

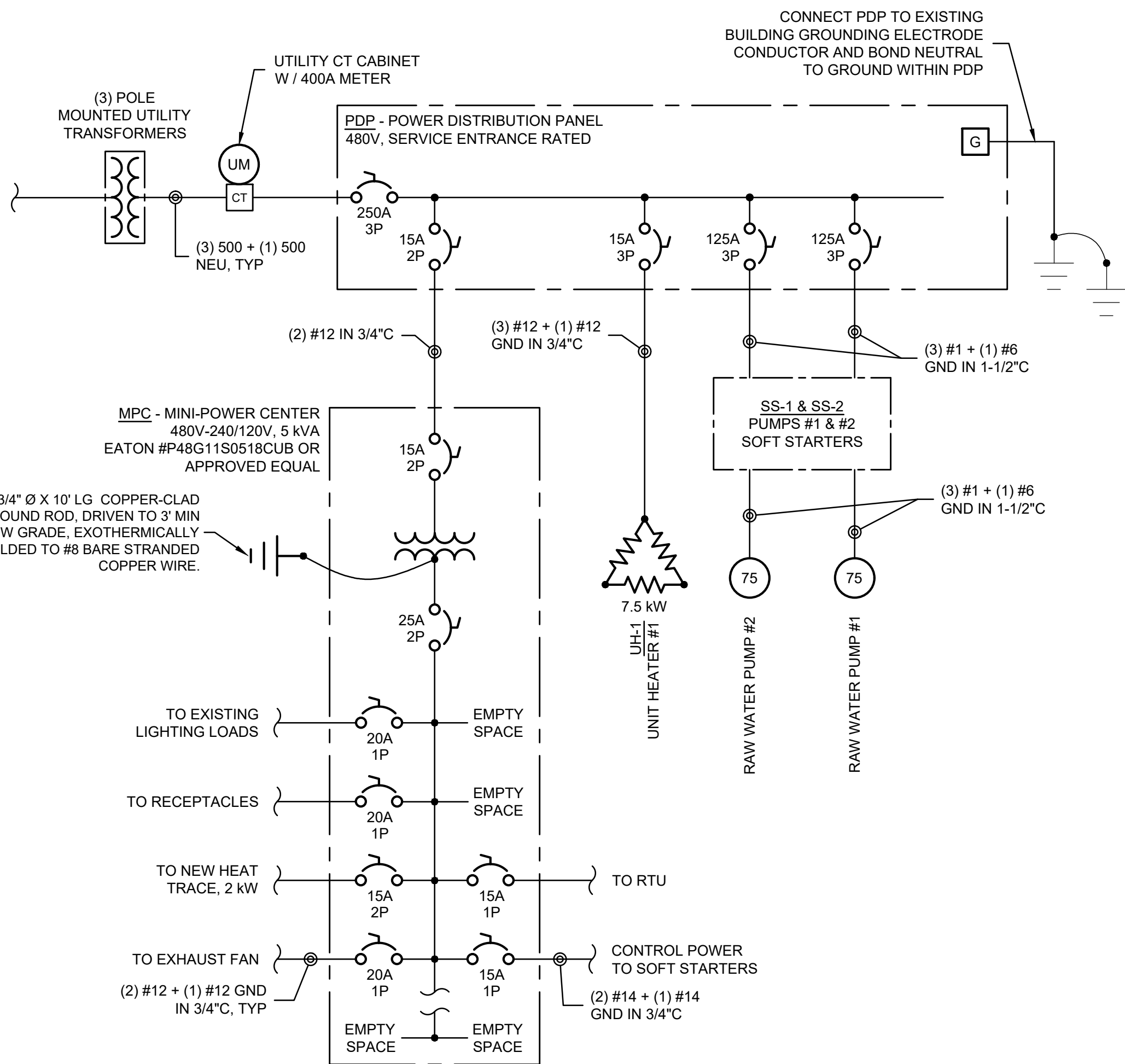
**PUMP STATION #2 PLAN**

SCALE: 1/2" = 1'

