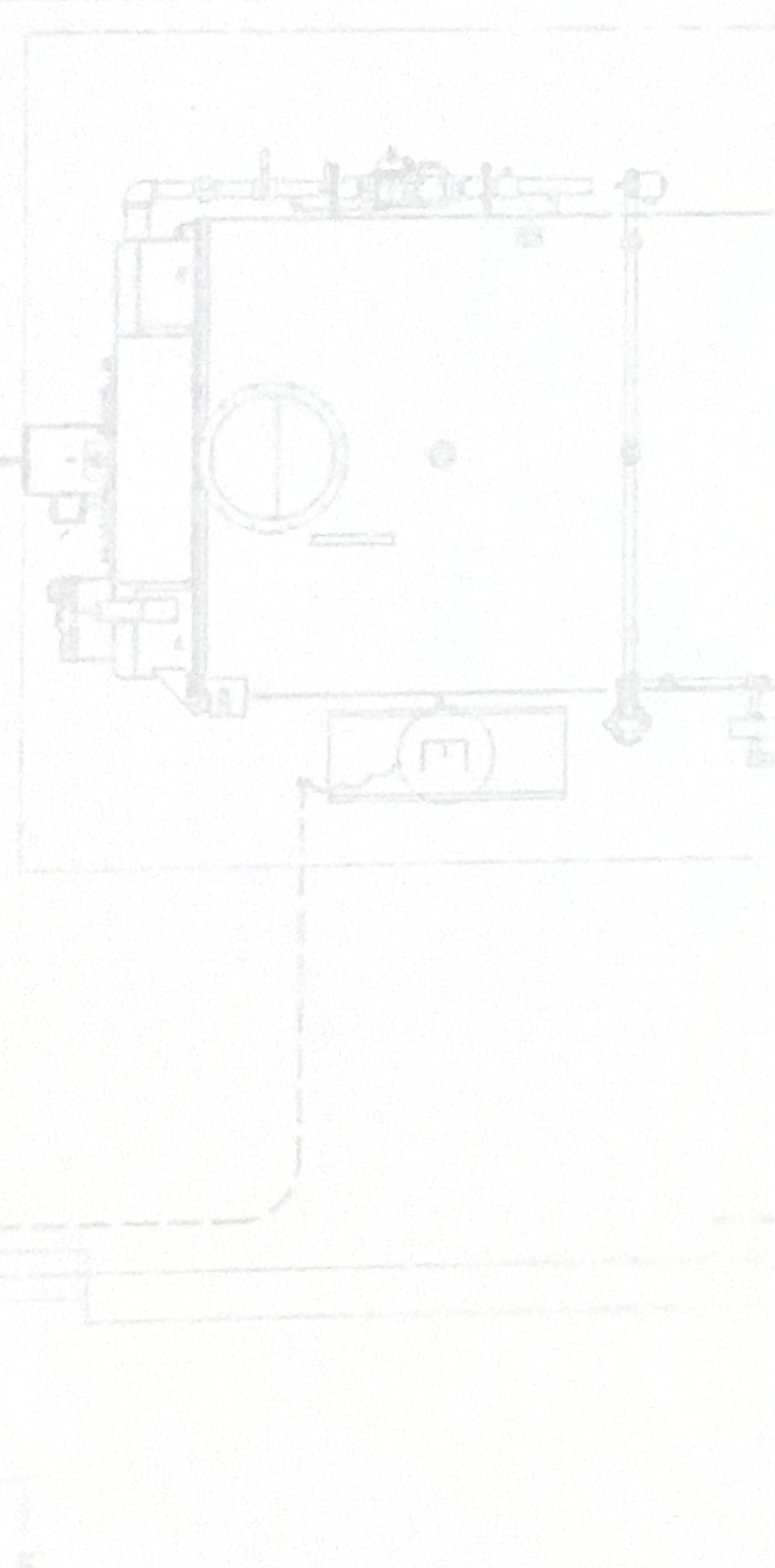


**GENERAL NOTES AND SPECIFICATIONS:**

1. ALL ELECTRICAL AND ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE NATIONAL ELECTRICAL CODE (NEC), LATEST EDITION; RULES AND REGULATIONS OF THE DEPARTMENT OF PUBLIC WORKS, AND GOVERNMENT OF GUAM.
2. WORKMANSHIP SHALL CONFORM TO CONSTRUCTION PRACTICES RECOMMENDED BY THE AMERICAN ELECTRICIAN HANDBOOK BY CROFT (LATEST EDITION) AND SHALL BE SUBJECT TO THE APPROVAL OF THE AGENCY WHO HAS JURISDICTION AND THE ENGINEER.
3. ANY DEVICE MAY BE RELOCATED FROM THE LOCATION SHOWN ON DRAWINGS PRIOR TO INSTALLATION AT THE DIRECTION OF THE ENGINEER AND AT NO ADDITIONAL COST TO THE OWNER.
4. METALLIC ENCLOSURES, RACKINGS, AND ELECTRICAL EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH REQUIREMENTS OF NEC ARTICLE 250. PROVIDE GROUND WIRE IN EVERY RACKWAY. SIZE IN ACCORDANCE WITH NEC TABLE.
5. OBTAIN AND PAY FOR PERMITS.
6. CONDUIT SHALL BE PVC (EVIDENT IN CONCRETE AND BELOW GRADE), ALUMINUM (EXPOSED INSTALLATION), EMT (DRY LOCATIONS, CONCEALED ABOVE GRADE), 3/4" MINIMUM DIAMETER UNLESS OTHERWISE NOTED.
7. WIRING SHALL BE NEC TYPE THW, THWN OR XHHW, 600V. CONDUCTORS SHALL BE COPPER.
8. TEST: TESTING IN PRESENCE OF ENGINEER. RESULTS SUBMITTED FOR APPROVAL TO ENGINEER.
  - a. OPERATION TEST
  - b. INSULATION RESISTANCE
9. ELECTRICAL WORK SHALL BE UNDER FULL SUPERVISION OF A PROFESSIONAL ELECTRICAL ENGINEER OR A MASTER ELECTRICIAN REGISTERED TO PRACTICE IN GUAM.
10. SUBSTITUTE MATERIALS TO BE EQUAL QUALITY TO SPECIFIED ITEM. IF SUBSTITUTE MATERIALS ARE PROPOSED, SUBMIT SIX (6) COPIES OF SHOP DRAWINGS FOR APPROVAL PRIOR TO ORDERING. PROVIDE SAMPLES OF SUBSTITUTE MATERIALS, IF REQUESTED TO EVALUATE QUALITY OF PROPOSED SUBSTITUTION.
11. GUARANTEE: THE ENTIRE INSTALLATION SHALL BE GUARANTEED FOR ONE YEAR AFTER ACCEPTANCE BY THE OWNER AGAINST DEFECTIVE MATERIALS AND WORKMANSHIP. WHEN NOTED BY THE OWNER OR FAILURE OF ANY PART OF THE INSTALLATION DURING THE GUARANTEE PERIOD, CONTRACTOR SHALL REPAIR OR REPLACE THE DEFECTIVE PART AT HIS OWN EXPENSE TO THE SATISFACTION OF THE OWNER.
  - A. ALL WORK SHALL BE NEATLY EXECUTED, WORKMANLIKE IN APPEARANCE, SYMMETRICAL, PLUMB, UNIFORM, PROPERLY ALIGNED AND SECURED IN PLACE.
  - B. WIRING METHODS:
    1. USE SEPARATE FLEX FOR CONNECTION TO EQUIPMENT.
    2. ATTACH TO CONCRETE AND MASONRY WITH EXPANSION ANCHORS AND TO WOOD WITH WOOD SCREWS.
    3. SUPPORT RACEWAYS PER NEC REQUIREMENT.
    4. DO NOT SUPPORT RACKINGS AND BOXES FROM AND ON MECHANICAL SYSTEMS.
