

## **Appendix A Technical Specifications**

### **99424: Communications Shelter Purchase 2020: Otis Road**

#### **Scope of Work**

JEA is seeking bids for 2 Communications Shelter sites. Bidder shall submit pricing that includes inside shipping for all items seen below to: garljb@jea.com. Pricing submitted below shall include any other associated costs. No additional fees shall apply.

#### **Construction - Concrete**

- Size nominal 10' wide exterior x nominal 16' long exterior x nominal 9'2" high interior, one room concrete shelter
- The structural loads of the proposed concrete shelter are as follows:
  - 200 pounds per square foot distributed floor loading while on foundation
  - 125 pounds per square foot distributed floor loading while lifting
  - 100 pounds per square foot distributed roof load
  - 150 mph wind load
  - Seismic Zone 4
  - Lightweight concrete weight to be less than 100 lbs./cu.ft.
  - Aggregate to be homogenous; no seeding of aggregate
  - Preliminary drawings to be provided 12-15 working days after receipt of purchase order
  - Shelter to be approved and labeled through the Florida Department of Community Affairs
- All building panels (wall-to-wall, roof-to-wall, and wall-to-floor) shall be constructed with step joints to prevent water intrusion
- All building panel connections shall be accomplished by a welded connection by certified welders. Bolted panel connections are not acceptable
- Building lifting provisions shall be integral to the shelter floor. Bolt-on lifting eyes or lifting provisions from the shelter walls are not acceptable
- The proposed shelter walls, roof, and floor shall be a minimum of 4" thick lightweight concrete (concrete weight to be less than 100 lbs./cu.ft.)
- The proposed shelter walls will provide a two hour fire rating
- The walls will be insulated with hardboard insulation, total wall is R-19
- The ceiling will be insulated with hardboard insulation, total ceiling is R-38
- The interior walls and ceiling will be sheathed with white Nupoly board
- Exposed aggregate exterior
- The proposed shelter walls are capable of stopping 30.06 rifle fire per UL752 requirements. Unless otherwise specified, the shelter door is not bullet resistant.

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- Light colored industrial grade vinyl tile floor covering
- One (1) 36" wide x 84" high **Florida approved** steel exterior door of fully insulated construction with stainless steel ball-bearing tamper-proof hinges, latch guard, security viewer, passage style lever handle, **Florida approved** Mortise deadbolt lockset and fiberglass weather hood
- One (1) hydraulic door closer

#### **Power Distribution**

- One (1) MOV only lightning arrestor, GE Model #TLE120SO50WM (specification sheet attached)
- One (1) telco surge arrestor, Atlantic-Scientific Model #24558 (specification sheet attached)
- One (1) 225 Amp, 10,000 AIC, 120/240 VAC, single phase, 60 Hz, 42 space main lug only, snap-in utility power distribution panel, in a NEMA 1 surface mount enclosure
- Power panel to be supplied with the following breakers:
  - Two (2) 15 Amp single pole
  - Seven (7) 20 Amp single pole
  - One (1) 40 Amp single pole
  - Five (5) 20 Amp double pole
  - One (1) 30 Amp double pole
  - Two (2) 35 Amp double pole
  - Eight (8) 40 Amp double pole
- One (1) 200 Amp, 240 VAC, fused, double pole, NEMA 3R single throw safety switch
- One (1) 200 Amp, 250 VAC, non-fused, three pole, double throw, NEMA 1 manual transfer switch
- One (1) 200 Amp, four wire, four pin exterior power receptacle; Appleton Model #AJA20044-200RS
- One (1) mating plug for the power receptacle; Appleton Model #AP20044E-RS
- Three (3) 20 Amp specification grade duplex receptacles
- One (1) 20 Amp specification grade exterior duplex receptacle on a ground fault interrupter circuit
- Six (6) equipment AC circuit drops up to 40 Amps routed in conduit or wireway to specified locations on the ceiling above customer equipment racks. Flexible conduit including circuit conductors will be coiled and tagged for identification with enough length to reach the floor and an additional four feet (4') of circuit conductors to be cut to length and terminated by the customer.

#### **Lighting**

- Four (4) four foot, surface mounted LED light fixtures

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- One (1) 20 Watt surface mounted exterior flood light; Lithonia p/n OLW14
- One (1) emergency / exit LED light

#### **HVAC**

- Two (2) nominal 36,000 Btu/hr (3 ton) wall mount air conditioning unit, with low ambient and compressor anti cycle controls, time delay relay on one unit, washable dust filters, no integral heat strips and fiberglass hoods
- Redundant lead/lag controls allowing approximately equal operating time on each air conditioning unit
- HVAC equipment shall be to have an efficiency rating of 11.0 or higher

#### **Alarm Device Contacts**

The following alarm device contacts will be wired and brought to a location specified by the customer. The alarm wires will be coiled and tagged for identification. Termination at the customer's equipment will be provided by others.

No provisions for audible, visual or remote alarm monitoring will be offered, except where it is integral to the device offered

- One (1) line voltage smoke detector
- One (1) intrusion alarm switch with form "C" contacts rated .1 Amps at 28 Vdc
- One (1) high temperature alarm
- One (1) lightning arrestor alarm
- One (1) utility power failure alarm
- One (1) HVAC shutdown for smoke detector alarm with manual reset push button

#### **Grounding**

- Provisions for the connection of a grounding electrode conductor at the shelter service equipment
- One "halo" ground system consisting of a 2 AWG stranded green insulated copper halo, approximately 6 inches below the ceiling, with vertical 2 AWG bare/tinned copper drops through the floor at each corner. A length of wire is coiled at each drop to allow attachment to an exterior ring ground system by others
- One (1) ¼" x 4" x 30" isolated copper ground plate
- Two (2) ¼" x 4" x 37" isolated copper exterior ground plates
- One (1) ¼" x 4" x 6" isolated copper ground plate

#### **Accessories**

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- The information below has been extracted from the above referenced Facilities Standards Manual:  
08 71 20 – Corbin Russwin Locksets

#### **LOCKSET:**

- Mortise: Corbin Russwin, ML2000 Series-Heavy duty for medium to light used door
- Cylindrical: Corbin Russwin, CL3300 Series-Extra heavy duty for highly used door or Corbin Russwin, CL3500 Series-Heavy duty for medium to lightly used door

#### **HANDLE AND TRIM:**

- Mortise: Lustra Lever Design Handle (LWA) for mortise lockset
  - Satin Stainless Steel US32D (BHMA 630) finish
  - Cylindrical: Newport lever handle (NZD)
  - Satin chrome plated (626) finish
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- One (1) sixteen - port/waveguide entry panel with 4" sleeves and protective blank covers
  - Two (2) future waveguide openings with interior and exterior cover plates
  - Fifty-two feet (52') of 12" wide cable ladder/tray
  - One (1) 48" x 96" x 3/4" equipment mounting board
  - One (1) alarm terminal strip with 56 dual terminal points
  - One (1) file holder
  - One (1) portable 5 pound CO<sub>2</sub> fire extinguisher
  - One (1) hand held emergency eye wash station
  - One (1) first aid kit
  - One (1) service manual
  - Provide three (3) sets of shelter drawings with each shelter unit order. Typical foundation drawings based upon normal soil conditions are available to support calculations for recommended shelter tie down locations.
  - All wiring will be installed in surface mounted conduit or wireways if specified and will be in full compliance with ANSI/NFPA-70 - The National Electric Code, latest revision
  - Transportation to Jacksonville, FL (exact SHIP TO ADDRESS is 150 Otis Rd., Jacksonville, FL 32220)
  - Work must be completed no later than September 30, 2020.