

SHAFER & ASSOCIATES

OFFICE OF ARCHITECTURE

October 23, 2017
GS# 411-120, Repair and Renovation - Various
East Mississippi State Hospital

Addendum No. 1

This addendum forms part of the Contract Documents for the above referenced project. All other requirements of the original Contract Documents shall remain in effect except as specifically modified in this addendum. Bidder is to acknowledge receipt of this addendum with their bid proposal. Failure to do so may subject the Bidder to disqualification.

1. The Contractor is responsible for protecting all materials, surfaces, etc. in and adjacent to the building. Proper protection shall be placed over equipment, furnishings, etc. as necessary to protect such items from damage from construction activities (debris, etc.). Replacement of any damaged items will be the Contractor's responsibility.
2. Pay attention to all special conditions and the Bureau of Building bidding requirements.
3. All of the existing information shown on the drawings and details was taken from the original construction drawings. An attempt was made to alter the details when differing conditions were observed on site. However, the Contractor should be aware that some conditions may vary and he will be responsible for altering the construction to accommodate variations from these details.
4. Drawing Sheet E1.1: Large Scale Floor Plan Notes, Note #9:
"ATS" size in note is listed as Nema 3R, 2500A. 208 Volt, 3 Phase shall be changed to read Nema 3R, 1000A. 208 Volt, 3 Phase.
5. Drawing Sheet E1.1: At Building "E", the removal of the existing indoor generator shall create a hole in the outside wall when the muffler is removed. The existing painted sheet metal shall be replaced with similar material of the same size and painted to match the surrounding area.
6. Drawing Sheet E1.1: At Building "E", the wall louver for the existing generator shall be covered with sheet metal on the outside or blanked off on the inside with sheet metal and sealed from the outdoor elements as required.
7. Drawing Sheet E1.1: The Emergency Generator and "ATS" shown the Alternate #2 plan shall be relocated. Refer to revised attached E1.1 for location. See attached drawing.
8. Drawing Sheet E2.1: Bldg. E - Power Riser Diagram Note #3 - Change 2000A. to be 1000A.
9. Specification Section 230900, Instrumentation and Control for HVAC: The DDC Building Control System will now be procured through an allowance. This allowance for the DDC Building Controls System is in the amount of Seven Thousand Dollars. The revised controls specification section 230900 is attached. The revised Division One Supplement (Section 01900, page 24) is also attached reflecting this change.
10. The Job Site Fencing described in Specification Section 02830 is to enclose any active work areas and lay-down areas at each location where work is taking place or materials/equipment is stored. The fencing will be allowed to be moved around the campus from one work area to another as long as any active work area and all storage areas are enclosed. The fencing shall be of a size and configuration as necessary to enclose these areas.

Approval of a Manufacturer or product as an "equal" does not in any way alter the Contract Documents. Any approved manufacturer must accommodate construction details, required finishes, owner's specific requirements, adjacent materials, etc. Any additional materials or components required by the "approved equal" for proper installation for the given conditions are the responsibility of the Contractor. Approval of a Manufacturer also shall not cause an up-charge for the desired finish or limit the choices of finishes, colors, materials, etc.

Contents: This addendum consists of **9** (8 1/2" x 11") sheet(s) - (including this page) and **1** drawing.

End of Addendum No. 1 for: GS# 411-120, Repair and Renovation - Various

SECTION 230900

INSTRUMENTATION AND CONTROL FOR HVAC

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes control equipment for HVAC systems and components, including control components for terminal heating and cooling units not supplied with factory-wired controls.
- B. **The work required by this section is to be included as an allowance. The Mechanical Contractor shall include in his bid, an allowance of \$ 7,000.00 (Seven Thousand Dollars) to procure the DDC Building Controls System for this project.** The DDC Building Controls System is described in Specification Section 230900 "Instrumentation and Control for HVAC" and further illustrated on Division 23 drawings. Selection of the appropriate Controls Contractor shall be made on a "Best Value" basis for the Owner once the project has been awarded. The selection process will include representatives of the Owner, Design Professionals and Mechanical Contractor.
- C. Related Sections include the following:
 - 1. Division 23 Section "Meters and Gages for HVAC Piping" for measuring temperature and pressure associated with HVAC piping and equipment.

1.3 DEFINITIONS

- A. DDC: Direct-digital controls.
- B. LAN: Local area network.
- C. MS/TP: Master-slave/token-passing.
- D. PICS: Protocol Implementation Conformance Statement.

1.4 SYSTEM DESCRIPTION

- A. Control system consists of sensors, indicators, actuators, final control elements, interface equipment, other apparatus, accessories, and software connected to distributed controllers operating in multi-user, multitasking environment on token-passing network and programmed to control mechanical systems.