    5. CABLES WILL NOT BE PERMITTED.
  - C. CONDUCTORS:
    1. MAKE SPACES IN ACCESSIBLE LOCATIONS. MAKE SPACES IN CONDUCTORS NO. 10 AWG & SMALLER DIAMETER WITH INSULATED, PRESSURE-TYPE CONNECTOR. MAKE SPACES IN CONDUCTORS NO. 8 AWG AND LARGER DIAMETER WITH SOLDERLESS CONNECTOR, AND COVER WITH INSULATION MATERIAL EQUIVALENT TO CONDUCTOR INSULATION.
    2. FORM WIRE NEATLY IN ENCLOSURES.
    3. IDENTIFY CONDUCTORS BY COLOR CODE - NEUTRAL WIRE TO BE WHITE AND GROUND WIRE TO BE GREEN.
    4. CUT, DRILL AND PATCH AS REQUIRED. REPAIR ANY SURFACES DAMAGED OR MARKED. CUTTING, REPAIRS AND REFINISHING SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT.
    5. CLEAN ALL SURFACES TO RECEIVE PAINT PRIOR TO SURFACE DAMAGED DURING INSTALLATION.
    6. REPAIR ALL SURFACES DAMAGED DURING THE INSTALLATION OF THE WORK SUBJECT TO THE APPROVAL OF THE OWNER.
    7. ALL PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE SEALED WITH APPROVED PRESTRESSING MATERIAL.
    8. PROVIDE EXPANSION/DEFLECTION FITTING FOR CONDUITS PASSING THROUGH SEISMIC JOINTS.
    9. PROVIDE CONDUIT SEAL FOR CONDUITS PASSING THROUGH AIR CONDITIONED AND NON-AIR CONDITIONED AREAS.
    1. SEISMIC CRITERIA PER IBC 2009 OCCUPANCY IMPACTANCE FACTOR = 1.25 SEISMIC DESIGN CATEGORY D.
  - K. OUTDOOR INSTALLATIONS SHALL BE RATED FOR 170 MPH WIND SPEED PER IBC 2009 EXPOSURE C AND ASCE 7-05.
  - 12. CIRCUIT BREAKERS AND SAFETY SWITCHES - GENERAL ELECTRIC, SQUARE D, ITE, WESTINGHOUSE OR CHALLENGER SAFETY SWITCH - HEAVY DUTY TYPE.
  - 13. SUBMIT SHOP DRAWING AND CALCULUS DATA FOR ALL MATERIALS FOR APPROVAL.
  - 14. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL WORK WITH THE CONTRACTING OFFICER, OTHER SUBCONTRACTORS, AND THE USING AGENCY PRIOR TO STARTING WORK.
  - 15. ANY OUTAGE OF ELECTRICAL SERVICE OR ANY OTHER SYSTEM IN ANY PART OF THE FACILITY SHALL BE REQUESTED IN WRITING AT LEAST SEVEN WORKING DAYS PRIOR TO THE DESIRED DATE OF OUTAGE FOR APPROVAL BY THE CONTRACTING OFFICER.
  - 16. EXISTING GFA SERVICE AND METERING IS SATISFACTORY AND NO CHANGES OR ADDITION IS REQUIRED.
  - 17. AT THE CONCLUSION OF THE WORK, THE CONTRACTOR SHALL INCORPORATE ALL CHANGES MADE AND RECORDED INTO THE SET OF REPRODUCIBLES IN A CLEAR, LEGIBLE AND REPRODUCIBLE MANNER AS A CONDITION FOR ACCEPTANCE OF WORK. "AS-BUILT" REPRODUCIBLES SHALL BE SIGNED BY CONTRACTOR ATTESTING THAT ALL CHANGES HAVE BEEN INCORPORATED, DATED AND DELIVERED TO THE CONTRACTING OFFICER.

