

1.0 Location of Property

JEA Brandy Branch Generating Station is located at 15701 West Beaver Street, Jacksonville, Florida 32234.

2.0 Scope of Work

2.1. This specification covers the purchase and installation of ten (10) new fan hub assemblies for a Marley F499A-4.0-10B cooling tower at Brandy Branch Generating Station. This specification also covers removal and disposal of the existing FRP fan hub assemblies. The awarded Company is to furnish all labor, supervision, material, cranes, subcontracts, etc. to perform the before mentioned work.

2.1.1. The Company shall remove and dispose of the existing ten hub assemblies, including blades, that are being replaced. The Company shall provide all material and labor for installation of the hub assemblies including fan blades, hubs plates, blade clamps and hardware, and fan seal discs.

2.1.2. The Company shall take every precaution to not damage the cooling tower structural while removing current hub assemblies and while installing the new hub assemblies.

3.0 Codes and Standards

The following codes and standards, as amended to date, are applicable under this contract:

- Codes, Rules and Regulations of the State of Florida
- Occupational Safety and Health (OSHA)
 - 1917.120
- American Society of Civil Engineers (ASCE)
 - ASCE Standard ANSI/ASCE 7-2010

4.0 Existing Fan Hub Assemblies

4.1. The existing fan hub assemblies are Marley HP7000, 32'10-1/2" Diameter, with seven FRP blades per assembly. The fan blades are hollow FRP with weep holes, and the hub diameter is 5'0".

4.2. The existing fan blades have UV damage and damage in multiple areas. The fan blades have been recoated previously and the coating has worn off. An inspection performed by the OEM and a third party recommends replacing the hub assemblies.

5.0 Demolition and Removal

5.1 The existing fan hub assemblies are connected to the cooling tower structure, which is not being replaced. Extreme care must be taken so that no damage is done to the cooling tower or any other equipment during the removal of the hub assemblies. It is emphasized that equipment located adjacent to and below grade in the working area are very essential

elements of the plant. All such adjacent equipment must be kept safe during all demolition and installation work. When possible, equipment will be de-energized by JEA personnel. JEA will tag-out any equipment that needs to be de-energized.

5.2 The Company shall erect and properly maintain danger signs, barricades, tags, lights and other safeguards as may be required for safe working conditions.

5.3 All materials from the fan hub assembly removal shall become the property of the Company and shall be removed promptly from the site. Removal of debris from the site shall be done frequently to avoid any collection of debris.

6.0 Replacement Fan Hub Assemblies

6.1 The Company shall be fully responsible for the complete replacement of the existing cooling tower fan hub assemblies including lades, hub plates, clamps, and seal discs. The Company shall purchase ten new fan hub assemblies, that are identical to the existing assemblies. The Company shall inspect the condition of the existing cooling tower structural to ensure there will be no issues with the installation of the new fan hub assemblies.

6.2 The Contractor shall ensure the proper seating of the new fan hub assemblies. The fan blades shall be securely clamped. The fan seal discs shall be installed on each hub assembly. All hardware shall be torqued to the proper manufacture specification, and the manufacture specifications shall be turned over to JEA engineering for review. The blade pitch shall be set to $15^{\circ} \pm 0.5^{\circ}$. Blade tip clearance shall be between $\frac{3}{4}$ " to 1-1/2". Blade tracking shall be a maximum of 1-1/2". Blade pitch setting reports for each fan will be provided by the Contractor.

6.3 Any hardware required shall be provided by the Company and shall be stainless.

7.0 Shipment

7.1 The Company shall be fully responsible for the safe shipment, storage, and handling of the components of the fan hub assemblies. The Company shall be fully responsible for the fan hub assemblies on the job site until the system is turned over to the Plant. The Company is responsible for all shipping costs and for all truck loading and unloading of material at the job site.

7.2 Hardware, and other miscellaneous parts shall be packed in suitable boxes for storage at the job site.

8.0 Construction

8.1 Temporary Utilities

- A. JEA will provide limited 110V - 20 ampere single-phase and 480V - 60 ampere three-phase electrical power at designated locations in the cooling tower area. Company shall be responsible for additional power supply (Generator) requirements and transformers to provide any other required voltages. Company shall make electrical connections and supply sufficient quantities and lengths of cables and electrical connectors in safe working order.
- B. Service air for construction activities is not available.
- C. Isolating and tagging out of equipment prior to work by the Company will be provided by JEA.
- D. Company to provide designated trash dumpsters, labeled by debris type.
- E. Company to provide adequate sanitary facilities for all their personnel serviced at a minimum 3 times a week.
- F. Company to provide any required break areas for personnel.
- G. Contractor parking area is located on West side of plant ~1600' from work area. Only company placarded vehicles will be allowed @ work area.

8.2 Laydown & Assembly Area

The Company shall notify the JEA Project manager of the size of their required laydown and assembly area. The laydown and assembly location will be determined jointly by the JEA Project Manager and Company.

8.3 Project Schedule

- A. The tentative outage schedule for Brandy Branch combined cycle is tentatively March 8, 2027 through April 21, 2027. The Company will have about 40 days available to perform scope of work thus allowing operational shutdown, startup, and testing activities. **Tentative outage working days are 3/11/27 to 4/18/27.**
- B. Company shall provide the JEA Project Manager a detailed resource loaded project schedule within 2 weeks of award. Schedule shall outline all project details including but not limited to: Mobilization, Assembly, demobilization. It shall be in MPP format with copy in PDF format.
- C. The project schedule for this contract shall be prepared and maintained by Company to provide coordination between subcontractors and suppliers, to establish the basis for measuring and monitoring Company progress and overall Project progress, to detect problems for the purpose of taking corrective action.

14.4 Project Meetings

A. Once Company has mobilized to Jobsite, JEA and Company representatives shall meet daily to update the following:

Current status of the job progress

Look-Ahead Schedule (requirements listed in Item B. below)

Current and projected manpower

Changes in the Work

Safety and Quality Control issues

Problem areas or concerns

B. The Look-Ahead Schedule shall:

Report all planned work that is to be accomplished during the current week and the next two weeks in support of, and in accordance with, Company's detailed Construction Schedule

Be personnel and resource loaded

Report the planned and actual progress of the previous week

Report critical activities that are identified to be completed by others, the delay of which would prevent Company from starting and completing its planned work activities in accordance with the detailed Construction Schedule.