



April 17, 2017

**GS # 106-257 Edna Horton Renovation
Mississippi Valley State University**

Addendum No. 2

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. This Addendum is issued to all known Plan Holders.

1. Specifications:

- a. Section 00300 PROPOSAL FORM: **Revise calendar days to 455.** Delete Section 00300 PROPOSAL FORM and replace with attached revised 00300 PROPOSAL FORM.
- b. Section 00500 STANDARD FORM OF AGREEMENT BETWEEN THE OWNER AND THE CONTRACTOR: **The calendar days will be revised to 455.**
- c. Section 01410 TESTING LABORATORY SERVICES: **Revise** Scope: The Contractor will employ and pay for the services of an independent laboratory to perform specified services. The Owner will employ and pay for services of an independent laboratory to perform specified Construction Materials Testing and/or any Special Inspections. Employment of a testing laboratory shall in no way relieve the Contractor of his obligation to perform work in accordance with the Contract.
- d. Section 14200 Elevator Specification, PART 2 PRODUCTS, ADA TELEPHONE: **ADD** "The system shall be fully programmed and provided with up to three numbers for automatic dial-out. Cabling by others – coordinate with Owner for fully installed and tested system."
- e. Section 15160.2, add the following:
 - D. Chilled and heating water supply and return piping inside building shall be insulated with 1 inch thick urethane foamed between inner and outer jackets. Insulation shall pass Underwriters' Laboratory Test No. 723. Insulation on piping outside building shall be 1-1/2 inch thick urethane with waterproof jacket. All insulated chilled water piping exposed to the weather shall be additionally finished with .016 inch corrugated aluminum jacket, all joints overlapped a minimum of 2 inches, secured with ½ inch aluminum strappings and seals at 12 inches o.c. Coordinate installation of heat tape on exterior exposed piping at chiller. All fittings, tees and elbows shall be insulated with premold insulation covers of the same insulation specified for piping. Provide lapping section of fab-cloth and two generous coats of vapor sealer. Exterior valves and fittings shall be also covered with premolded aluminum covers.
- f. Section 16435: Add the attached Section 16435, Switchboards.
- g. Section 16703: Revise article 2.2.B.1 to read "Number of addressable alarm or IDNET points shall be sufficient for the entire system with 20% spare."



2. Drawings:

- a. Drawing Sheet M402, Pump Schedule: Change flow rate on Pumps P-1 and P-2 from 840 GPM to 700 GPM.
- b. Drawings, Sheet E401: Panels MDP, LSBA, and LBA shall be provided with NEMA 3R enclosures as noted on sheet E401.
- c. Drawings, Sheet E002: Note 6 on sheet E002 only applies to new panels. No modifications to existing panels to incorporate SPD's is required under the base bid.
- d. Drawings, Sheet E001R1: Add note 33: "Where receptacles or switches are shown in a location without new walls or existing device boxes, provide surface mount EMT to above nearest accessible ceiling."
- e. Drawings, Sheets T101 thru T-103: Any additional TV locations beyond those shown on the drawings are not a part of this scope.
- f. Drawings, Sheet T101: Provide infrastructure (1" conduit) for two dedicated phone lines to elevator machine room for connection by the elevator provider from the first floor communications room. Coordinate exact locations with the elevator provider and cabling installer.
- g. Drawings, Sheets E101 thru E103: Surface mount final connections to lighting fixtures in dorm rooms. Utilize surface metal raceway painted to match ceiling. Install fixtures to allow for the raceway and fixture to be as flush as possible.

Contents: This addendum consists of 10 sheets.

End of Addendum No. 2 for: GS #106-257 Edna Horton Renovation

PROPOSAL FORM

SECTION 00300

To: Bureau of Building, Grounds and Real Property Management
501 North West Street, Suite 1401B [Woolfolk Building]
Jackson, Mississippi 39201

Re: Project # GS# 106-257
Project Title Edna Horton Renovation
Location Itta Bena, MS

I propose to complete all work in accordance with the Project Manual and Drawings within 455 consecutive calendar days for the sum of: (Professional must specify number of days)

BASE BID: (Write in the amount of the base bid in words and numbers. The written word shall govern.)

_____ Dollars (\$_____)

ALTERNATES: (Write in the amount of all of the alternates in words and numbers. The written word shall govern.)

Alternate #1 ☒ Adds ☐ Deducts

Dollars (\$_____)

Description REPLACE WATER HEATERS IN LIEU OF UTILIZING EXISTING EQUIPMENT.

