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**POOL EQUIPMENT SCHEDULE**

ITEM	MANUFACTURER/MODEL	DESCRIPTION	CAPACITY	ELECTRIC	NOTES
POOL PUMPS	PAADO PUMP #50957	END SUCTION, SINGLE STAGE CENTRIFUGAL TYPE PUMP (EPOXY FUSED COATED)	862 GPM @ 70' TDH EACH PUMP	25 HP, 480 V, 3 PHASE 1750 RPM	INTERLOCK WITH CHEMICAL CONTROLLER
POOL FILTERS	PARAGON AQUATICS #526-120-12ST	STACKED, HORIZONTAL, HI-RATE FIBERGLASS SAND FILTER, C-STYLE	35 SQUARE FOOT FILTER AREA EACH FILTER	N/A	STACKED FILTERS 42" X 120"
POOL WATER HEAT EXCHANGER (HE-1)	BELL AND GOSSETT #JUNUS 5-4 6	SHELL AND TUBE WATER-TO-WATER HEAT EXCHANGER	REFER TO POOL PIPING DIAGRAM FOR CAPACITIES		MOUNTED ON A UNISTRUT STAND
STRAINERS	MERMAID #FO SERIES	FIBERGLASS CONSTRUCTION HAIR AND LINT STRAINER WITH STAINLESS STEEL BASKET AND AEROLIC 10		N/A	
CONTROLLER	CHEMTRON #PC3000	PROGRAMMABLE CHEMICAL CONTROLLER TO AUTOMATICALLY CONTROL POOL CHEMISTRY		120 V, 60 HZ, SINGLE PHASE	INTERLOCK WITH BUILDING MANAGEMENT SYSTEM (BMS)
PH CONTROL	MVE, INC. #5-3528-0M750	HIGH FLOW CO <sub>2</sub> DELIVERY SYSTEM STAINLESS STEEL, DOUBLE WALL CONSTRUCTION, ASME DESIGN	771 LBS STORAGE/ EACH 15 LBS PER HOUR DELIVERY	N/A	INJECTION CONTROLLED BY CHEMICAL CONTROLLER
SANITATION	VANTAGE #916-85	COMMERCIAL STYLE BROMINATORS HEAVY-DUTY FIBERGLASS TANK, GRANULAR	290 lbs TANK CAPACITY/ EA	N/A	SOLENOID VALVE CONTROLLED BY CHEMICAL CONTROLLER
SANITATION	VANTAGE POLY-A #PVF-12	AID THE COAGULATION AND REMOVAL OF ORGANIC AND NON ORGANIC COMPOUNDS	CALIBRATE FLOW, 12 lbs CAPACITY	N/A	CONTROLLED BY BALL VALVE
OZONE	CLEARWATER TECH #OZ12000	OZONE GENERATOR	162 GRAMS / HR 1.23 PPM/MG/L SIZES/STREAM INJECTION RATE	208V 1 PH 16.0 AMPS	
	CLEARWATER TECH #OXS215	OXYGEN GENERATOR SYSTEM	90 SCFH; 90% PURE OXYGEN		
	CLEARWATER TECH #PUBS2/MAG19	SIDE STREAM BOOSTER DUMP (EPOXY FUSED COATED)	110 GPM @ 60 TDH	208/480V 3PH; 3 HP	
	CLEARWATER TECH #M248/OXAC65	OZONE INJECTION MANIFOLDS - CUSTOMS	2" VALVED VENTURI INJECTOR W/ Z" BYPASS WITH BUILT-IN UNIONS		
	CLEARWATER TECH #ONC10/35	CONTACT VESSELS	40 GALLON		
	CLEARWATER TECH #VASS	STAINLESS STEEL OFF GAS VENT			
SPARGER	CLEARWATER TECH #OOD12	OZONE OFF GAS DESTRUCT	THERMAL CATALYTIC O <sub>2</sub> NE DESTRUCT SYSTEM W/ WATER TRAP	120V, 1PH	
	QUINCY #QR-25	AIR COOLED, TWO STAGE RECIPROCATING AIR COMPRESSOR WITH VERTICAL STORAGE TANK	90.4 ACFM @ 175 PSIG 600 GALLON TANK	25 HP, 480V/3/60	TANK SIZE: 42" x 117" HEAD: CONTROL, LINT

