

Addendum Number 5, September 18, 2023

RE: Mobile Civic Center Parking Facility
Mobile, Alabama
C-085-22

FROM: Evan Terry Associates, LLC
One Perimeter Park South, Suite 200S
Birmingham, Alabama 35243

TO: All Planholders

This Addendum forms a part of and modifies the Construction Documents for the above project. Receipt of this Addendum shall be acknowledged in the submission of a proposal to the Owner. The Addendum will be issued to Registered Bidders.

This Addendum consists of additions to the existing contract documents dated June 30, 2022, as follows:

This Addendum consists of two (2) pages with attachments.

GENERAL

NA

CHANGES TO THE DRAWINGS

NA

CHANGES TO THE SPECIFICATIONS

ITEM 01 Refer to the specifications and add specifications section 26 22 16 Low-Voltage Distribution Transformers, copy which is attached.

RESPONSE TO RFI's

ITEM 01 Is the "EV Park Future" stripping required to be stenciled for this construction package or is this to be done in the future?

RESPONSE The Note "EV Park Future" is for informational purposes only. No stenciling required.

ITEM 02 Understanding the work hours identified in the bid documents of 6:00 am to 6:00 pm M-F, as this is a cast in place concrete parking deck, and early morning concrete pours are industry standard, will contractor be allowed to perform early morning concrete pours (pre 6:00 am) if coordinated with the Owner?

RESPONSE Yes

- ITEM 03 Under this heading item A.6. Concrete mixtures calls for 1 pint per cuyd of internal cure in concrete. IS this required for all concrete on this project?
- RESPONSE** **The internal cure admixture is in all horizontal beams and slabs, including slab on grade. It is not required in columns, walls and pile caps.**
- ITEM 04 There are typical cuts that aren't consistent with sections taken through the ramp on the typical levels. Do the slabs overlap and is there a curb everywhere there's a barrier cable. See details below:
- RESPONSE** **Barrier cables and curbs occur at the internal ramps along column lines 4 and 7 from column line D to P. The Interior Barrier Cable Detail on Sheet S1.02 shows the correct extents of the slabs (no overlap)**
- ITEM 05 In specification *08 7100 Door Hardware*, hardware set 1.0 and 2.0 correlate to the exterior aluminum doors. Hardware set 2.0 indicates two exit devices for a single door. Please confirm if hardware set 1.0 is to be used for all aluminum storefront doors. If not, please advise which exit device and door pull is to be used for hardware set 2.0.
- RESPONSE** **Hardware Set 1.0 to be used for exterior aluminum doors.**
- ITEM 06 What is the short circuit current rating required for each panelboard shown on sheet E0.02.
- RESPONSE** **The short circuit rating will be determined when the power study is performed during submittals. See notes on Sheet E0.02.**
- ITEM 07 Please provide a specification for the low voltage transformers shown on sheet E0.02.
- RESPONSE** **Low Voltage transformer specification added as a part of this Addenda.**
- ITEM 08 On Drawing C2.00 Site Demolition Plan, it calls for a light pole to be removed from the construction area. Is the circuit that feeds this light pole feeding other light poles in that area? If so, how do you propose to handle the circuit feeding the other lights?
- RESPONSE** **The feed for the parking entrance booth and light poles will to be de-energized before mobilization.**

End Of Addenda 5

SECTION 26 22 13
LOW-VOLTAGE DISTRIBUTION TRANSFORMERS

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes distribution, dry-type transformers with a nominal primary and secondary rating of 600 V and less, with capacities up to 1500 kVA.

1.02 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings:
 - 1. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
 - 2. Vibration Isolation Base Details: Detail fabrication including anchorages and attachments to structure and to supported equipment.
 - 3. Include diagrams for power, signal, and control wiring.

1.03 INFORMATIONAL SUBMITTALS

- A. Seismic Qualification Data: Certificates, for transformers, accessories, and components, from manufacturer.
- B. Source quality-control reports.
- C. Field quality-control reports.

1.04 CLOSEOUT SUBMITTALS

- A. Operation and maintenance data.

1.05 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Accredited by NETA.
 - 1. Testing Agency's Field Supervisor: Certified by NETA to supervise on-site testing.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Eaton.
 - 2. Siemens Industry, Inc., Energy Management Division.
 - 3. Square D; Schneider Electric USA.

2.02 GENERAL TRANSFORMER REQUIREMENTS

- A. Description: Factory-assembled and -tested, air-cooled units for 60-Hz service.
- B. Transformers shall comply with NEMA Standard TP-1 and be labeled for the EPA Energy Star Program.
- C. Comply with NFPA 70.
 - 1. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.
- D. Transformers Rated 15 kVA and Larger:
 - 1. Comply with 10 CFR 431 (DOE 2016) efficiency levels.
 - 2. Marked as compliant with DOE 2016 efficiency levels by an NRTL.
- E. Encapsulation: Transformers smaller than 30 kVA shall have core and coils completely resin encapsulated.
- F. Cores: Electrical grade, non-aging silicon steel with high permeability and low hysteresis losses.
- G. Coils: Continuous windings without splices except for taps.
 - 1. Coil Material: Copper.
 - 2. Internal Coil Connections: Brazed or pressure type.
 - 3. Terminal Connections: Welded.

- H. Shipping Restraints: Paint or otherwise color-code bolts, wedges, blocks, and other restraints that are to be removed after installation and before energizing. Use fluorescent colors that are easily identifiable inside the transformer enclosure.

