

Re-Use Water Pump Station  
468-85112 (620784)  
Change Order #2 Attachment

Summary of Mechanical Change Orders:

Roof Hatch Hardware .....	\$525.00
The roof hatches provide access to pulling pumps out of the building. The hatches ordered per plans opened 70 degrees. This does not allow access to the pumps due to the roof pitch, so new hardware was supplied to open the hatches 110 degrees.	
Back Flow Preventer .....	\$565.00
MABCD changed the back flow preventer from the Watts 009 to the better quality Watts 909 to allow two vacuum breakers.	
Chlorine Room Layout Changes .....	\$1,897.50
The chemical feed room lay out changed as equipment was stationed in the room. Field adjustments were made to the location of the water heater, eye-wash station, chlorine injection pump, chemical tanks, and salt brine storage system to allow improved access and maintenance by waste water treatment plant staff. The overall change provides better visibility to equipment in the room which allows easier operations.	
Eyewash and Water Heater Changes .....	\$977.50
Original plans show the eyewash station discharging to a splash block outside the building, which will ice up in the winter time. The plans also did not provide a drain for the backflow preventer, which emits water from time to time. These systems were re-plumbed to drain to a 4" floor drain inside the chemical feed room which discharges to the wet well.	
Total Mechanical	\$3,965.00

Summary of Electrical Change Orders:

EF 3-Phase Breaker Change .....	\$529.00
This request is in recognition of the price adjustment of changing the single phase breakers to three phase breakers for both EF-1 & EF-2. Breaker change per HVAC submittal 7.19.16.	
Wet well Room Pump Heater .....	\$1,485.80
This change provides and installs (3) 120V 20A circuits in overhead GRC conduit from Panel PSL to Wet Well Room for pump heaters, (3) 30mm on/off selector switches in local disconnects, and installs circuits in in slab power conduit to motor connection for termination of heatersxis.	
Re-use Brine Pump .....	\$943.00
Provide and install relay in box in MCC room. Provide and install power conduit and wire from MCC room to pump location.	
Re-use Revised Layout .....	\$1,990.65
Rework and extend power and control conduits and wire from East wall equipment in original layout to new locations on the West wall.	
Bleach Pump Skid .....	\$6,237.60
Install furnished NEMA-1 VFD's remote mounted in MCC Room. -Provide and install power conduit and wire from panelboard through VFD to Bleach Pump Skid. -Provide and install VFD control conduit and cabling from VFD's to Bleach Pump Skid for Rupture Disk. -Provide and install control conduit and cabling from VFD's to SCADA Panel. -Provide terminations and labeling of control wiring.	
Bleach Pump Start up Motor Rewire .....	\$300.15
Provide startup assistance for Bleach Pump Skid. Provide motor troubleshooting and voltage rewiring of skid motors from 480V to 208V.	
ASO Generator Cabinet Communications Cabling .....	\$285.20
Provide and install cabling for Ethernet communication from SCADA panel to (2) OSG Generator Cabinets.	
Bleach Tank Level Communications to SCADA Panel .....	\$929.20
Provide startup assistance for Bleach Pump Skid. Provide and install control conduit and cabling from level controller on bleach tanks to the SCADA Panel.	
Thermostat NEMA 4X Covers .....	\$331.20
Provide and install NEMA 4X cover for wash down protection of thermostats.	
Total Electrical	\$13,011.80
CO #2 TOTAL	\$16,976.80