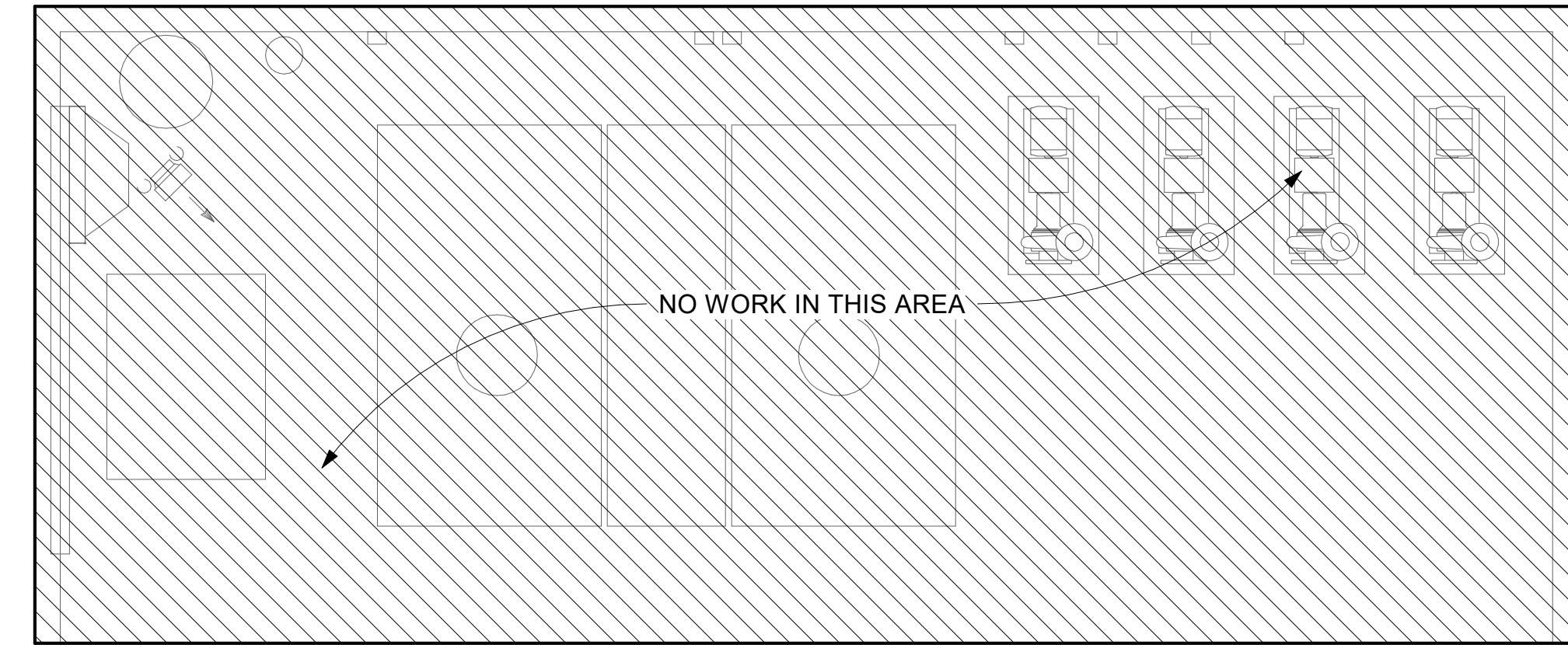


MCC-N

BLANK
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EXISTING CT-3 FAN MOTOR
EXISTING CHILLER #3

MCC-1

CT-1B BASIN HEATER	(NOTE 1) NEW CT-1B CONTROL PANEL	(NOTE 7) NEW CT-1A BASIN HEATER
	(NOTE 5) NEW CT-1A CONTROL PANEL	EXISTING CWP-3 PUMP MOTOR
EXISTING CHILLER #2	CT-1 FAN MOTOR	EXISTING CWP-2 PUMP MOTOR
	(NOTE 3) NEW CT-1B BASIN HEATER	EXISTING CWP-1 PUMP MOTOR
EXISTING CHILLER #1	EXISTING EF-2	(NOTE 7) NEW CT-1A BASIN HEATER