2.03 DISTRIBUTION TRANSFORMERS

- A. Comply with NFPA 70, and list and label as complying with UL 1561.
- B. Provide transformers that are constructed to withstand seismic forces specified in Section 260548.16 "Seismic Controls for Electrical Systems."
- C. Cores: One leg per phase.
- D. Enclosure: Ventilated.
 - 1. NEMA 250, Type 2: Core and coil shall be encapsulated within resin compound to seal out moisture and air.
 - 2. KVA Ratings: Based on convection cooling only and not relying on auxiliary fans.
 - 3. Wiring Compartment: Sized for conduit entry and wiring installation.
- E. Enclosure: Ventilated.
 - 1. NEMA 250, Type 3R: Core and coil shall be encapsulated within resin compound, sealing out moisture and air with drip shield.
 - 2. Wiring Compartment: Sized for conduit entry and wiring installation.
- F. Taps for Transformers 3 kVA and Smaller: One 5 percent tap above normal full capacity.
- G. Taps for Transformers 7.5 to 24 kVA: One 5 percent tap above and one 5 percent tap below normal full capacity.
- H. Taps for Transformers 25 kVA and Larger: Two 2.5 percent taps above and two 2.5 percent taps below normal full capacity.
- I. Insulation Class, Smaller Than 30 kVA: 180 deg C, UL-component-recognized insulation system with a maximum of 115 deg C rise above 40 deg C ambient temperature.
- J. Insulation Class, 30 kVA and Larger: 220 deg C, UL-component-recognized insulation system with a maximum of 150 deg C rise above 40 deg C ambient temperature.
- K. Grounding: Provide ground-bar kit or a ground bar installed on the inside of the transformer enclosure.
- L. Wall Brackets: Manufacturer's standard brackets.

2.04 IDENTIFICATION

- A. Nameplates: Engraved, laminated-acrylic or melamine plastic signs for each distribution transformer, mounted with corrosion-resistant screws. Nameplates and label products are specified in Section 260553 "Identification for Electrical Systems."

PART 3 EXECUTION

3.01 EXAMINATION

- B. Examine conditions for compliance with enclosure- and ambient-temperature requirements for each transformer.
- C. Verify that field measurements are as needed to maintain working clearances required by NFPA 70 and manufacturer's written instructions.
- D. Examine walls, floors, roofs, and concrete bases for suitable mounting conditions where transformers will be installed.
- E. Verify that ground connections are in place and requirements in Section 260526 "Grounding and Bonding for Electrical Systems" have been met. Maximum ground resistance shall be 5 ohms at location of transformer.
- F. Environment: Enclosures shall be rated for the environment in which they are located. Covers for NEMA 250, Type 4X enclosures shall not cause accessibility problems.

3.02 INSTALLATION

- A. Install wall-mounted transformers level and plumb with wall brackets fabricated by transformer manufacturer.
 - 1. Coordinate installation of wall-mounted and structure-hanging supports with actual transformer provided.

- B. Install transformers level and plumb on a concrete base with vibration-dampening supports. Locate transformers away from corners and not parallel to adjacent wall surface.
- C. Construct concrete bases according to Section 033000 "Cast-in-Place Concrete" and anchor floor-mounted transformers according to manufacturer's written instructions and requirements in Section 260529 "Hangers and Supports for Electrical Systems."
 - 1. Coordinate size and location of concrete bases with actual transformer provided. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements are specified with concrete.
- D. Secure transformer to concrete base according to manufacturer's written instructions.
- E. Secure covers to enclosure and tighten all bolts to manufacturer-recommended torques to reduce noise generation.
- F. Remove shipping bolts, blocking, and wedges.

3.03 CONNECTIONS

- A. Ground equipment according to Section 260526 "Grounding and Bonding for Electrical Systems."
- B. Connect wiring according to Section 260519 "Low-Voltage Electrical Power Conductors and Cables."
- C. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A-486B.
- D. Provide flexible connections at all conduit and conductor terminations and supports to eliminate sound and vibration transmission to the building structure.

3.04 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
- B. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- C. Perform tests and inspections.
- D. Small (Up to 167-kVA Single-Phase or 500-kVA Three-Phase) Dry-Type Transformer Field Tests:
 - 1. Visual and Mechanical Inspection.
 - a. Inspect physical and mechanical condition.
 - b. Inspect anchorage, alignment, and grounding.
 - c. Verify that resilient mounts are free and that any shipping brackets have been removed.
 - d. Verify the unit is clean.
 - e. Perform specific inspections and mechanical tests recommended by manufacturer.
 - f. Verify that as-left tap connections are as specified.
 - g. Verify the presence of surge arresters and that their ratings are as specified.
 - 2. Electrical Tests:
 - a. Measure resistance at each winding, tap, and bolted connection.
 - b. Perform insulation-resistance tests winding-to-winding and each winding-to-ground. Apply voltage according to manufacturer's published data. In the absence of manufacturer's published data, comply with NETA ATS, Table 100.5. Calculate polarization index: the value of the index shall not be less than 1.0.
 - c. Perform turns-ratio tests at all tap positions. Test results shall not deviate by more than one-half percent from either the adjacent coils or the calculated ratio. If test fails, replace the transformer.
 - d. Verify correct secondary voltage, phase-to-phase and phase-to-neutral, after energization and prior to loading.
- E. Remove and replace units that do not pass tests or inspections and retest as specified above.
- F. Test Labeling: On completion of satisfactory testing of each unit, attach a dated and signed "Satisfactory Test" label to tested component.

3.05 CLEANING

- A. Vacuum dirt and debris; do not use compressed air to assist in cleaning.

END OF SECTION