**ELECTRICAL SYMBOL LIST**

EXISTING	NEW	DESCRIPTION
	ⓔ	EQUIPMENT CONNECTION
	ⓔ	EQUIPMENT DISCONNECT SWITCH, HP RATED
	ⓔ	ELECTRIC PANELBOARD
	ⓔ	SWITCHBOARD OR DISTRIBUTION CABINET
	ⓔ	FLEXIBLE CONDUIT, NUMBER OF WIRES WITHIN AS REQUIRED INCLUDING GROUND
	ⓔ	RACEWAY, CONCEALED BELOW FINISH FLOOR OR GROUND NUMBER OF WIRES WITHIN AS REQUIRED INCLUDING GROUND
	ⓔ	RACEWAY, CONCEALED IN CEILING OR WALL NUMBER OF WIRES WITHIN AS REQUIRED INCLUDING GROUND
	ⓔ	ARROW, HOMERUN TO CABINET OR PANEL AS INDICATED NUMBER OF WIRES WITHIN AS REQUIRED INCLUDING GROUND
	ⓔ	EXPOSED RACEWAY, NUMBER OF WIRES WITHIN AS REQUIRED INCLUDING GROUND
	ⓔ	INDICATOR, DETAIL: TOP HALF-DETAIL NUMBER BOTTOM HALF-SHEET NUMBER (DETAIL LOCATION)
	ⓔ	INDICATOR, RACEWAY SECTION
	ⓔ	NOTE INDICATOR
	ⓔ	AMPERE FRAME/AMPERE TRIP
	ⓔ	ABOVE FINISH FLOOR/ABOVE FINISH GRADE
	ⓔ	GROUND FAULT INTERRUPTER
	ⓔ	GROUND FAULT ALARM
	ⓔ	NON-FUSIBLE SWITCH
	ⓔ	NOT IN CONTRACT
	ⓔ	NORMALLY OPEN/NORMALLY CLOSED
	ⓔ	PROVISION FOR FUTURE BREAKER
	ⓔ	STAINLESS STEEL
	ⓔ	INDICATES WEATHERPROOF