**PLUMBING EQUIPMENT SCHEDULE**

ITEM	MAKE & MODEL NUMBER (OR APPROVED EQUAL)	DESCRIPTION	CAPACITY	ELECTRICAL CHARACTERISTICS	NOTES
WATER HEATER (WH-1 & WH-2)	A. O. SMITH #LW-1000	GAS FRED, HOT WATER SUPPLY BOILER 90% THERMAL EFFICIENCY	1091 GPM @ 100' TEMP RISE/ EA 1,000 MBH EACH/ 7' VENT EA	120V FOR CONTROLS	GUARANTEE MINIMUM THERMAL EFFICIENCY @ DESIGN CONDITIONS FOR THIS PROJECT: 90%
STORAGE TANK (ST-1)	A. O. SMITH #F24-750	GLASSED LINED, JACKETED INSULATED ASME, HOT WATER STORAGE TANK	750 GALLONS STORAGE CAPACITY		DOMESTIC SYSTEM
EXPANSION TANK (ET-1)	AMTROL #ST-60V-C	DOMESTIC HOT WATER THERMAL EXPANSION ASME CONSTRUCTED TANK	25 GALLONS TANK VOLUME		DOMESTIC SYSTEM
WATER SOFTENER SYSTEM	CULLIGAN #BRO/3R-210-2	DUPLEX WATER SOFTENER SYSTEM	102 GPM @ 25 PSI DROP PEAK LOAD	120V FOR CONTROLS	
BACKFLOW PREVENTOR (BFP-1 & BFP-2)	WATTS #909 SERIES - 2 1/2"	REDUCE PRESSURE BACKFLOW PREVENTOR BUILDING SERVICE	102 GPM @ 14 PSI DROP EACH		AIR GAP ASSEMBLY #909-AG-F
BACKFLOW PREVENTOR (BFP-3)	WATTS #909 SERIES - 1"	REDUCE PRESSURE BACKFLOW PREVENTOR HVAC SYSTEM MAKE-UP	20 GPM @ 10 PSI DROP		AIR GAP ASSEMBLY #909-AG-C
BACKFLOW PREVENTOR (BFP-4)	WATTS #909 SERIES - 2 1/2"	REDUCE PRESSURE BACKFLOW PREVENTOR POOL SYSTEM MAKE-UP	75 GPM @ 14 PSI DROP		AIR GAP ASSEMBLY #909-AG-F
BACKFLOW PREVENTOR (BFP-5)	WATTS #909 SERIES - 2"	REDUCE PRESSURE BACKFLOW PREVENTOR LAWN IRRIGATION SYSTEM	75 GPM @ 8 PSI DROP		AIR GAP ASSEMBLY #909-AG-F
CIRCULATION PUMP (COP-1)	BELL & GOSSETT #P035	IN-LINE DOMESTIC HOT WATER CIRCULATING PUMP	5 GPM @ 20 PSI DROP	1/3 HP, 115/230V	AQUASTAT; PUMP ON: 117' PUMP OFF: 120'
CIRCULATION PUMP (COP-2)	BELL & GOSSETT #P035	IN-LINE DOMESTIC HOT WATER CIRCULATING PUMP	5 GPM @ 20 PSI DROP	1/3 HP, 115/230V	AQUASTAT; PUMP ON: 137' PUMP OFF: 140'
MIXING VALVE (TMV-1)	SYMONS #5-700	THERMOSTATIC MIXING VALVE	5.0 GPM @ 15 PSI DROP		
MIXING VALVE (TMV-2)	SYMONS #5-120	THERMOSTATIC MIXING VALVE	0.5 GPM MINIMUM FLOW, 10 PSI DROP @ 6 GPM		FOR INFRARED FAUCETS
MIXING VALVE (TMV-3)	SYMONS #5-120	THERMOSTATIC MIXING VALVE	0.5 GPM MINIMUM FLOW, 10 PSI DROP @ 6 GPM		FOR INFRARED FAUCETS
DUPLEX SEWAGE EJECTOR SYSTEM	AS #AFP084MZZ/4	DUPLEX CAST IRON SEWAGE EJECTOR PUMP ASSEMBLY WITH CONTROL PANEL	90 GPM @ 24' TDH	3 HP, 480V, 3PH EACH	48" x 10'-0" FIBERGLASS BASIN