Alternate #2 ☒ Adds ☐ Deducts

Dollars (\$_____)

Description ELECTRICAL INFRASTRUCTURE IMPROVEMENTS IN LIEU OF UTILIZING EXISTING.

Alternate #3 ☒ Adds ☐ Deducts

Dollars (\$_____)

Description REPLACE ALL INTERIOR DOORS AND HARDWARE.

Alternate #4 ☒ Adds ☐ Deducts

Dollars (\$_____)

Description REPLACE MECH/LAUNDRY BUILDING ROOF SYSTEM IN ITS ENTIRETY, AND RENOVATE LAUNDRY SPACE.

Alternate #5 ☐ Adds ☐ Deducts

Dollars (\$_____)

Description N/A

ADDENDA ACKNOWLEDGMENT: (modified dates August 2016)

No. _____ No. _____ No. _____
No. _____ No. _____ No. _____

ACCEPTANCE:

I certify that I am authorized to enter into a binding contract, if this Proposal is accepted.

Signature _____ Date _____
Name and Title _____
Name of Business _____

Complete spelling of bidder's name and address - **exact as recorded at the Secretary of State**

[<http://www.sos.state.ms.us/busserv/corp/soskb/csearch.asp>] which should be the same as you applied for at the Mississippi State Board of

Contractors [<http://www.msdoc.us/Search2.CFM>] (see 2.07, 3.01, 5.01) **PLEASE LOOK IT UP at SoS. SoS rules when the 2 are different.**

Address _____ (mailing)

Address _____ (physical)

City/State/Zip Code _____ County _____

Phone _____ Fax _____ Email _____

■ **BIDDER'S CERTIFICATE OF RESPONSIBILITY NUMBER(S):** _____

■ **MINORITY BUSINESS ENTERPRISE?** Yes _____ No _____ (to assist with Code 57-1-57)

■ Attach copy of Non-Resident Bidder's Preference Law (5.04 of Bidder's Checklist)

■ **Mechanical / Plumbing / Electrical Contractors:** (modified Dec 2013 SoS per 10/17/12 Addendum 1 & Feb 2014)

Regarding said Divisions of the Specifications of the BoB Standard Form of Agreement Between The Owner and The Contractor:

List any Mechanical/Plumbing and/or Electrical Sub-Contractors that will perform work of this contract. COR must be included where sub-contract exceeds \$50,000.00. If no sub-contractor is listed, and such work is within scope of contract, bidder's own COR classification(s) must be sufficient to self-perform any such work. If no sub-contractor is listed, then use of sub-contractor to perform such scope will not be permitted. This is in accordance with 5.05 and 5.06 of the Bidder's Checklist revised below.

Mechanical Contractor: _____ Certificate of Responsibility No. _____
Plumbing Contractor: _____ Certificate of Responsibility No. _____
Electrical Contractor: _____ Certificate of Responsibility No. _____

■ Mississippi Department of Agriculture & Commerce
Bureau of Plant Industry
Landscape License Number ^{N/A} _____ MS Code 69-19-1 – 69-19-15
↑Complete for prime landscaping projects

SECTION 16435

SWITCHBOARDS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Service and distribution switchboards rated 600 V and less.
2. Disconnecting and overcurrent protective devices.
3. Transient voltage suppression devices.
4. Accessory components and features.
5. Identification.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: For each switchboard and related equipment.

1. Include dimensioned plans, elevations, sections, and details, including required clearances and service space around equipment. Show tabulations of installed devices, equipment features, and ratings.
2. Include time-current coordination curves for each type and rating of overcurrent protective device included in switchboards.
3. Include schematic and wiring diagrams for power, signal, and control wiring.

C. Field quality-control reports.

D. Operation and maintenance data.

1.3 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with NEMA PB 2.

C. Comply with NFPA 70.

D. Comply with UL 891.

1.4 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace transient voltage suppression devices that fail in materials or workmanship within specified warranty period.