1.5 SUBMITTALS

- A. Product Data: Include manufacturer's technical literature for each control device. Indicate dimensions, capacities, performance characteristics, electrical characteristics, finishes for materials, and installation and startup instructions for each type of product indicated.
 - 1. Each control device labeled with setting or adjustable range of control.
- B. Shop Drawings: Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
 - 1. Schematic flow diagrams showing fans, pumps, coils, dampers, valves, and control devices.
 - 2. Wiring Diagrams: Power, signal, and control wiring. Differentiate between manufacturer-installed and field-installed wiring.
 - 3. Details of control panel faces, including controls, instruments, and labeling.
 - 4. Written description of sequence of operation.
 - 5. Schedule of dampers including size, leakage, and flow characteristics.
 - 6. Schedule of valves including leakage and flow characteristics.
 - 7. Trunk cable schematic showing programmable control unit locations and trunk data conductors.
 - 8. Listing of connected data points, including connected control unit and input device.
 - 9. System graphics indicating monitored systems, data (connected and calculated) point addresses, and operator notations.
 - 10. System configuration showing peripheral devices, batteries, power supplies, diagrams, modems, and interconnections.
- C. ASHRAE BACnet Statement: PICS for each DDC system component (panel, zone controller, field devices, and operator workstation) proposed.
- D. Samples: For each color required, of each type of thermostat cover.
- E. Software and Firmware Operational Documentation: Include the following:
 - 1. Software operating and upgrade manuals.
 - 2. Program Software Backup: On compact disc, complete with data files.
 - 3. Device address list.
 - 4. Printout of software application and graphic screens. Provide line-by-line English Language version of all programmable logic routines in each and every controller utilizing logic routines.
 - 5. Software license required by and installed for DDC workstations and control systems.
- F. Software Upgrade Kit: For Owner to use in modifying software to suit future power system revisions or monitoring and control revisions.
- G. Field Test Reports: Indicate and interpret test results for compliance with performance requirements.
- H. Maintenance Data: For systems to include in maintenance manuals specified in Division 1. Include the following:

1. Maintenance instructions and lists of spare parts for each type of control device and compressed-air station.
 2. Interconnection wiring diagrams with identified and numbered system components and devices.
 3. Keyboard illustrations and step-by-step procedures indexed for each operator function.
 4. Inspection period, cleaning methods, cleaning materials recommended, and calibration tolerances.
 5. Calibration records and list of set points.
- I. Qualification Data: For firms and persons specified in "Quality Assurance" Article.
- J. Project Record Documents: Record actual locations of control components, including control units, thermostats, and sensors. Revise Shop Drawings to reflect actual installation and operating sequences.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who is an authorized representative of the automatic control system manufacturer for both installation and maintenance of units required for this Project.
- B. Manufacturer Qualifications: A firm experienced in manufacturing automatic temperature-control systems similar to those indicated for this Project and with a record of successful in-service performance.
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- D. Comply with NFPA 90A, "Installation of Air Conditioning and Ventilation Systems."
- E. Comply with ASHRAE 135 for DDC system control components.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Factory-Mounted Components: Where control devices specified in this Section are indicated to be factory mounted on equipment, arrange for shipping of control devices to unit manufacturer.

1.8 COORDINATION

- A. Coordinate location of thermostats, humidistats, and other exposed control sensors with plans and room details before installation.
- B. Coordinate equipment with Division 26 Section "Enclosed Controllers" to achieve compatibility with motor starters and annunciation devices.

1.9 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

- B. Replacement Materials: One of immersion type temperature sensor.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by the following:
 - 1. Johnson Controls Metasys

2.2 CONTROL PANELS

- A. Local Control Panels: Unitized cabinet with suitable brackets for wall or floor mounting, located adjacent to each system under automatic control. Provide common keying for all panels.
 - 1. Fabricate panels of 0.06-inch-thick, furniture-quality steel, or extruded-aluminum alloy, totally enclosed, with hinged doors and keyed lock and with manufacturer's standard shop-painted finish.
 - 2. Panel-Mounted Equipment: Temperature and humidity controllers, relays, and automatic switches; except safety devices. Mount devices with adjustments accessible through front of panel.
 - 3. Door-Mounted Equipment: Flush-mount (on hinged door) manual switches, including damper-positioning switches, changeover switches, thermometers, and gages.
 - 4. Graphics: Color-coded graphic, laminated-plastic displays on doors, schematically showing system being controlled, with protective, clear plastic sheet bonded to entire door.

2.3 SENSORS

- A. Electronic Sensors: Vibration and corrosion resistant; for wall, immersion, or duct mounting as required.
 - 1. Thermistor temperature sensors as follows:
 - a. Accuracy: Plus or minus 0.5 deg F at calibration point.
 - b. Wire: Twisted, shielded-pair cable.
 - c. Insertion Elements in Ducts: Single point, 8 inches long; use where not affected by temperature stratification or where ducts are smaller than 9 sq. ft.
 - d. Averaging Elements in Ducts: 72 inches long, flexible; use where prone to temperature stratification or where ducts are larger than 9 sq. ft.; length as required.
 - e. Insertion Elements for Liquids: Brass socket with minimum insertion length of 2-1/2 inches.
 - f. Room Sensors: Wall mounting, with digital display for space temperature, temperature set-point adjustment, timed override, timed override cancel and access for connection of portable operator terminal.
 - g. Outside-Air Sensors: Watertight inlet fitting, shielded from direct sunlight.
 - h. Room Security Sensors: Stainless-steel cover plate with insulated back and security screws.