**NEW ELECTRICAL PLAN**

REVISIONS	
No.	Date

Project:	REPLACE BOILER GUAM MEMORIAL HOSPITAL, TAMUNING, GUAM
Title:	ELECTRICAL SYMBOL LIST, GENERAL NOTES & SPECIFICATIONS
Designed:	AA
Drawn:	JD
Checked:	AA
Supv:	AA
Scaler:	NONE
Date:	JULY 8, 2019
Project No.:	61K1902
AutoCAD File:	61K1902E-1
Drawing No.:	E-1
Sheet No.:	2 of XXX

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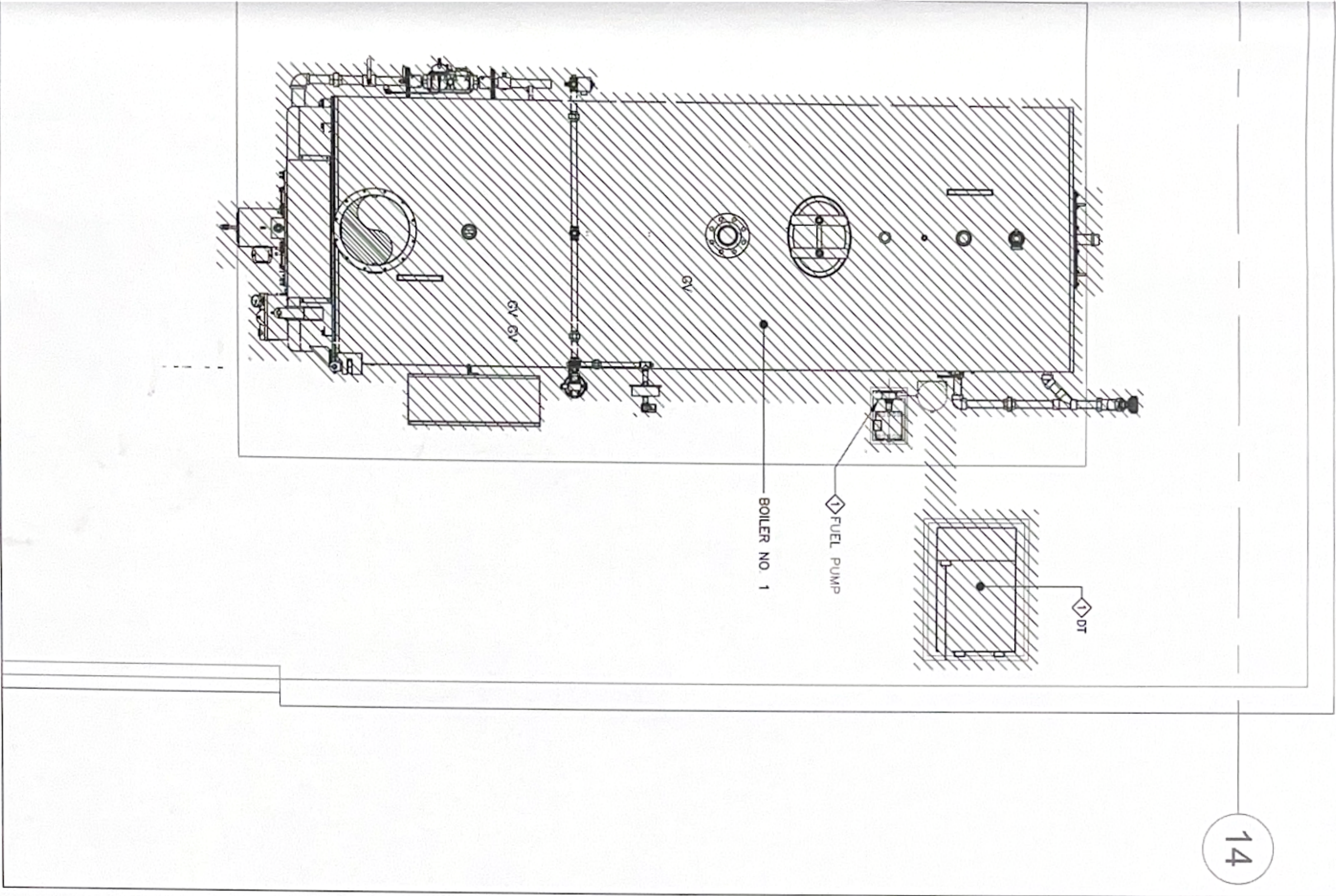
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**NOTES:**