**PLUMBING FIXTURE ROUGH-IN SCHEDULE**

ITEM	DESCRIPTION	ROUGH-IN CONNECTIONS						
		COLD WATER	HOT WATER	TEMPERED WATER	TRAP	WASTE	VENT	FINISHED RESET
P-1	WATER CLOSET - WALL HUNG, FLUSH VALVE	1"			INTEGRAL	4"	2"	15"
P-2	WATER CLOSET - WALL HUNG, FLUSH VALVE, ADAAG	1"			INTEGRAL	4"	2"	17"
P-3	URNAL - WALL HUNG	3/4"			INTEGRAL	2"	1 1/2"	24"
P-4	URNAL - WALL HUNG, ADAAG	3/4"			INTEGRAL	2"	1 1/2"	17"
P-5	LAVATORY - COUNTERTOP (BATTERY POWERED INFRARED)			1/2"		1 1/2"	1 1/2"	NOTE 1
P-6	ELECTRIC WATER COOLER - "H/A/O" - REMOTE CHILLER	1/2"			1 1/2"	1 1/2"	1 1/2"	36" LOW 42" HIGH
P-7	MOP SERVICE BASIN	3/4"	3/4"		3"	3"		NOTE 2
P-8	KITCHEN SINK	1/2"	1/2"		1 1/2"	1 1/2"	1 1/2"	NOTE 1
P-9	SWIM SUIT SPIN DRYER				1 1/2"	1 1/2"	1 1/2"	NOTE 5
P-10	RECESSED DRINKING FOUNTAIN	1/2"			1 1/2"	1 1/2"	1 1/2"	30"
P-11	WALL HYDRANT - INTERIOR	3/4"						24"
P-12	SHOWER	1/2"	1/2"					NOTE 3
P-13	SHOWER - ADAAG	1/2"	1/2"					NOTE 4
P-14	SHOWER - DIVING PLATFORM	1/2"	1/2"					78"
P-15	BAR SINK	1/2"	1/2"		1 1/2"	1 1/2"	1 1/2"	NOTE 1
P-16	CLOTHES WASHER HOSE CONNECTION	3/4"	3/4"					
P-17	HOSE BIBB	3/4"						30"
P-18	WALL HYDRANT - NON FREEZE	3/4"						24"

- NOTES:  
1. MOUNT SINK IN COUNTERTOP.  
2. MOUNT FAUCET 36" ABOVE FINISH FLOOR.  
3. SHOWER HEAD HEIGHT:  
MENS: 6'-6"  
WOMENS: 6'-4"  
4. HAND HELD SHOWER HEAD ON 30" ADJUSTABLE ROD.  
5. ROUGH-IN WASTE FOR UNIT PER MANUFACTURERS RECOMMENDATIONS.

**DRAINAGE FITTING SCHEDULE**

ITEM	MAKE/MODEL	DESCRIPTION	LOCATION
DD-1	ZURN #Z-1726	STAINLESS STEEL ADJUSTABLE FLOOR DRAIN	POOL DECK
FD-1	ZURN #ZM-455-B	CAST IRON BODY WITH INTEGRAL TRAP, SIDE OUTLET, ADJUSTABLE POLISHED NICKEL BRONZE STRAINER, INTEGRAL CLEANOUT	FINISHED AREAS, TOILET ROOMS, ON GRADE
FD-2	ZURN #ZB-541 W/ #Z-1012	HEAVY DUTY DRAIN CAST IRON BODY, SLOTTED GRATE AND SEDIMENT BUCKET WITH DEEP SEAL TRAP W/ FLOOR CLEANOUT	UNFINISHED AREAS, MECHANICAL & STORAGE ROOMS ON GRADE
FD-3	ZURN #ZB-507	MEDIUM DUTY DRAIN, CAST IRON BODY SLOTTED GRATE, BOTTOM OUTLET	UNFINISHED AREAS, MECHANICAL ROOMS, ABOVE GRADE
FS-1	ZURN #ZM-566	CAST IRON BODY, BOTTOM OUTLET, POLISHED NICKEL BRONZE SLOTTED HALF GRATE	MECHANICAL ROOM
OSD-1	ZURN #ZB-455-B W/ #Z-328	CAST IRON BODY WITH INTEGRAL TRAP, SIDE OUTLET, ADJUSTABLE POLISHED BRONZE STRAINER WITH FUNNEL	UNFINISHED/ FINISHED AREAS, ON GRADE
ORD-1	ZURN #Z-100-R-C-89	ROOF DRAIN WITH UNDER DECK CLAMP, CAST IRON DOME STRAINER, 2" HIGH DAM SUMP RECEIVER	ROOF LEVEL
RD-1	ZURN #Z-100-R-C	ROOF DRAIN WITH UNDER DECK CLAMP, CAST IRON DOME STRAINER, SUMP RECEIVER	ROOF LEVEL
SD-1	ZURN #ZM-415	CAST IRON BODY SLOTTED GRATE, BOTTOM OUTLET, NICKEL BRONZE TOP	SHOWER DRAIN