2. Resistance Temperature Detectors: Platinum.

- a. Accuracy: Plus or minus 0.2 percent at calibration point.
- b. Wire: Twisted, shielded-pair cable.
- c. Insertion Elements in Ducts: Single point, 8 inches long; use where not affected by temperature stratification or where ducts are smaller than 9 sq. ft.
- d. Averaging Elements in Ducts: 72 inches long, flexible; use where prone to temperature stratification or where ducts are larger than 9 sq. ft.; length as required.
- e. Insertion Elements for Liquids: Brass socket with minimum insertion length of 2-1/2 inches.
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- g. Outside-Air Sensors: Watertight inlet fitting, shielded from direct sunlight.
- h. Room Security Sensors: Stainless-steel cover plate with insulated back and security screws.

B. Electronic Valve/Damper Position Indication: Visual scale indicating percent of travel and 2- to 10-V dc, feedback signal.

C. Water-Flow Switches: Pressure-flow switches of bellows-actuated mercury or snap-acting type, with appropriate scale range and differential adjustment, with stainless-steel or bronze paddle. For chilled-water applications, provide vaporproof type.

2.4 CONTROL VALVES

A. Control Valves: Factory fabricated, of type, body material, and pressure class based on maximum pressure and temperature rating of piping system, unless otherwise indicated.

B. Butterfly Valves: 200-psig, 150-psig maximum pressure differential, ASTM A 126 cast-iron or ASTM A 536 ductile-iron body and bonnet, extended neck, stainless-steel stem, field-replaceable EPDM or Buna N sleeve and stem seals.

- 1. Body Style: Wafer or Grooved.
- 2. Disc Type: Nickel-plated ductile iron.
- 3. Sizing: 1-psig maximum pressure drop at design flow rate.

2.5 CONTROL CABLE

A. Electronic and fiber-optic cables for control wiring shall be per the manufacturer's specifications. All cable exposed to view or subject to damage shall be installed in conduit. Control cable located in mechanical rooms shall be routed in conduit.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install equipment level and plumb.

- B. Install labels and nameplates to identify control components according to Division 23 Section "Basic HVAC Materials and Methods."
- C. Install hydronic instrument wells, valves, and other accessories according to Division 23 Section "Hydronic Piping."

3.2 ELECTRICAL WIRING AND CONNECTION INSTALLATION

- A. Install raceways, boxes, and cabinets according to Division 26 Section "Raceways and Boxes."
- B. Install building wire and cable according to Division 26 Section "Conductors and Cables."
- C. Install control and communication cable according to Controls Manufacturer's recommendations.
 - 1. All cable in mechanical rooms shall be installed in raceway.
 - 2. Install cable that would otherwise be exposed to view in raceway.
 - 3. Fasten flexible conductors, bridging cabinets and doors, along hinge side; protect against abrasion. Tie and support conductors.
 - 4. Number-code or color-code conductors for future identification and service of control system, except local individual room control cables.

3.3 CONNECTIONS

- A. Install piping adjacent to machine to allow service and maintenance.
- B. Connect manual-reset limit controls independent of manual-control switch positions. Automatic duct heater resets may be connected in interlock circuit of power controllers.
- C. Connect hand-off-auto selector switches to override automatic interlock controls when switch is in hand position.
- D. Ground equipment.

3.4 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including piping and electrical connections. Report results in writing.
 - 1. Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.
 - 2. Operational Test: After electrical circuitry has been energized, start units to confirm proper unit operation. Remove malfunctioning units, replace with new units, and retest.
 - 3. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment, and retest.
 - 4. Calibration test electronic controllers by disconnecting input sensors and stimulating operation with compatible signal generator.
- B. Engage a factory-authorized service representative to perform startup service.

- C. Replace damaged or malfunctioning controls and equipment.
 - 1. Start, test, and adjust control systems.
 - 2. Demonstrate compliance with requirements, including calibration and testing, and control sequences.
 - 3. Adjust, calibrate, and fine tune circuits and equipment to achieve sequence of operation specified.
- D. Verify DDC as follows:
 - 1. Verify software including automatic restart, control sequences, scheduling, reset controls, and occupied/unoccupied cycles.
 - 2. Verify operation of operator workstation.
 - 3. Verify local control units including self-diagnostics.