EXISTING MOTOR CONTROL CENTERS -

2 NEW WORK  
E201 SCALE: NOT TO SCALE

GENERAL NOTES:

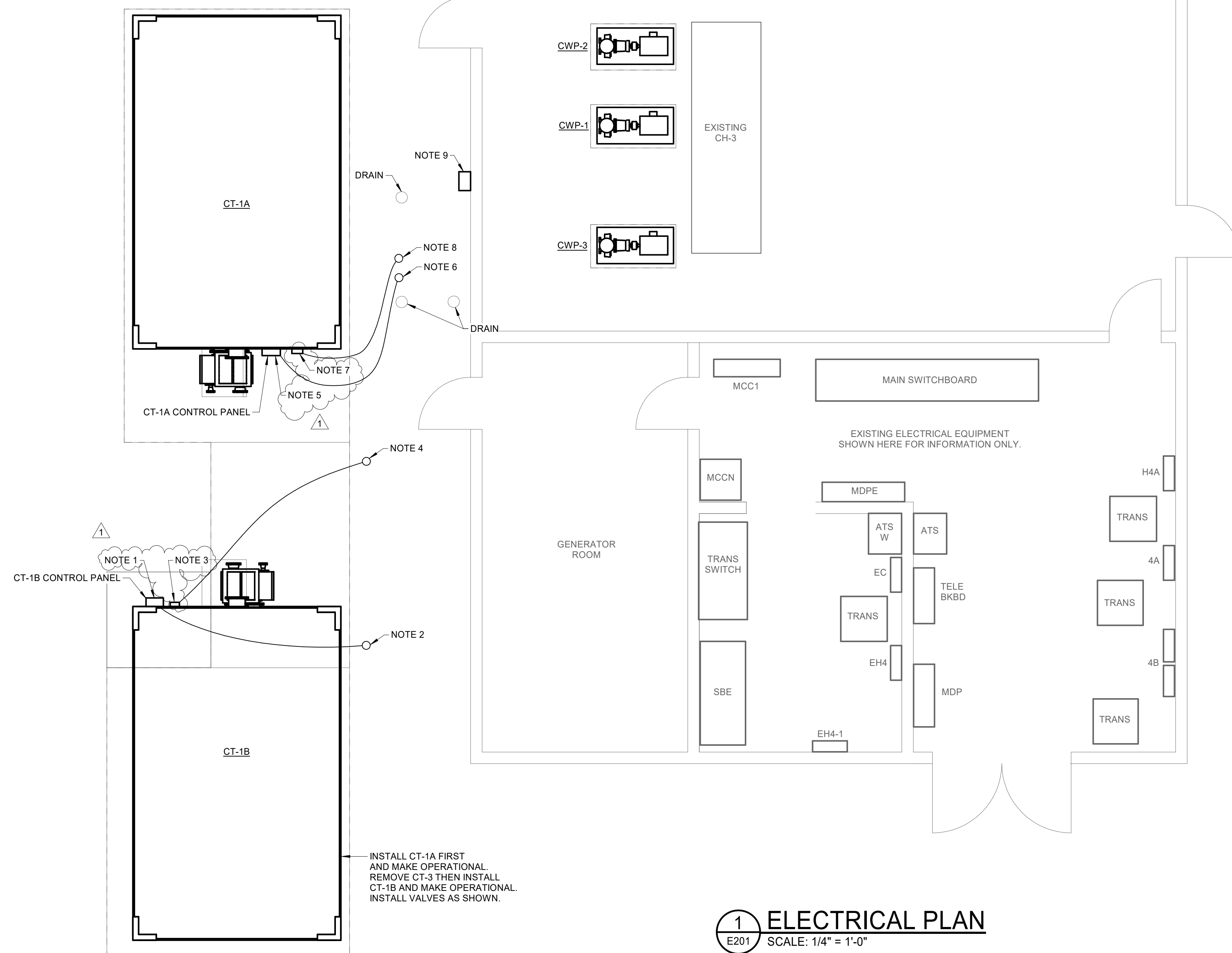
- THE WORK SHALL COMPLY WITH THE 2017 NATIONAL ELECTRIC CODE (N.E.C).
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH MECHANICAL DRAWINGS AND SPECIFICATIONS FOR EXACT LOCATIONS AND ELECTRICAL REQUIREMENTS OF EQUIPMENT PRIOR TO PLACING BID.
- CONTRACTOR SHALL VISIT THE SITE AND EXAMINE EXISTING CONDITIONS BEFORE SUBMITTING BID. THE CONTRACTOR SHALL NOT RECEIVE ADDITIONAL PAYMENT ABOVE BID PRICE FOR ANY WORK THAT CAN BE INFERRED THROUGH OBSERVATION OF EXISTING CONDITIONS.
- INTERFACE NEW CONDUIT AND WIRING WITH EXISTING AND MODIFY EXISTING AS REQUIRED. PROVIDE JUNCTION BOX AT INTERFACE BETWEEN NEW AND EXISTING.
- PROVIDE SUPPORT CHANNEL FRAME FOR MOUNTING DISCONNECTS WHEN WALL MOUNTING IS NOT AVAILABLE. AVOID MOUNTING DISCONNECT DIRECTLY ON EQUIPMENT HOUSINGS.
- REFER TO ELECTRICAL DEMOLITION NOTES ON SHEET E101.
- CONTRACTOR SHALL REUSE EXISTING HEAT TAPE CIRCUIT FOR NEW HEAT TAPE INSTALLATION. REFER TO MECHANICAL DRAWINGS AND SPECIFICATIONS FOR EXACT LOCATIONS. CONTRACTOR SHALL EXTEND CONDUIT/CONDUCTORS WHERE REQUIRED.
- REFER TO MECHANICAL DRAWINGS AND SPECIFICATIONS FOR PROJECT PHASING OF DEMOLITION AND CONSTRUCTION OPERATIONS.
- ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUIT AND RACEWAY FOR ANY NEW MECHANICAL CONTROL SYSTEM CABLING. COORDINATE WITH MECHANICAL CONTRACTOR, MECHANICAL PLANS, AND MECHANICAL SPECIFICATIONS FOR EXACT REQUIREMENTS.

