16	
0	HV-F5320D	BALL VALVE	40	BUILDING 102	1-0101-PPID-F018-001	SECTION 22 11 16	
0	XV-F5320A	THERMOSTATIC MIXING VALVE	40	BUILDING 102	1-0101-PPID-F018-001	SECTION 22 45 00	
0	BV-F5320A	BALANCING VALVE	20	BUILDING 102	1-0101-PPID-F018-001	SECTION 22 11 16	
0	HV-F5321B	BALL VALVE	40	BUILDING 102	1-0101-PPID-F018-001	SECTION 22 11 16	
0	HV-F5321C	BALL VALVE	40	BUILDING 102	1-0101-PPID-F018-001	SECTION 22 11 16	
0	XV-F5321A	THERMOSTATIC MIXING VALVE	40	BUILDING 102	1-0101-PPID-F018-001	SECTION 22 45 00	

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Rev	Valve Tag	Valve Type	Valve Size	Location	P&ID	Valve Spec Code (Refer to)	Comments
0	BV-F5321A	BALANCING VALVE	20	BUILDING 102	1-0101-PPID-F018-001	SECTION 22 11 16	
0	HV-F5310A	BALL VALVE	40	BUILDING 102	1-0101-PPID-F018-001	SECTION 22 11 16	
0	HV-F5310B	BALL VALVE	20	BUILDING 102	1-0101-PPID-F018-001	SECTION 22 11 16	
0	HV-F5310C	BALL VALVE	32	BUILDING 102	1-0101-PPID-F018-001	SECTION 22 11 16	
0	HV-F5310D	BALL VALVE	32	BUILDING 102	1-0101-PPID-F018-001	SECTION 22 11 16	
0	HV-F5310E	BALL VALVE	20	BUILDING 102	1-0101-PPID-F018-001	SECTION 22 11 16	WATER HEATER DRAIN
0	HV-F5310F	BALL VALVE	32	BUILDING 102	1-0101-PPID-F018-001	SECTION 22 11 16	
0	HV-F5310G	BALL VALVE	20	BUILDING 102	1-0101-PPID-F018-001	SECTION 22 11 16	WATER HEATER DRAIN
0	HV-F5310H	BALL VALVE	20	BUILDING 102	1-0101-PPID-F018-001	SECTION 22 11 16	
0	HV-F5310J	BALL VALVE	15	BUILDING 102	1-0101-PPID-F018-001	SECTION 22 11 16	
0	HV-F5310K	BALL VALVE	15	BUILDING 102	1-0101-PPID-F018-001	SECTION 22 11 16	
0	HV-F5310L	BALL VALVE	20	BUILDING 102	1-0101-PPID-F018-001	SECTION 22 11 16	
0	HV-F5310M	BALL VALVE	40	BUILDING 102	1-0101-PPID-F018-001	SECTION 22 11 16	
0	HV-F5310N	BALL VALVE	40	BUILDING 102	1-0101-PPID-F018-001	SECTION 22 11 16	
0	HV-F5310O	BALL VALVE	40	BUILDING 102	1-0101-PPID-F018-001	SECTION 22 11 16	
0	CV-F5310A	CHECK VALVE	32	BUILDING 102	1-0101-PPID-F018-001	SECTION 22 11 16	
0	CV-F5310B	CHECK VALVE	20	BUILDING 102	1-0101-PPID-F018-001	SECTION 22 11 16	
0	HV-F6310A	BALL VALVE	40	BUILDING 102	1-0101-PPID-F019-001	SECTION 23 11 23	
0	HV-F6310B	BALL VALVE	25	BUILDING 102	1-0101-PPID-F019-001	SECTION 23 11 23	
0	HV-F6340A	BALL VALVE	15	BUILDING 102	1-0101-PPID-F019-001	SECTION 23 11 23	
0	HV-F6341A	BALL VALVE	15	BUILDING 102	1-0101-PPID-F019-001	SECTION 23 11 23	
0	HV-F6342A	BALL VALVE	15	BUILDING 102	1-0101-PPID-F019-001	SECTION 23 11 23	
0	HV-F5010A	GATE VALVE	40	DEWATERING	1-0101-PPID-F020-001	SECTION 22 15 00	
0	CV-F5010A	CHECK VALVE	40	DEWATERING	1-0101-PPID-F020-001	SECTION 22 15 00	