3.5 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain control systems and components.
 - 1. Train Owner's maintenance personnel on procedures and schedules for starting and stopping, troubleshooting, servicing, and maintaining equipment and schedules.
 - 2. Provide operator training on data display, alarm and status descriptors, requesting data, executing commands, calibrating and adjusting devices, resetting default values, and requesting logs. Include a minimum of 2 hours' dedicated instructor time on-site.
 - 3. Review data in maintenance manuals. Refer to Division 1 Section "Contract Closeout."
 - 4. Review data in maintenance manuals. Refer to Division 1 Section "Operation and Maintenance Data."
 - 5. Schedule training with Owner, through Architect, with at least seven days' advance notice.

3.6 ON-SITE ASSISTANCE

- A. Occupancy Adjustments: Within one year of date of Substantial Completion, provide one Project site visit, when requested by Owner, to adjust and calibrate components and to assist Owner's personnel in making program changes and in adjusting sensors and controls to suit actual conditions.

END OF SECTION 230900

DIVISION ONE SUPPLEMENT

SECTION 01900

PART 1- SUMMARY OF WORK SUPPLEMENT

1.01 WORK SEQUENCE

- A. Owner will occupy the building during construction, coordinate with Owner's Representative in scheduling work To vacate the areas as the Contractor requires. **See Special Conditions for working in this area.**
- B. Construct work in stages as follows:
1. Coordinate access with owner at pre-construction meeting and monthly meetings.
 2. Work related to the roofing of Building 'A' and elevator modernization is a priority.
 3. _____

1.02 PARTIAL OWNER OCCUPANCY

- A. Schedule early completion of designated areas for Owner's usage prior to substantial completion of entire Project.
1. Elevator Modernization
 2. _____
 3. _____
- B. Owner will occupy areas for purpose of The building(s), site(s) and adjacent buildings will be fully occupied by the Using Agency. All demolition and construction work that would possibly affect the occupants (such as utility outages, blocking of exits, restriction to the site, etc) will require scheduling and coordination with the Using Agency. All such work is to be coordinated and approved by the owner prior to beginning such work. **See "Architect's Special Conditions".**
- C. Contractor will provide:
1. Access for Owner's personnel
 2. Operation of heating, ventilating, air conditioning and electrical systems
 3. Protection of adjacent construction and vehicles shall be provided
- D. Prior to occupancy, execute a *Certificate of Substantial Completion* for designated areas.
- E. Upon occupancy, Owner shall provide:
1. N/A
 2. _____

PART 2 - ALLOWANCE SUPPLEMENT

2.01 SCHEDULE OF ALLOWANCES

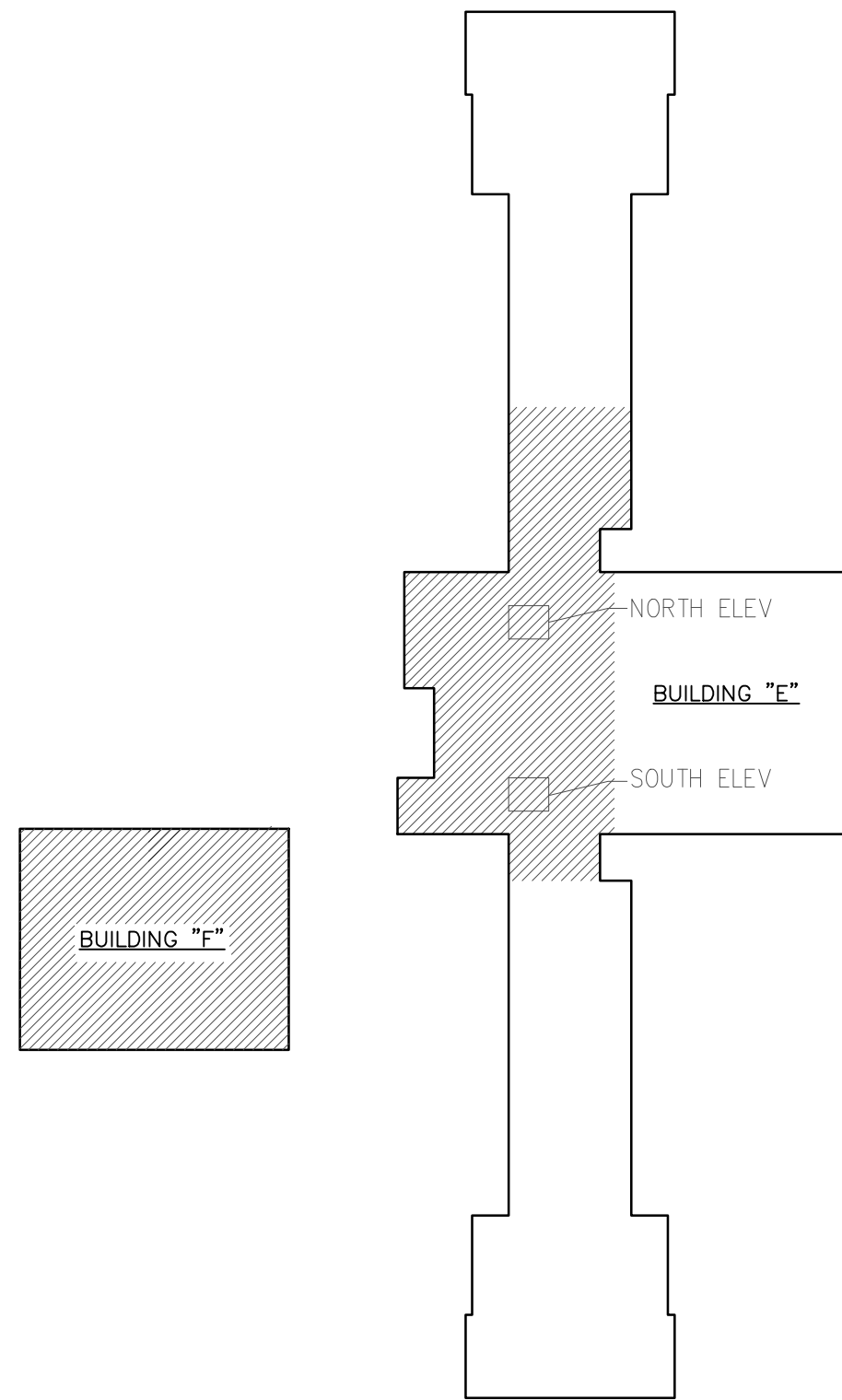
- A. Include in the Bid, for inclusion in the Contract Sum, the amount of \$ 7,000.00 for purchase of the DDC Building Controls System as defined in the "Instrumentation And Control For HVAC" specification. (Refer to Section 230900, Instrumentation And Control For HVAC and all related Mechanical/Electrical specifications and drawings)
- B. Include in the Bid, for inclusion in the Contract Sum, the amount of \$ N/A for purchase of _____ (Refer to Section _____, _____)