**WATER HAMMER ARRESTOR SCHEDULE**

P. D. I. SYMBOL	FIXTURE UNIT RATING	PIPE SIZE
(A)	1 - 11	3/4"
(B)	12 - 32	1"
(C)	33 - 60	1"
(D)	61 - 113	1"
(E)	114 - 154	1"
(F)	155 - 330	1"

**POOL EQUIPMENT KEY INDEX**

KEY	DESCRIPTION	QUANTITY
1	MAIN DRAIN - 24" X 48"	3
2	FLOAT VALVE	1
3	HAIR/LINT STRAINER	3
4	CIRCULATION PUMP	3
5	HI-RATE SAND FILTERS	6
6	SENSOR CELL ASSEMBLY	1
7	CHEMICAL CONTROLLER	1
8	BROMINATOR	2
9	CO SYSTEM/TANKS	3
10	POOL HEATER	1
11	POLY-A FEEDER	1
12	OZONE SYSTEM	1
13	WATER LEVEL SENSOR	1
14	FLOW SENSOR	2
15	GAS MONITOR	1
16	SPARGER SYSTEM	1
17	SPARGER AIR FLENUM	4
18	SPARGER CONTROL PANEL	1
19	INLET FITTING	76
20	ANTI-VORTEX FITTING	3

**PIPE SLEEVE/LINK SEAL SCHEDULE**

ITEM	PIPE SIZE	SLEEVE MODEL	LINK SEAL SIZE NO.	LINKS PER SEAL	COMMENTS
1	3/4"	WS-2 1/2-20-S-A	LS-275	5	POLY-A PIPING
2	2 1/2"	WS-4-25-S-A	LS-200	9	OZONE PIPING
3	3/4"	WS-2 1/2-20-S-A	LS-275	5	CHEMICAL SAMPLING PIPING
4	10"	WS-14-37-S-A	LS-425	10	PUMP SECTION
5	4"	WS-6-28-S-A	LS-300	10	POOL MAKE-UP WATER
6	12"	WS-16-37-S-A	LS-425	12	GUTTER PIPING
7	14"	WS-18-37-S-A	LS-400	13	MAIN DRAIN PIPING
8	3/4"	WS-2 1/2-20-S-A	LS-275	5	WATER LEVEL CONTROL CONDUIT
9	12"	WS-16-37-S-A	LS-425	12	POOL RETURN PIPING
10	4"	WS-6-28-S-A	LS-300	10	SURGE TANK VENT
11	2"	WS-4-25-S-A	LS-200	9	WATER AGITATOR PIPING

- NOTES:  
1. \* = VERIFY EXACT WALL THICKNESS.  
2. REFER TO DRAWINGS FOR EXACT LOCATION AND QUANTITY OF SLEEVES.



CERTIFICATION  
**CONSTRUCTION DOCUMENTS**

**CARDINAL PARK NATATORIUM**

**UNIVERSITY OF LOUISVILLE**

Project: 03006  
Drawn: TERRY GUNN  
Checked: GREG CHAMPION  
Scale: AS NOTED  
Issue Date: AUGUST 28, 2003  
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**SCHEDULES PLUMBING**

**P501**