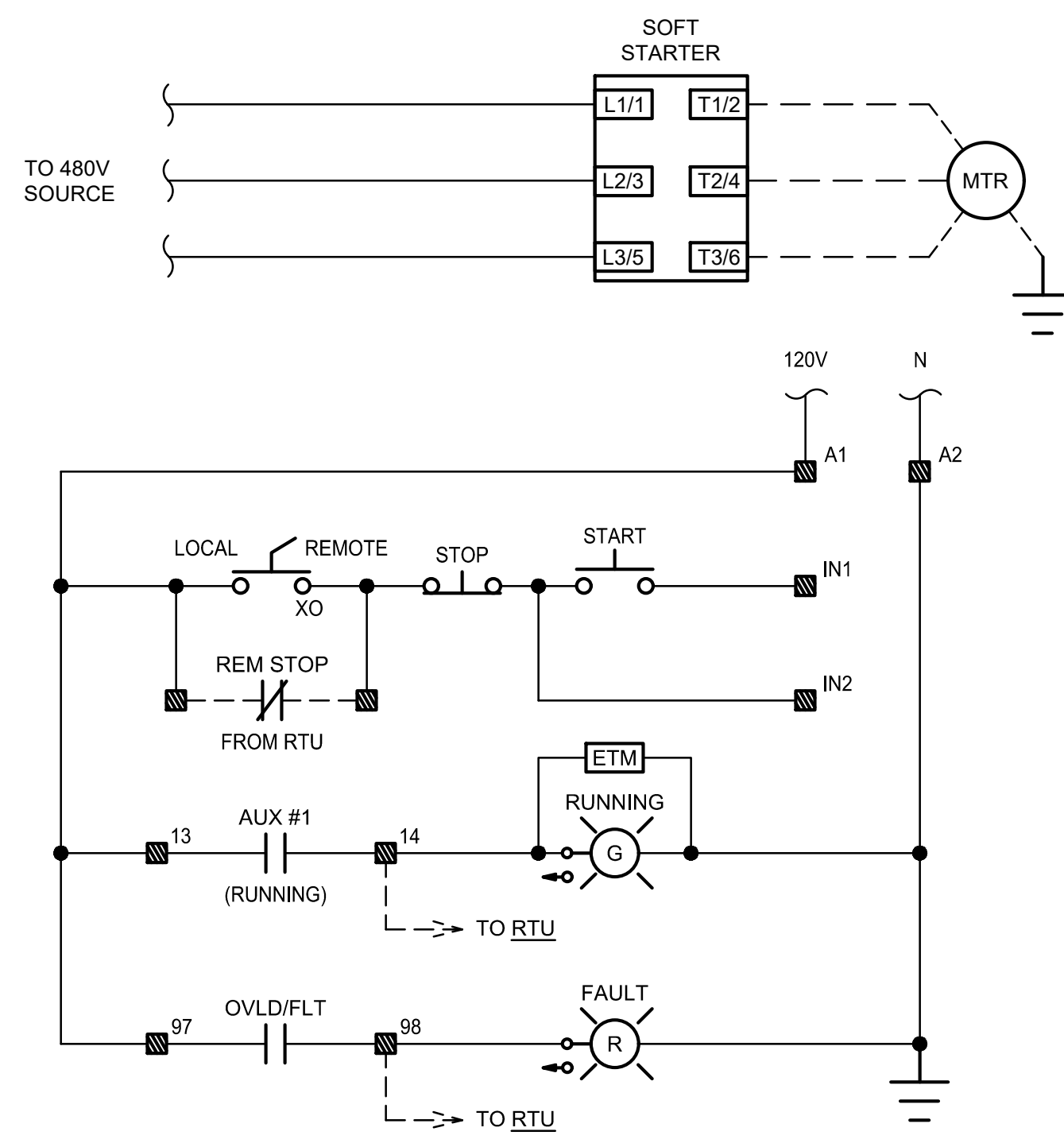


**SITE PLAN**

SCALE: 1" = 40'



**PROPOSED ONE-LINE DIAGRAM**



**SOFT STARTER 3-WIRE MOTOR CONTROL CIRCUIT**

NOTE: **xx** = TERMINALS ON THE SOFT STARTER CONTROLLER  
UNDESIGNATED TERMINALS ARE ADDED FOR USE WITH RTU.

**GENERAL NOTES:**

- EXISTING EQUIPMENT BASED ON DRAWING SET BY WILLIAM D. McCULLOUGH DATED SEPTEMBER, 1990, AS WELL AS CHANGES NOTED DURING SITE VISITS.
- CAP AND ABANDON IN PLACE ALL UNDERGROUND CONDUIT CONTAINING EXISTING FEEDERS TO BE REMOVED UNLESS OTHERWISE NOTED.
- ALL PROPOSED UNDERGROUND DUCT BANKS TO UTILIZE 48" SWEEPS, MINIMUM.
- DEMOLISH ALL EXISTING EQUIPMENT SLATED FOR REPLACEMENT INCLUDING CONDUIT WITHIN PUMP STATION #2. RETAIN SERVICE RISER CONDUIT AND WEATHERHEAD IF POSSIBLE.