- 1 REMOVE EQUIPMENT CONNECTION AND BRANCH CIRCUIT WIRING UP TO PANEL BOARD
- 2 2P30A, NFS, 240V NEMA 1
- 3 3P60A, NFS, 600V NEMA 1

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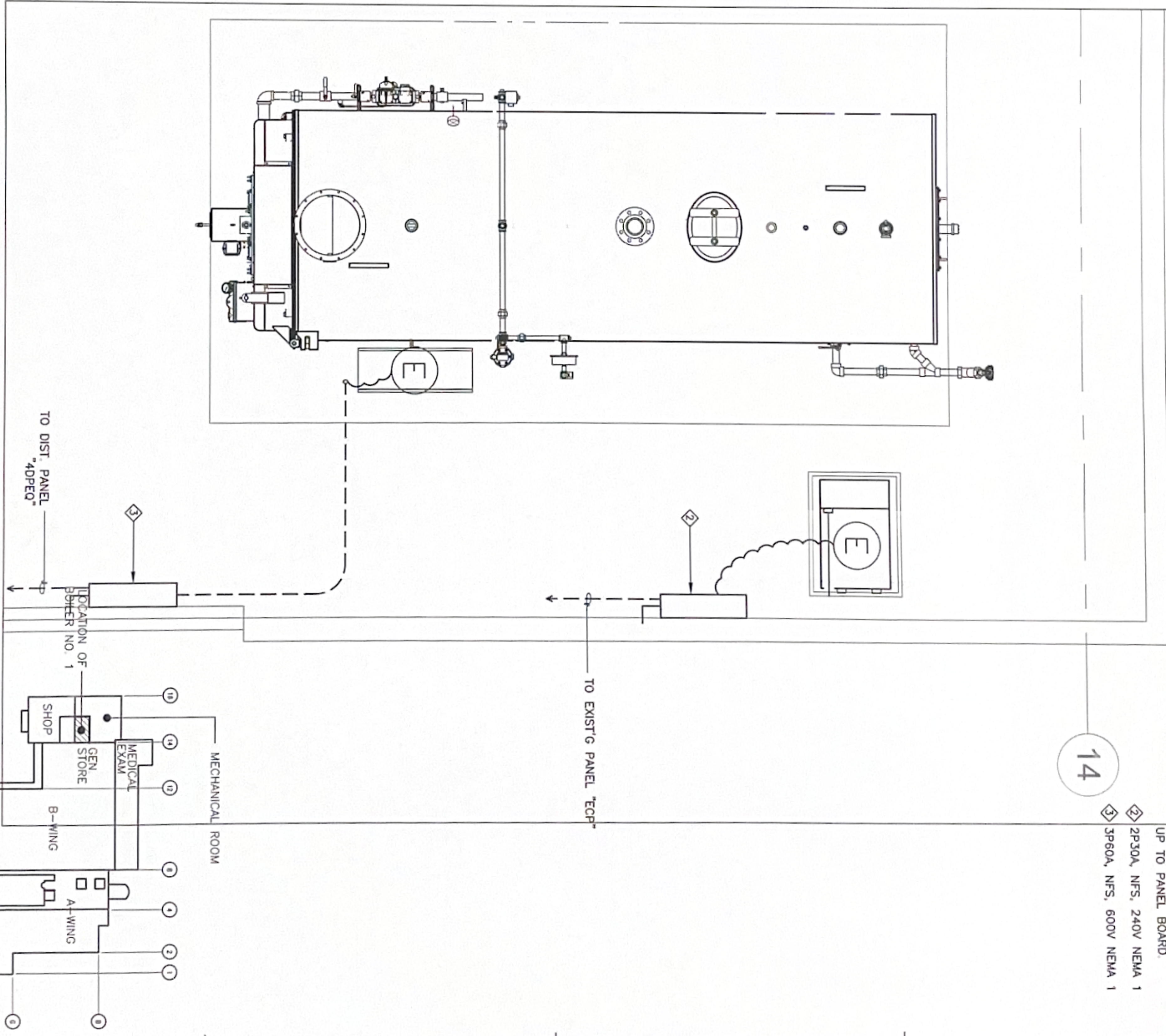
**1** ELECTRICAL REMOVAL PLAN  
SCALE 3/4" = 1'-0"

