

- 1)
- h. Automatic Level Control Mode:
- 1) The controls shall start and stop the one of the pumps as the Lead Pump and start and stop the second pump, as the Lag Pump respectively based on wetwell level and the activation of the float switches.
 - 2) The lead pump shall alternate after each run cycle.
 - 6) In the event that a pump failure alarm occurs during a start or while in operation, an alarm shall be indicated and logged on the SCADA System. The pump shall be locked out of the sequence until the alarm is manually cleared and reset by the operator. The other pump shall start as the lead immediately.

C. RTU I/O:

- 1 PUMP 1 RUNNING
- 2 PUMP 2 RUNNING
- 3 PLC OK
- 4 PUMP 1 FAULT
- 5 PUMP 2 FAULT
- 6 ESTOP ACTIVE
- 7 POWER FAIL
- 8 PUMP 1 SEAL FAIL
- 9 HIGH HIGH WETWELL FLOAT SWITCH ALARM
- 10 HIGH WETWELL FLOAT
- 11 LOW WETWELL FLOAT
- 13 OPERATOR ASSIST
- 14 PUMP 2 SEAL FAIL
- 15 SITE INTRUSION
- 16 FLOW METER
- 17 WETWELL LEVEL FROM RADAR LEVEL TRANSMITTER

3.03 EQUIPMENT SCHEDULES

TABLE A - Control Panels, PLC Control Panels, Network Comm Panels

Control Panels, PLC Control Panels, Network Communication Panels with construction, features, software and hardware as specified previously, shown on the drawings and I/O list, shall be provided to monitor and control at the specified locations:				
TAG	LOCATION	ENCLOSURE	PLC & COMMUNICATIONS	NOTES
Pump Control Panel	Big Ridge No. 2 Pump Station	Nema 4X SS with Dead Front Panel, 3pt latch		(2) 1.5HP, XXX VAC, 3P, NEMA 0 contactor with OL. Provide generator plug compatible with the city's portable generator and mechanical walking beam interlock between the breakers. Provide intrinsic safety barriers for float switches SCADA RTU connections Dry contacts to field per I/O list
RTU	Big Ridge No. 2 Pump Station	Nema 4	Motorola ACE3600 Controller; Ports:2 Ethernet, 2 RS-232 1 Modem/Radio Port APX6500li 800 MHz radio.	

TABLE B - INSTRUMENTATION SCHEDULE

INSTRUMENTATION WITH CONSTRUCTION, FEATURES, SOFTWARE AND HARDWARE AS SPECIFIED PREVIOUSLY, SHALL BE PROVIDED TO MONITOR AND CONTROL AT THE SPECIFIED LOCATIONS:				
TAG	LOCATION	SIZE/TYPE	CAL. RANGE	NOTES
LIT- 101	PS Wetwell	Radar Level Transducer	0–_40_ Feet	Provide termination box and gortex filter for vent tube
LSL-101	PS Wetwell	Float Switch		Low Level Alarm
LSH-101	PS Wetwell	Float Switch		High Level Alarm
LSHH-102	PS Wetwell	Float Switch		High Level Alarm
FIT-101	PS Flow Meter	Mag flow meter	0 – 4000 GPM	ABB Watermaster

END OF SECTION