Valve Specification Index

1	2022-07-05	Re-Issued for Construction	AF	
0	2022-05-18	Issued for Construction	JP	RC
Revision	Date	Issued For	By	Approved
City of Winnipeg				
NEWPCC Interim Phosphorous Removal				
Doc. No.:	LST-M-006		Revision	1

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Project Name: NEWPCC Interim Phosphorous Removal
 Project Number: 21-0107-015
 Client: City of Winnipeg
 Document No: LST-M-006
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 Rev: 1

Valve Specifications Index



Rev	Valve Spec. No	Size Range	Service	Piping Material Class	Type	Pressure Rating	End Connection	Body		Closure Element		Seat Material	Stem Material	Packing/Body Gasket	Operator	Notes	Acceptable Products (or Approved Equal)
								Material	Design & Construction	Material	Design						
0	BV01	15mm - 50mm (1/2" - 2")	FSW SEA	CU01	Ball	850 kPag @ 120°C	Female Threaded	Bronze or Forged Brass	2-piece	Bronze or Chrome Plated Brass	Full port ball	PTFE	Stainless Steel	EPDM	lever w/ locking device	blowoutproof ball and stem required	Kitz Fig 88 Crane 8302 Toyo Fig 5044A Watts B6100/B6000
0	BV06	15mm - 65mm (1/2" - 2-1/2")	FC SHD	PV04 PV05 PE03	Ball	850 kPag @ 600°C	Female Threaded, Schedule 80, True Union	PVC	3-piece	PVC - floating ball	Full port ball	PTFE	PVC	O Ring, EPDM or Viton	lever w/ locking device	blowoutproof ball and stem required	Chemline CTU, Safe Bloc Hayward, Safe Bloc Nibco Tru-Block PVC Fabco Superbloc
0	BV07	80mm - 100mm (3" - 4")	FC SHD	PV04 PV05 PE03	Ball	850 kPag @ 600°C	Flanged, Schedule 80	PVC	3-piece	PVC - floating ball	Full port ball	PTFE	PVC	O Ring, EPDM or Viton	lever w/ locking device	blowoutproof ball and stem required	Chemline CTU, Safe Bloc Hayward, Safe Bloc Nibco Tru-Block PVC Fabco Superbloc
0	CV01	15mm - 50mm (1/2" - 2")	FSW	CU01	Check, swing	850 kPag @ 50°C	Female Threaded	Bronze	Bolted cover	Bronze	Swing disc	Bronze	N/A	N/A	Stainless steel hinge pin		Crane 37 Kitz No. 22 Jenkins 4082 Toyo 236
0	CV05	15mm - 50mm (1/2" - 2")	SEA	CU01	Check, swing	1400 kPag @ 120°C	Female Threaded	Bronze	Bolted cover	Bronze	Swing disc	Bronze	N/A	N/A	Stainless steel hinge pin		Crane 137 Kitz No. 29 Jenkins 4475 Toyo Fig 236
0	CV09	15mm - 50mm (1/2" - 2")	FC SHD	PV04 PV05 PE03	Check, ball	1034 kPag @ 50°C	Female Threaded, Schedule 80, True Union	PVC	1-piece	Floating Ball	Ball	EPDM	PVC	O Ring, EPDM or Viton	N/A	spring loaded ball	Chemline BT Series
0	CV10	65mm - 100mm (2-1/2" - 4")	FC SHD	PV04 PV05 PE03	Check, ball	1034 kPag @ 50°C	Flanged, Schedule 80	PVC	1-piece	Floating Ball	Ball	EPDM	PVC	O Ring, EPDM or Viton	N/A	spring loaded ball	Chemline BC Series
1	GV01	80mm - 300mm (3" - 12")	PD	PV02	Gate, wastewater service	850 kPag @ 50°C	150# Flanged	PVC	1-piece	Polypropylene	Gate	EPDM	PVC / Steel Core	EPDM	Square operating nut	Suitable for below grade and submerged service. Provide chemical resistant extension shaft (PVC with Steel Core) and handle for operation of valve at main floor. All hardware shall be titanium.	Chemline CGA Series Gate Valves
1	PV01	80mm - 300mm (3" - 12")	WAS	PV02	Plug valve, wastewater service	1210kPag	150# Flanged	Cast Iron	1-piece	Cast Iron	Plug	Nickel	Stainless Steel	NBR	Hand wheel with worm gear	Rectangular port construction with resilient faced cylindrical plug.	DeZurik, Eccentric Plug Valve