SECTION 26 2041 - MOTOR CONTROL CENTERS

- MODIFY EXISTING MOTOR CONTROL CENTERS AS SHOWN ON THE DRAWINGS.
- MANUFACTURERS: PROVIDE PRODUCTS PRODUCED BY ONE OF THE FOLLOWING: GENERAL ELECTRIC COMPANY, SIEMENS, SQUARE D COMPANY, CUTLER HAMMER.
- COMPLY WITH APPLICABLE UL, NEMA, AND ANSI PUBLICATIONS PERTAINING TO MOTOR CONTROL CENTERS.
- SUBMITTALS: REFER TO SECTION 260120 FOR ADDITIONAL REQUIREMENTS.
- VOLTAGE RATING: 480V, 3-PHASE.
- PROVIDE MOLDED CASE CIRCUIT BREAKERS WHERE INDICATED FOR FEEDER PROTECTION. BREAKERS SHALL BE OF FIXED CONSTRUCTION.
- ALL CIRCUIT BREAKERS SHALL HAVE U.L. LISTED AVAILABLE INTERRUPTING RATING OF NOT LESS THAN 65,000 R.M.S. SYMMETRICAL AMPS AT SYSTEM VOLTAGE.

NOTES:

- CT-1B CONTROL PANEL. FURNISH AND INSTALL NEW 480V, 70A/3P CIRCUIT BREAKER IN EXISTING LOCATION. ROUTE NEW CONDUCTORS: (3)#4 AND #8G. UTILIZE EXISTING CONDUIT IF POSSIBLE. OTHERWISE PROVIDE NEW 1" O.D. GR. ROUTE CIRCUIT VIA NEW NEMA 1 VFD MOUNTED INSIDE THE MECHANICAL ROOM. FIELD VERIFY LOCATION AND ENSURE THAT NEC ARTICLE 110 REQUIRED WORKING CLEARANCES ARE MET.
- FURNISH AND INSTALL NEW NEMA 3R JUNCTION BOX TO EXTEND EXISTING CONDUIT TO NEW CT-1B CONTROL PANEL. JUNCTION BOX SHALL COMPLY WITH ARTICLE 314 OF THE NATIONAL ELECTRIC CODE 2017.
- NEW BASIN HEATER FOR CT-1B. FURNISH AND INSTALL NEW 480V, 20A/3P CIRCUIT BREAKER IN EXISTING LOCATION. ROUTE NEW CONDUCTORS: (3)#10 AND #10G. UTILIZE EXISTING CONDUIT IF POSSIBLE. OTHERWISE PROVIDE NEW 1" O.D. GR. BASIN HEATER SHALL BE WIRED TO THE BASIN HEATER CONTROL PANEL IN THE FIELD. THE BASIN HEATER CONTROL PANEL SHALL BE FIELD MOUNTED. COORDINATE EXACT ELECTRICAL REQUIREMENTS WITH EQUIPMENT BEING INSTALLED.
- FURNISH AND INSTALL NEW NEMA 3R JUNCTION BOX TO EXTEND EXISTING CONDUIT TO NEW CT-1A BASIN HEATER. JUNCTION BOX SHALL COMPLY WITH ARTICLE 314 OF THE NATIONAL ELECTRIC CODE 2017.
