VOLUME 2 – TECHNICAL MANUAL

BID NO. 2018-175

PROJECT MANUAL
FOR
GENERATOR REPLACEMENT AT GREEN BAY JAIL
2500 URBAN DRIVE
FORT WORTH, TEXAS 76106

BIDS DUE SEPTEMBER 20, 2018
2:00 P.M.

Technical Specifications Prepared by
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6300 Ridglea Place, Suite 700
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RFB NO. 2018-175
Scope Summary

To: Bidders

From: Paul Morris, PE

Date: July 30, 2018

Subject: Tarrant County Green Bay Jail – Generator Replacement

Replace existing 250 KW generator and fuel tank with new genset equivalent to existing generator.

1. Perform all work in accordance with all applicable national and local codes and code authorities.

2. Submit electronic copy of shop drawings for all material furnished under this division of work.

3. Secure and pay for all necessary permits, licenses and inspections required by law for the completion of the work. Secure and pay for all certificates of approval that are required and deliver them to the engineer before final acceptance of the work.

4. Make excavations to the proper depth, with allowances made for floor slabs, forms, beams, etc. Compact the ground under conduits before conduits are installed.

5. Identify electrical equipment using laminated three-ply, engraved, plastic nameplates as required with black surface and white interior core, at least 1/16 inch thick. Attach nameplates using chromium plated screws as required. Provide nameplates for new disconnect switches.

6. Examine the project site and make allowances in the bid to accommodate existing conditions.

7. All material shall be new, UL listed, and free from defects, unless existing material is specifically shown to be reused. Install all material in accordance with good workmanship standards.

8. Substitutions of specified material shall be approved in writing by the engineer prior to bidding.

9. Provide all cutting and patching necessary for the work. Patching shall be done to the satisfaction of the engineer.

10. Provide factory finish on all material furnished to the jobsite and touch up finishes which have been damaged.

11. Provide typewritten directories in all new panelboards. Provide new typewritten directories for existing panelboards in which the loads served have been changed by the scope of this project.
12. Provide a copy of as-built plans to the owner upon completion of project.

13. Maintain operations of all building systems during construction. Coordinate all shutdowns or system disruptions with owner seven days in advance.

14. Use EMT conduit with compression type fittings and insulated bushings, 3/4 inch minimum, for interior, concealed work and exposed work above switch height.

15. Use rigid galvanized steel conduit for exposed work below switch height.

16. Use schedule 40 PVC conduit, 3/4 inch minimum, for all underground work. Provide PVC coated, rigid galvanized steel bends.

17. Use 4" square (minimum) galvanized steel outlet boxes.

18. Use copper conductors, type THHN insulation, or approved equal. Use solid conductors for #10 AWG and smaller and stranded conductors for #8 AWG and larger. Aluminum conductors are not acceptable.

19. Make splices and provide work as required to maintain circuit continuity to existing devices and equipment to remain in service.

20. Remove all existing conductors, cables and exposed conduit rendered unused by the scope of this project back to the source of supply.

21. Provide specification grade wiring devices equal to Hubbell 1221 for switches and Hubbell 5262 for receptacles. Provide coverplates for all wiring devices and communications outlets. Install receptacles at +18 inches and switches at +48" unless noted otherwise.

22. Circuit breakers shall be number of poles and ampere rating as shown on plans. Circuit breakers shall be capable of interrupting the fault current available to them without the use of series connected ratings with upstream circuit breakers.

23. Provide a ground system that includes all connections and testing of: ground rods, ground cables, ground buses, conduits, fittings, anchors, supports, and other materials as required for a complete installation.

24. The manufacturer's standard warranty for the generator system shall not be less than two (2) years from substantial completion or 2000 run time hours from date of initial start-up of the system and shall include repair parts, labor, reasonable travel expense necessary for repairs at the job site, and expendables (lubricating oil, filters, antifreeze, and other service items made unusable by the defect) used during the course of the repair. Submittals received without written warranties as specified will be rejected in their entirety.

Submitted By:  Paul Morris, Electrical Engineer

BAIRD, HAMPTON & BROWN