Tie-In Points List

0	2022-05-18	Issued For Construction	JP	<i>JP</i>
Revision	Date	Issued For	By	Approved
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Client: City of Winnipeg
Document No: LST-M-007
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Rev: 0



Tie-In Points List

Rev	Tie-In Point Number	Service	Location	Comments	Reference Drawings
0	01	Compressed Air	Building 101		1-0101-MGAD-F204-001, 1-0101-PPFD-F001-001, 1-0101-PPID-F001-001
0	02	Ferric Chloride	Building 101		1-0101-MGAD-F211-001, 1-0101-PPFD-F001-001, 1-0101-PPID-F001-001
0	03	Domestic Cold Water	Building 101		1-0101-MGAD-F204-001, 1-0101-PPID-F013-001
0	04	Ferric Chloride	Dewatering Building	Existing Centrifuge Centrate	1-0101-MGAD-F216-001, 1-0101-PPID-F011-001
0	05	Domestic Cold Water	Dewatering Building	Basement	1-0101-MGAD-F216-001, 1-0101-PPID-F018-001
0	06	Compressed Air	Dewatering Building	Basement	1-0101-MGAD-F216-001, 1-0101-PPID-F017-001
0	07	Ferric Chloride (DP 1.4)	Trucked Sludge	Injection Ring	1-0101-MGAD-D102-001, 1-0101-PPFD-F003-001, 1-0101-PPID-D002-001
0	08	Sodium Hydroxide (DP 1.6)	Trucked Sludge	Injection Ring	1-0101-MGAD-D102-001, 1-0101-PPFD-F003-001, 1-0101-PPID-D002-001
0	09	Ferric Chloride (DP 2.1A)	Piping Gallery No.6	Waste Activated Sludge (Primary and Bypass Lines)	1-0101-MGAD-G014-001, 1-0101-PPFD-F003-001, 1-0101-PPID-G013-001
0	10	Potable Water	Junction Chamber		1-0101-MGAD-Y301-001
0	11	Natural Gas	Building 101		1-0101-MGAD-F208-001, 1-0101-PPID-F014-001
0	12	Natural Gas	Building 102		1-0101-MGAD-F202-001, 1-0101-PPID-F019-001
0	13	Compressed Air	Dewatering Building	Mechanical Room Second Floor	1-0101-MGAD-F214-001
0	14	Ferric Chloride (DP 4.1,4.2,4.3)	Junction Chamber		1-0101-PPFD-F003-001, 1-0101-MGAD-Y301-001
0	15	Sodium Hydroxide (DP 1.5A)	Primary Sludge	Injection Ring	1-0101-MGAD-D102-001, 1-0101-PPFD-F003-001, 1-0101-PPID-D001-001
0	16	Potable Water	Piping Gallery No.6	Required for Emergency Shower	1-0101-MGAD-G014-001
0	17	Sanitary Drainage	Building 101	Under Road North of Existing Railcar Shelter 1	Civil Drawing
0	18	Sanitary Drainage	Building 102	Under Road North of Existing Railcar Shelter 1	Civil Drawing
0	19	Natural Gas	Building 101	At pressure regulator	1-0101-MGAD-F208-001, 1-0101-PPID-F014-001
0	20	Ferric Chloride (DP 2.1B)	Piping Gallery No.6	Waste Activated Sludge (Primary and Bypass Lines)	1-0101-MGAD-G014-001, 1-0101-PPFD-F003-001, 1-0101-PPID-G013-001
0	21	Sodium Hydroxide (DP 1.5B)	Primary Sludge	Injection Ring	1-0101-MGAD-D102-001, 1-0101-PPFD-F003-001, 1-0101-PPID-D001-001