DEMOLITION NOTE:

WHERE SPECIFICALLY DEFINED BY NOTE OR SHOWN TO BE AN AREA TO BE DEMOLISHED, DISCONNECT AND REMOVE ALL EXISTING LIGHTING FIXTURES, ELECTRICAL EQUIPMENT, RECEPTACLES, EXPOSED CONDUIT, SURFACE DEVICE BOXES, PLATES, ETC. REMOVE ALL WIRE FROM EXISTING CONDUIT, CUT BACK, CAP AND ABANDON ALL CONCEALED CONDUITS. MAINTAIN AND RESTORE, IF INTERRUPTED, ALL BRANCH CIRCUITS AND FEEDERS PASSING THROUGH RENOVATED AREAS AND SERVING UNDISTURBED AREAS. EXISTING STRAIGHT LENGTHS OF CONDUIT FOUND TO BE REUSABLE MAY BE USED. ALL OTHER DEMOLISHED MATERIALS SHALL BE REMOVED FROM THE JOB SITE SUBJECT TO THE DEMOLITION DIRECTIVE ISSUED BY THE ARCHITECT. CONSULT WITH THE ARCHITECT PRIOR TO ANY DEMOLITION CONCERNING THE IMPLEMENTATION OF THIS NOTE.

**BUILDING "E" and "F" -
KEY PLAN**

NO SCALE

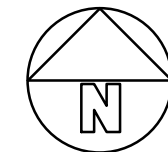


BUILDING "F"

BASE BID

**BUILDING "E" AND "F" -
PARTIAL FIRST FLOOR PLAN - ELECTRICAL**

SCALE: 1/8" = 1'-0"