**CODED NOTES - PROPOSED:**

- AMERICAN ELECTRIC POWER (AEP) TO UPGRADE SERVICE TO 400A, 480V, 3 $\phi$ , 4W
- NEW 400A CT CABINET AND UTILITY METER PER AEP SPECIFICATIONS, MOUNTED TO BUILDING EXTERIOR WITH STAINLESS STEEL FASTENERS. BE SURE TO INSTALL METER SOCKET BELOW WESTERN WINDOW AND GLASS BLOCKS.
- NEW HEAT TRACE AROUND INTAKE PIPE, 240V, 1 $\phi$ , 8 W / FT. INSTALL FROM UPPER ELBOW AT END OF PIER TO GROUND PENETRATION IN DAM, SPIRAL WRAPPED WITH 16" PITCH. CONTROLLER AND POWER JUNCTION BOX LOCATED AT SOUTH END OF RUN.
- NEW POWER DISTRIBUTION PANEL, 400A, SERVICE ENTRANCE RATED. WIRE TO EXISTING BUILDING GRIDDING AND BOND TO NEUTRAL.
- PUMP MOTORS COMMON SOFT STARTER CONTROL CABINET, WALL MOUNTED, NEMA 12.
  - SOFT STARTERS TO BE ALLEN-BRADLEY SMC-3 MODEL# 150-C135NBD OR APPROVED EQUALS
  - 3-WIRE CONFIGURATION WITH "START" & "STOP" PUSHBUTTONS
  - LOCAL-REMOTE SELECTOR SWITCHES
  - GREEN "RUNNING" AND RED "FAULT" PILOT LIGHTS
  - OVERLOAD DIAL SET TO MOTOR FLA OR LOWEST SETTING POSSIBLE, WHICH EVER IS HIGHER
  - OVERLOAD RESET DOOR EXTENSION WITH PUSHBUTTON
  - ELAPSED TIME MONITOR
  - EXTERIOR WARNING LABEL DECLARING MULTIPLE SOURCES OF POWER FOR EACH PUMP AS WELL AS CONTROL POWER. LABEL TO LIST CIRCUIT DESIGNATIONS FOR EACH SOURCE.
- NEW PUMP MOTORS, 3 $\phi$ , 480V, 75 HP
- NEW UNIT HEATER, 3 $\phi$ , 480V, 7.5 kW. WIRE TO NEW REMOTE THERMOSTAT SET FOR 50°F
- NEW MINI-POWER CENTER (MPC), 1 $\phi$ , 5 kVA 480V-240/120V TRANSFORMER. EATON #P48G11S0518CUB OR APPROVED EQUAL.
- REPLACE EXISTING FIXTURE WITH NEW LED WALL PACK, WIRE TO EXISTING LIGHTING CONTACTOR WITH PHOTOEYE.
- REPLACE EXISTING EXHAUST FAN IN KIND WITH EXISTING THERMOSTAT. SEE ONE-LINE DIAGRAM FOR WIRING DETAILS.
- REPLACE EXISTING LIGHT BULBS WITH NEW LED TYPE, 900 LUMEN OUTPUT EACH, MINIMUM.
- EXISTING REMOTE SCADA CONTROLLER (RTU). COORDINATE WITH SYSTEMS INTEGRATOR (SI) TO WIRE REMOTE CONTROL AND MONITORING SIGNALS FOR SOFT STARTERS. SI TO DETERMINE HARDWARE CHANGES, CONTRACTOR TO INSTALL. SI TO MAKE PROGRAM CHANGES NECESSARY TO SEND NEW SIGNALS TO SCADA NETWORK.

**BID**

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planners

REVISIONS	DATE	DESCRIPTION
1	4/08/2020	ADDENDUM 3

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  
SPARROW RESERVOIR PUMP STATION  
CADIZ, OHIO  
ELECTRICAL SITE PLAN, DETAILS & DIAGRAMS

PROJECT NO.	190599
DISCIPLINE	ELECTRICAL
SHEET NAME	E-11
SHEET	OF
44	46