



WATER TREATMENT PLANT - PARTIAL PLAN, UPPER LEVEL
SCALE: 1/4" = 1'

- GENERAL NOTES:**
- SEE SHEET #42, ONE-LINE DIAGRAM & INTERCONNECTIONS FOR SCHEDULE OF CONTROL SIGNALS TO BE WIRED TO THE FILTER CONTROL PANEL "FCP"
 - ALL CONDUIT IN FILTER ROOM TO BE SCHEDULE-40 PVC OR NON-METALLIC FLEXIBLE UNLESS OTHERWISE NOTED, ALL OTHER AREAS TO BE RGS
 - MINIMUM SIZE OF CONDUIT IS 3/4"
 - RUN CONDUCTORS OF DIFFERING VOLTAGES IN SEPARATE CONDUIT. VOLTAGE LEVELS ARE AS FOLLOWS:
 - VALVE POWER - 480 VAC, 3 ϕ
 - INSTRUMENT POWER - 120 VAC, 1 ϕ
 - LIGHTS & RECEPTACLES POWER - 120 VAC, 1 ϕ
 - ANALOG CONTROL SIGNALS - 24 VDC
 - DIGITAL CONTROL SIGNALS - MATCH EXISTING SYSTEM VOLTAGE LEVEL AND PHASE
 - ALL PROPOSED CONDUCTORS TO BE THE FOLLOWING:
 - VALVE POWER - (3) #12 + (1) #12 GND
 - ALL 120 VAC WIRING - (2) #12 + (1) #12 GND
 - ALL CONTROL SIGNALS - A SINGLE CAT6 ETHERNET CABLE TO EACH VALVE CONTROLLER, BELDEN #7940A OR EQUAL
 - PROPOSED 20A RECEPTACLES - (2) #12 + (1) #12 GND

- CODED NOTES:**
- REPLACE SIEMENS 50 HP SOFT STARTER WITH 60 HP VFD INSIDE MCC-E.
 - REPLACE SIEMENS 60 HP SOFT STARTER WITH 60 HP VFD INSIDE MCC-E.
 - REPLACE SIEMENS 100 HP SOFT STARTER WITH 100 HP VFD INSIDE MCC-E.
 - RUN CONTROL CONDUCTORS AND CABLES FOR VFDs TO EXISTING LOCAL CONTROL PANEL C "LP-C". COORDINATE WITH SYSTEMS INTEGRATOR TO ADD HARDWARE DEVICES AS NEEDED PER EXAMPLE DIAGRAM ON SHEET #42, E-09 TO LP-C AS WELL AS RTU C. SYSTEMS INTEGRATOR TO MODIFY PLC & SCADA PROGRAMS TO CONTROL NEW PUMP VFDs.
 - DISCONNECT WIRING FROM EXISTING 50 HP PUMP MOTOR AND REMOVE ENTIRE RUN FROM MOTOR TO MCC-E. RUN NEW CONDUCTORS FOR 60 HP MOTOR IN EXISTING CONDUIT, TEST INSULATION OF CONDUCTORS AND MOTOR WINDINGS, AND TERMINATE AT MOTOR JUNCTION BOX. (3) #3 + (1) #8 GND
 - DISCONNECT WIRING FROM EXISTING MOTOR. TEST INSULATION OF CONDUCTORS, AND CONNECT TO NEW 60 HP PUMP INSTALLED IN SAME LOCATION.
 - DISCONNECT WIRING FROM EXISTING MOTOR. TEST INSULATION OF CONDUCTORS, AND CONNECT TO NEW 100 HP PUMP INSTALLED IN SAME LOCATION.
 - VALVE ACTUATOR 480V POWER DISTRIBUTION PANEL "LP-EV". SIEMENS P1 SERIES WITH 42 CIRCUITS, CAT# P1-F-42-ML-100-A-T-S OR APPROVED EQUAL. SEE SHEET #43, E-10 FOR PANEL SCHEDULE. ALL CIRCUIT BREAKERS TO BE PROVIDED WITH LOCKOUT PROVISIONS FOR ACTUATOR MAINTENANCE PER NEC.
 - ADD 35A CIRCUIT BREAKER TO SPARE SECTION OF EXISTING MCC-E TO FEED LP-EV WITH (3) #10 + (1) #12 GND IN 3/4" CONDUIT.
 - EFFLUENT VALVE #1,2,3,4; CONDUCTORS:
 - VALVE POWER
 - DIGITAL SIGNALS

- DISCRETE VALVES
 - OPEN-AUTO-CLOSE SELECTOR SWITCH
 - GREEN "OPEN" AND RED "CLOSED" PILOT LIGHTS
 - PROPORTIONAL VALVE
 - HAND-AUTO SELECTOR SWITCH
 - OPEN POSITION POTENTIOMETER, 0 - 100%
 - "% OPEN" 4-DIGIT 7-SEGMENT DISPLAY, 0.0 - 100.0
 - BACKWASH WATER FLOW METER
 - FLOW, 5-DIGIT 7-SEGMENT DISPLAY, 0.0 - 1000.0 GPM
- REPLACE DAMAGED HMI SCREEN ON RTU C

BID

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REV	DESCRIPTION	DATE
4	ADDENDUM 3	4/09/2020

ISSUED FOR:	REVIEW	ISSUE DATE:	SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
		03/13/2020	1" = 8'	JPB	JPB	NSS

VILLAGE OF CADIZ, OHIO
WATER TREATMENT PLANT HAB IMPROVEMENTS
HARRISON COUNTY
WATER TREATMENT PLANT
CADIZ, OHIO
POWER & INSTRUMENTATION - UPPER LEVEL

PROJECT NO.	190599
DISCIPLINE	ELECTRICAL
SHEET NAME	E-06
SHEET	OF
39	46

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