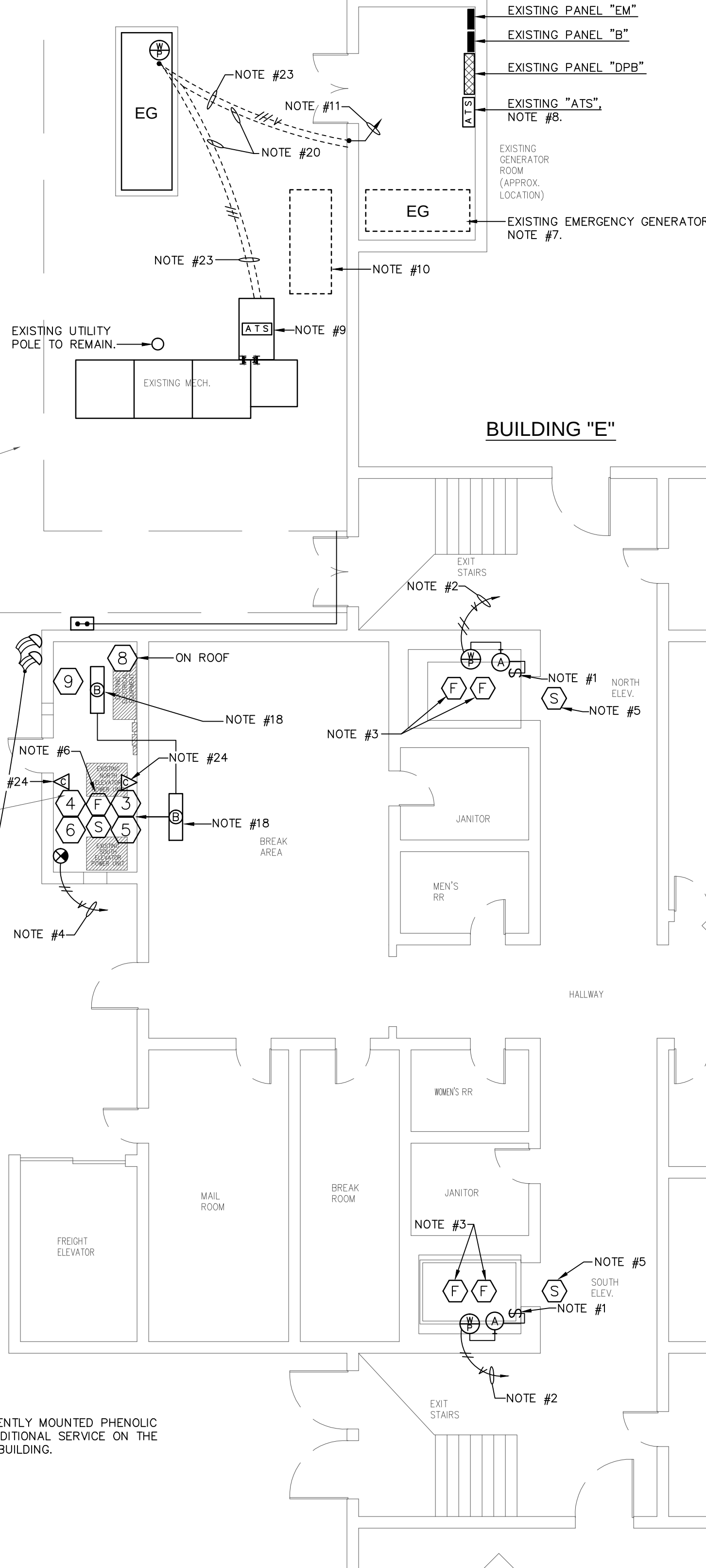
ALTERNATE #2

FOR BASE BID, THE WORK SHOWN SHALL BE OMITTED.
FOR ALTERNATE BID No. 2, PROVIDE THE NEW ATS, NEW EMERGENCY GENERATOR AND ASSOCIATED CIRCUITS AND MODIFICATIONS TO THE ELECTRICAL SERVICE AS SHOWN.

BUILDING "E"

EXISTING CANOPY SYSTEM

EXISTING MECHANICAL/
ELEVATOR EQUIPMENT ROOM



PROVIDE A PERMANENTLY MOUNTED PHENOLIC
PLATE DENOTING ADDITIONAL SERVICE ON THE
WEST SIDE OF THE BUILDING.