1. Warranty Period: One year from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURED UNITS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 1. Eaton Electrical Inc.; Cutler-Hammer Business Unit.
 2. General Electric Company; GE Consumer & Industrial - Electrical Distribution.
 3. Siemens Energy & Automation, Inc.
 4. Square D; a brand of Schneider Electric.
- B. Front-Connected, Front-Accessible Switchboards:
 1. Main Devices: Molded-case circuit breaker, panel mounted.
 2. Branch Devices: Molded-case circuit breakers, Panel mounted.
 3. Sections front and rear aligned.
- C. Nominal System Voltage: see drawing schedule.
- D. Main-Bus Continuous: see drawing schedule.
- E. Enclosure: Steel, NEMA 250, Type 1 or as indicated on drawings
 1. Enclosure Finish: Factory-applied finish in manufacturer's standard gray finish over a rust-inhibiting primer on treated metal surface.
 2. Enclosure: Flat roof; bolt-on rear covers for each section, with provisions for padlocking.
- F. Bus Transition and Incoming Pull Sections: Matched and aligned with basic switchboard.
- G. Hinged Front Panels: Allow access to circuit breaker, metering, accessory, and blank compartments.
- H. Phase and Neutral Buses and Connections: Three phase, four wire unless otherwise indicated. Tin-plated, high-strength, electrical-grade aluminum alloy with tin-plated aluminum circuit-breaker line connections.
 1. Ground Bus: 1/4-by-2-inch minimum size, hard-drawn copper of 98 percent conductivity, equipped with pressure connectors for feeder and branch-circuit ground conductors.
 2. Main Phase Buses and Equipment Ground Buses: Uniform capacity for entire length of switchboard's main and distribution sections. Provide for future extensions from both ends.
 3. Neutral Buses: 100 percent of the ampacity of phase buses unless otherwise indicated, equipped with pressure connectors for outgoing circuit neutral cables.
- I. Future Devices: Equip compartments with mounting brackets, supports, bus connections, and appurtenances at full rating of circuit-breaker compartment.

2.2 TRANSIENT VOLTAGE SUPPRESSION DEVICES

- A. Surge Protection Device Description: IEEE C62.41-compliant, integrally mounted, solid-state, parallel-connected, with sine-wave tracking suppression and filtering modules, UL 1449, second edition, short-circuit current rating matching or exceeding the switchboard short-circuit rating, and with the following features and accessories:
 - 1. Fuses, rated at 200-kA interrupting capacity.
 - 2. LED indicator lights for power and protection status.
 - 3. Audible alarm, with silencing switch, to indicate when protection has failed.
 - 4. Form-C contacts rated at 5 A and 250-V ac, one normally open and one normally closed, for remote monitoring of system operation. Contacts shall reverse position on failure of any surge diversion module or on opening of any current-limiting device.
 - 5. Transient-event counter set to totalize transient surges.
- B. Peak Single-Impulse Surge Current Rating: 160 kA per phase.
- C. Withstand Capabilities: 5000 IEEE C62.41, Category C3 (10 kA), 8-by-20-mic.sec. surges with less than 5 percent change in clamping voltage.
- D. Protection modes and UL 1449 SVR for grounded wye circuits with 277Y/480-V, three-phase, four-wire circuits shall be as follows:
 - 1. Line to Neutral: 800 V for 277Y/480.
 - 2. Line to Ground: 800 V for 277Y/480.
 - 3. Neutral to Ground: 800 V for 277Y/480.
- E. Protection modes and UL 1449 SVR for grounded wye circuits with 120Y/208-V, three-phase, four-wire circuits shall be as follows:
 - 1. Line to Neutral: 250 V for 120Y/208.
 - 2. Line to Ground: 250 V for 120Y/208.
 - 3. Neutral to Ground: 250 V for 120Y/208.

2.3 DISCONNECTING AND OVERCURRENT PROTECTIVE DEVICES

- A. Molded-Case Circuit Breaker (MCCB): Comply with UL 489, with series-connected rating to meet available fault currents.
 - 1. Thermal-Magnetic Circuit Breakers: Inverse time-current element for low-level overloads, and instantaneous magnetic trip element for short circuits. Adjustable magnetic trip setting for circuit-breaker frame sizes 250 A and larger.
 - 2. Current-Limiting Circuit Breakers: Frame sizes 400 A and smaller; let-through ratings less than NEMA FU 1, RK-5.
 - 3. Molded-Case Circuit-Breaker (MCCB) Features and Accessories:
 - a. Standard frame sizes, trip ratings, and number of poles.
 - b. Lugs: Mechanical, suitable for number, size, trip ratings, and conductor material.
 - c. Ground-Fault Protection: Integrally mounted relay and trip unit with adjustable pickup and time-delay settings, push-to-test feature, and ground-fault indicator.