- CT-1A CONTROL PANEL. FURNISH AND INSTALL NEW 480V, 70A/3P CIRCUIT BREAKER IN EXISTING LOCATION. ROUTE NEW CONDUCTORS: (3)#4 AND #8G. UTILIZE EXISTING CONDUIT IF POSSIBLE. OTHERWISE PROVIDE NEW 1" O.D. GR. ROUTE CIRCUIT VIA NEW NEMA 1 VFD MOUNTED INSIDE THE MECHANICAL ROOM. FIELD VERIFY LOCATION AND ENSURE THAT NEC ARTICLE 110 REQUIRED WORKING CLEARANCES ARE MET.
- FURNISH AND INSTALL NEW NEMA 3R JUNCTION BOX TO EXTEND EXISTING CONDUIT TO NEW CT-1A CONTROL PANEL. JUNCTION BOX SHALL COMPLY WITH ARTICLE 314 OF THE NATIONAL ELECTRIC CODE 2017.
- NEW BASIN HEATER FOR CT-1A. FURNISH AND INSTALL NEW 480V, 20A/3P CIRCUIT BREAKER IN EXISTING LOCATION. ROUTE NEW CONDUCTORS: (3)#10 AND #10G. UTILIZE EXISTING CONDUIT IF POSSIBLE. OTHERWISE PROVIDE NEW 1" O.D. GR. BASIN HEATER SHALL BE WIRED TO THE BASIN HEATER CONTROL PANEL IN THE FIELD. THE BASIN HEATER CONTROL PANEL SHALL BE FIELD MOUNTED. COORDINATE EXACT ELECTRICAL REQUIREMENTS WITH EQUIPMENT BEING INSTALLED.
- FURNISH AND INSTALL NEW NEMA 3R JUNCTION BOX TO EXTEND EXISTING CONDUIT TO NEW CT-1A BASIN HEATER. JUNCTION BOX SHALL COMPLY WITH ARTICLE 314 OF THE NATIONAL ELECTRIC CODE 2017.
- CLOSEST EXISTING PURE PULSE SYSTEM SHALL BE EXTENDED FOR FLOW SENSORS AND CONTROL POWER. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATIONS AND REQUIREMENTS. COORDINATE WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION.



1 ELECTRICAL PLAN  
E201 SCALE: 1/4" = 1'-0"



**DULOEHY ENGINEERS**  
7400 HODGSON MEMORIAL DRIVE - SUITE 100  
SAVANNAH, GEORGIA 31406  
PHONE (912) 341-8825 FAX (912) 355-1807

CHATHAM COUNTY SHERIFF COOLING TOWER REPLACEMENT  
1050 CARL GRIFFIN DRIVE  
SAVANNAH, GA 31405  
ELECTRICAL NEW WORK PLAN

REVISION	DATE
1. ELEC. REV.	7/23/20

JOB NO. 20190095  
DATE 06.24.2020  
DESIGN MRC  
REVIEW WOW

SHEET NUMBER: E201

**SECTION 239210 - MECHANICAL TESTING, ADJUSTING, BALANCING**

**PART 1 - GENERAL**

1.1 RELATED DOCUMENTS:

- A. Drawings and general provisions of the Contract, including General and Special Conditions and Division 1 Specification Sections, apply to this Section.