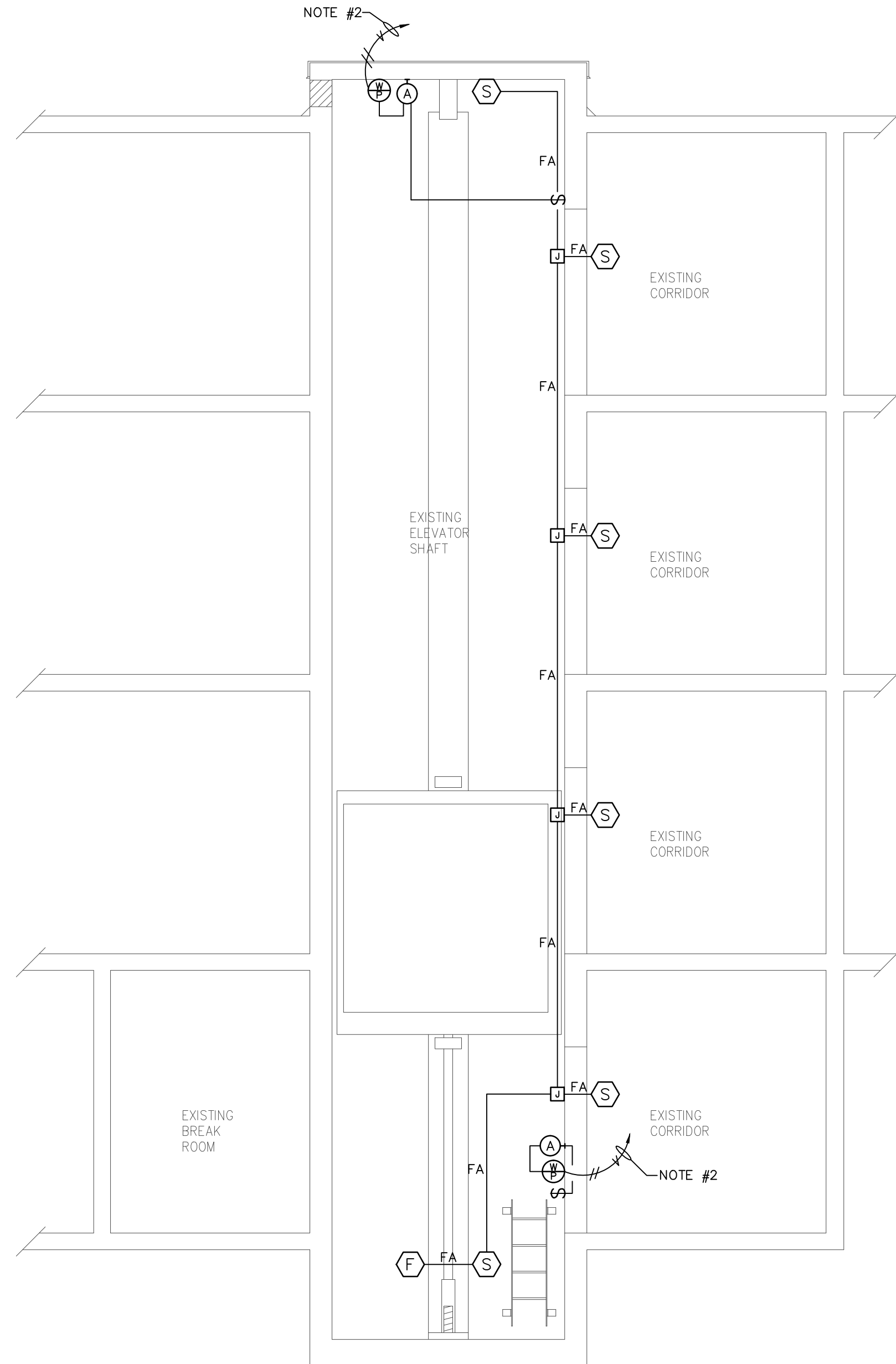
PROVIDE A PERMANENTLY MOUNTED PHENOLIC
PLATE DENOTING ADDITIONAL SERVICES ON THE
EAST SIDE OF THE BUILDING.

PROVIDE A MINIMUM OF (3)THREE (OR AS DIRECTED BY ARCH.)
CONCRETE BOLLARDS TO PROTECT GENERATOR FROM TRAFFIC.

LARGE SCALE FLOOR PLAN NOTES:

1. LOCATE ELEVATOR PIT LIGHT SWITCH AT GROUND FLOOR LEVEL ENTRY TO PIT ADJACENT TO PIT LADDER.
2. CONNECT TO NEAREST AVAILABLE UNSWITCHED, DEDICATED 120 VOLT, 20 AMP BRANCH CIRCUIT. PROVIDE 20A1P CIRCUIT BREAKER IF REQUIRED. USE 2-#12, 1-#12(G) IN 1/2"C.
3. PROVIDE A FIXED TEMP AND RATE OF RISE THERMAL/HEAT DETECTOR IN ELEVATOR PIT AND CONNECT TO FIRE ALARM SYSTEM TO REPORT AS "TROUBLE" CONDITION ONLY.
4. CONNECT TO NEAREST AVAILABLE 20A. 120V. UNSWITCHED BRANCH CIRCUIT USING 2-#12, 1-#12(G), 1/2"C.
5. PROVIDE DETECTOR FOR ELEVATOR RECALL IN FRONT OF ELEVATOR DOOR EACH FLOOR LEVEL.
6. HEAT SENSOR TO INITIATE A SHUNT TRIP SIGNAL TO THE ELEVATOR MACHINE CIRCUIT BREAKER.
7. DISCONNECT AND REMOVE EMERGENCY GENERATOR AND ALL ASSOCIATED EQUIPMENT AFTER NEW GENERATOR IS OPERATIONAL. RETURN GENERATOR TO OWNER AT LOCATION DESIGNATED BY THE ARCHITECT.
8. EXISTING "ATS" SHALL BE DISCONNECTED, REMOVED AND EXISTING EMERGENCY PANEL SHALL BE CONNECTED DIRECTLY TO THE NORMAL FEEDER BREAKER USING SAME SIZE FEEDER AS EXISTING. RETURN ATS TO OWNER AT LOCATION DESIGNATED BY THE ARCHITECT.
9. INSTALL NEW SERVICE RATED, NEMA 3R, 1000A. 208 VOLT, 3 PHASE, 3 POLE "ATS" AND CONNECT PER THE POWER RISER DIAGRAM.
10. EXISTING UNDERGROUND DIESEL TANK TO BE REMOVED AND DISPOSED BY THE GENERAL CONTRACTOR.
11. PROVIDE 2-20A., 120V. CIRCUIT(S) FROM BUILDING "E" TO BE DISCONNECTED FROM NEAREST ADEQUATE PANELBOARD FOR BLOCK HEATER, BATTERY CHARGER AND GENERAL PURPOSE RECEPTACLE.
12. REWORK EXISTING 240 VOLT, SINGLE PHASE SERVICE FROM OUTSIDE METER TO NEW SERVICE RATED, NEMA 3R, 200A., 240 VOLT, 3 POLE "ATS".