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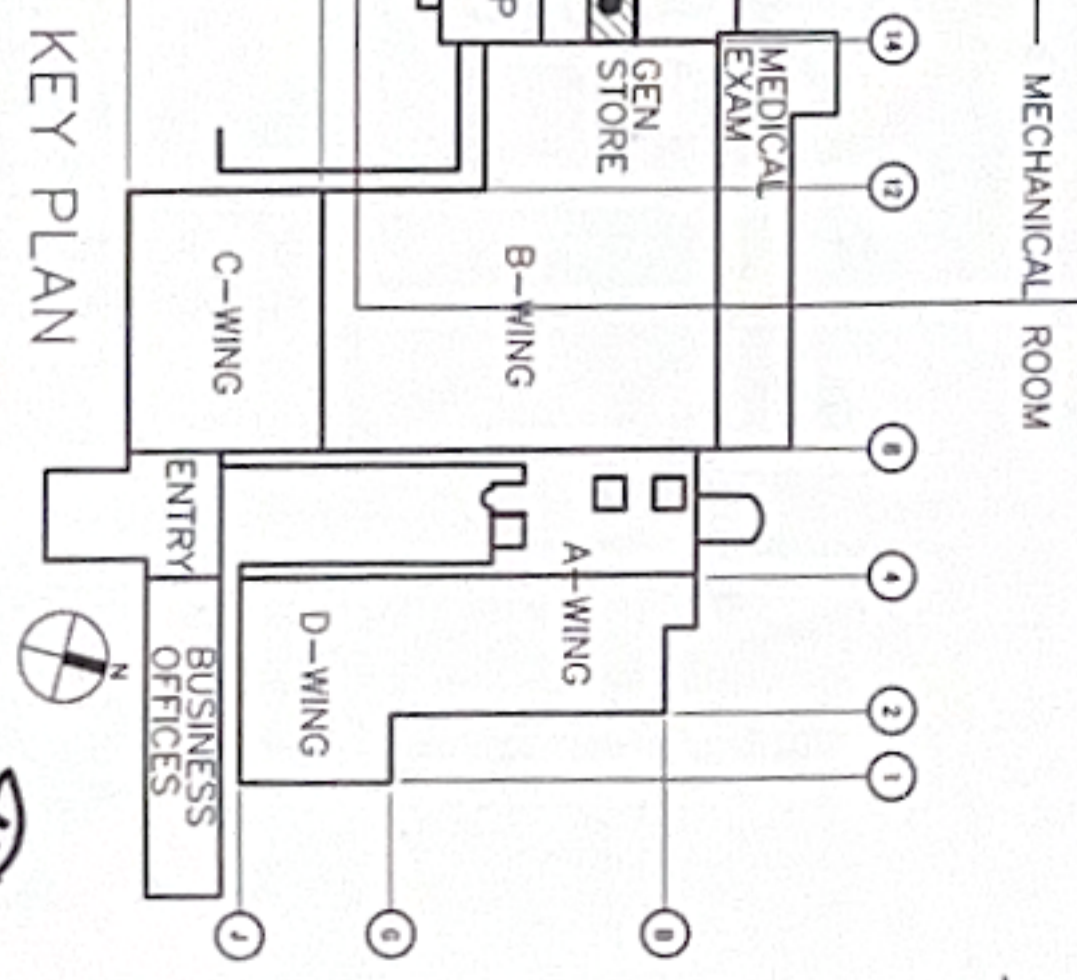
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**2** NEW ELECTRICAL PLAN  
SCALE 3/4" = 1'-0"



REVISIONS		
No.	Description	Date

Project: **REPLACE BOILER**  
**GUAM MEMORIAL HOSPITAL**  
**TAMUNING, GUAM**

100% SUBMITTAL

Designed: AA  
 Drawn: JD  
 Checked: AA  
 Supv: AA  
 Scale: AS SHOWN

Date: JULY 8, 2019  
 Project No: 61K1902  
 AutoCAD File: 61K1902E-2  
 Drawing No.

Sheet No. 3 of XXX

**E-2**



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF GUAM.

*Alex S. Antonio*