1.2 QUALITY ASSURANCE:

- A. General: An independent test agency shall perform the TAB work as described herein. The agency shall have a minimum of 3 years of successful TAB experience on projects of similar size and scope. The name of the test agency and proof of satisfactory performance on 5 previous projects in the form of projects referenced shall be submitted to the Architect for approval within 30 days after receipt of the construction contract.
- B. Test Agency: A firm with membership in the *Associated Air Balance Council (AABC)* or certified by the *National Environmental Balancing Bureau (NEBB)* in those testing and balancing disciplines similar to those required for this project, who is not the Installer of the system to be tested, and is otherwise independent of the project.
- C. Compliance: Comply with AABC standards or NEBB's *Procedural Standards for Testing-Adjusting-Balancing of Environmental Systems* as applicable to mechanical air systems and associated equipment apparatus.
- D. Industry Standards: Comply with ASHRAE (*American Society for Heating, Refrigeration and Air Conditioning Engineers, Inc.*) recommendations pertaining to measurements, instruments, and testing, adjusting, and balancing except as otherwise indicated.
- E. Pre-Qualified TAB Agencies: Testing and Balancing shall be performed by one of the following firms:
  - 1. *Air Analysis of Atlanta*
  - 2. *TAB Services*
  - 3. *Thomas Balancing*
  - 4. *Georgia Balance Company*
  - 5. *Augusta Air Balance*
  - 6. *Palmetto Air & Water Balance*

1.3 SUBMITTALS:

- A. Submit 5 copies of a certified test report signed by the TAB supervisor who performed the TAB work. Test reports shall be submitted prior to the final inspection of mechanical work.
- B. Include identification and types of instruments used and their most recent calibration date with submission of final test report.
- C. In addition to balancing and operational data required to be submitted, the report shall include

any observation of unusual noise or vibration observed and any malfunction of adjustable devices encountered during the TAB work.

1.4 JOB CONDITIONS:

- A. Do not proceed with testing, adjusting and balancing work until the work to be TAB'ed has been completed and is operable. Do not proceed until work scheduled for TAB'ing is clean and free from debris, dirt, and discarded building materials.

**PART 2 - PRODUCTS**

2.1 PATCHING MATERIALS:

- A. Except as otherwise indicated, use the same products as used by original Installer for patching holes in insulation, ductwork and housing which may have been cut or drilled for test purposes, including access for test instruments, attaching jigs and similar purposes.

2.2 TEST INSTRUMENTS:

- A. Utilize test instruments and equipment for the TAB work required, of the type, precision and capacity as recommended in AABC standards or NEBB's Procedural Standards for Testing-Adjusting-Balancing of Environmental Systems.

**PART 3 - EXECUTION**

3.2 TESTING:

- A. Tester must examine the installed work and conditions under which testing is to be done to ensure that work has been completed, cleaned and is operable. Notify the Contractor in writing of conditions detrimental to the proper completion of the test-adjusting-balancing work. Do not proceed with the TAB work until unsatisfactory conditions have been corrected in a manner acceptable to Tester.
- B. Test, adjust, and balance mechanical water systems. At a minimum, the report shall document the following:
  - 1. Maximum and minimum pump GPM and head pressures.
  - 2. Cooling Tower GPM and entering / leaving water temperatures.
- C. Prepare a report of test results, including instrumentation calibration reports, in the form recommended by the applicable standards.
- D. Patch holes in insulation, ductwork and housing, which have been cut or drilled for test purposes, in a manner recommended by the original Installer.
- E. Mark equipment settings, including manual damper control positions, and similar controls and

devices, to show final settings at completion of TAB work. Provide marking with paint or other suitable permanent identification materials.

END OF SECTION 239210