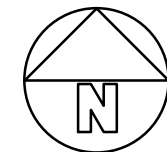
13. INSTALL NEW 45KW, 240 VOLT, SINGLE PHASE, NATURAL GAS EMERGENCY GENERATOR WITH WEATHERPROOF ENCLOSURE AND CONNECT PER THE POWER RISER DIAGRAM.
14. PROVIDE NEW UNDERGROUND GAS PIPING TO SERVE NEW NATURAL GAS EMERGENCY GENERATOR PER MANUFACTURER'S REQUIREMENTS.
15. PROVIDE NEW NEMA 3R, 200A3P, 208 VOLT, SERVICE RATED DISCONNECT SWITCH FOR EXISTING BUILDING SERVICE. PROVIDE NEW #6AWG GROUND IN 1"C. AND DISCONNECT EXISTING BUILDING SERVICE GROUND.
16. PROVIDE NEW NEMA 3R, 100A3P, 208 VOLT, SERVICE RATED DISCONNECT SWITCH FOR EXISTING BUILDING SERVICE. PROVIDE NEW #8AWG GROUND IN 1"C. AND DISCONNECT EXISTING BUILDING SERVICE GROUND.
17. EXISTING EMERGENCY 120 VOLT CIRCUIT(S) FROM BUILDING "E" TO BE DISCONNECTED FROM BUILDING "E" SOURCE. REWORK CIRCUITS TO NEAREST EXISTING ADEQUATE 120 VOLT PANEL AND RECONNECT TO NEW CIRCUIT BREAKERS AS REQUIRED.
18. DISCONNECT EXISTING LIGHTING FIXTURES IN THIS ROOM AND REPLACE WITH THE LIGHTING FIXTURES SHOWN. RECONNECT AS REQUIRED.
19. PROVIDE 2-20A., 120V. CIRCUIT(S) FROM BUILDING "E" TO BE DISCONNECTED FROM NEAREST ADEQUATE PANELBOARD FOR BLOCK HEATER, BATTERY CHARGER AND GENERAL PURPOSE RECEPTACLE.
20. PROVIDE 1" EMPTY CONDUIT WITH PULL STRINGS FOR LOW VOLTAGE COMM.
21. DISCONNECT ELECTRICAL CONNECT FOR WALL MOUNTED EXHAUST FAN.
22. PROVIDE SLEEVES AS REQUIRED THRU EXISTING ENCLOSURE TO NEW "ATS" AND FROM NEW "ATS" TO EXISTING PANEL FOR ROUTING OF SECONDARY.
23. CONTRACTOR SHALL PATCH ASPHALT OF TRENCHED AREA USING SIMILAR MATERIAL AND SIMILAR THICKNESS AS SURROUNDING.
24. VERIFY EXISTING COMMUNICATIONS CIRCUITS ARE ACTIVE AND EXTEND/CONNECT TO ELEVATOR EQUIPMENT AS REQUIRED.



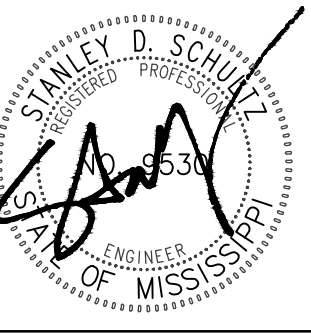
BASE BID

**BUILDING "E" -
ELEVATION VIEW OF EXISTING ELEVATOR SHAFT**

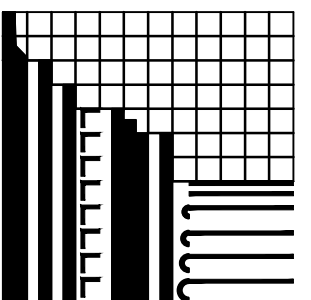
NO SCALE



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A PROFESSIONAL ASSOCIATION
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TEL: 601-982-3315 FAX: 601-982-7685
Preliminary Drawings S/W JOB NO: 216063



REVISIONS:
A - OCTOBER 19, 2017
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GS # 411-120
EAST MS STATE HOSPITAL
REPAIR AND RENOVATION - VARIOUS
Meridian, MS
DATE: APRIL 7, 2017
DRAWN BY: DMV.
CHECKED BY: S.D.S.

SHEET
E1.1
ELECTRICAL
BUILDINGS
"E" and "F"