2.4 INSTRUMENTATION

- A. Instrument Transformers: IEEE C57.13, NEMA EI 21.1, and the following:
1. Potential Transformers: IEEE C57.13; 120 V, 60 Hz, single secondary; disconnecting type with integral fuse mountings. Burden and accuracy shall be consistent with connected metering and relay devices.
 2. Current Transformers: IEEE C57.13; 5 A, 60 Hz, secondary; bar or window type; single secondary winding and secondary shorting device. Burden and accuracy shall be consistent with connected metering and relay devices.
 3. Control-Power Transformers: Dry type, mounted in separate compartments for units larger than 3 kVA.
 4. Current Transformers for Neutral and Ground-Fault Current Sensing: Connect secondary wiring to ground overcurrent relays, via shorting terminals, to provide selective tripping of main and tie circuit breaker. Coordinate with feeder circuit-breaker, ground-fault protection.
- B. Multifunction Digital-Metering Monitor: Microprocessor-based unit suitable for three- or four-wire systems and with the following features:
1. Switch-selectable digital display of the following values with maximum accuracy tolerances as indicated:
 - a. Phase Currents, Each Phase: Plus or minus 1 percent.
 - b. Phase-to-Phase Voltages, Three Phase: Plus or minus 1 percent.
 - c. Phase-to-Neutral Voltages, Three Phase: Plus or minus 1 percent.
 - d. Megawatts: Plus or minus 2 percent.
 - e. Megavars: Plus or minus 2 percent.
 - f. Power Factor: Plus or minus 2 percent.
 - g. Frequency: Plus or minus 0.5 percent.
 - h. Accumulated Energy, Megawatt Hours: Plus or minus 2 percent; accumulated values unaffected by power outages up to 72 hours.
 - i. Megawatt Demand: Plus or minus 2 percent; demand interval programmable from five to 60 minutes.
 - j. Contact devices to operate remote impulse-totalizing demand meter.
 2. Mounting: Display and control unit flush or semiflush mounted in instrument compartment door.
- C. Ammeters, Voltmeters, and Power-Factor Meters: ANSI C39.1.
1. Meters: 4-inch (100-mm) diameter or 6 inches (150 mm) square, flush or semiflush, with antiparallax 250-degree scales and external zero adjustment.
 2. Voltmeters: Cover an expanded-scale range of nominal voltage plus 10 percent.
- D. Instrument Switches: Rotary type with off position.
1. Voltmeter Switches: Permit reading of all phase-to-phase voltages and, where a neutral is indicated, phase-to-neutral voltages.
 2. Ammeter Switches: Permit reading of current in each phase and maintain current-transformer secondaries in a closed-circuit condition at all times.

2.5 IDENTIFICATION

- A. Service Equipment Label: NRTL labeled for use as service equipment for switchboards with one or more service disconnecting and overcurrent protective devices.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Receive, inspect, handle, store and install switchboards and accessories according to NECA 400.
- B. Equipment Mounting: Install switchboards on concrete base, 4-inch nominal thickness. Comply with requirements for concrete base specified in Division 3 Section "Cast-in-Place Concrete."
 - 1. Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch centers around the full perimeter of concrete base.
 - 2. For supported equipment, install epoxy-coated anchor bolts that extend through concrete base and anchor into structural concrete floor.
 - 3. Place and secure anchorage devices. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
 - 4. Install anchor bolts to elevations required for proper attachment to switchboards.
- C. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from switchboard units and components.
- D. Install filler plates in unused spaces of panel-mounted sections.
- E. Install overcurrent protective devices, transient voltage suppression devices, and instrumentation.
- F. Comply with NECA 1.

3.2 IDENTIFICATION

- A. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs complying with requirements for identification specified in Division 16 Section "Electrical Identification."
- B. Switchboard Nameplates: Label each switchboard compartment with a nameplate complying with requirements for identification specified in Division 16 Section "Electrical Identification."
- C. Device Nameplates: Label each disconnecting and overcurrent protective device and each meter and control device mounted in compartment doors with a nameplate complying with requirements for identification specified in Division 16 Section "Electrical Identification."

3.3 FIELD QUALITY CONTROL

- A. Acceptance Testing Preparation:

1. Test insulation resistance for each switchboard bus, component, connecting supply, feeder, and control circuit.
 2. Test continuity of each circuit.
- B. Tests and Inspections:
1. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
 2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
 3. Test and adjust controls, remote monitoring, and safeties. Replace damaged and malfunctioning controls and equipment.
- C. Switchboard will be considered defective if it does not pass tests and inspections.
- D. Prepare test and inspection reports, including a certified report that identifies switchboards included and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

END OF SECTION 16435