



**BID SPECIFICATIONS**

**FOR 40 HP INVERTER DUTY MOTOR**

**WASTEWATER TREATMENT PLANT # 3**

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# SPECIFICATIONS

## **PART 1 – GENERAL**

### **1.01 SECTION INCLUDES**

- A. Existing Motor Repair Specifications
- B. New Motor Specifications

### **1.02 REPAIR SPECIFICATIONS**

- A. Name Plate Data :
  - 40hp
  - Catalog #: APH04006TE4
  - Frame: 364T
  - Volts: 460
  - KVA Code: G
  - Amps: 47.1
  - Amb: 40C
  - Hz: 60
  - SF: 1.15
  - Rating: Continuous
  - Design: B
  - Bearing 6313Z C35C 6213Z C35C
  - NEMA Nom Eff: 94.1
  - Minimum Eff: 93.0
- B. Repair motor including but not limited to the following: Note: motor is disassembled
  - Pickup and delivery at Wastewater Plant # 3
  - Clean parts.
  - Measure mechanical fits.
  - Strip out three phase windings.
  - Perform core loss test.
  - Rewind to three lead stator, inverter duty rated.
  - Class B temperature rise. Class F insulation with phenolic alkyd resin varnish – two dips and bakes.
  - Bore and sleeve housings.

- Dynamic balance rotor.
- New shielded bearings BRG-6313ZZ and BRG-6213ZZ
- Sleeve EMIo1-6948
- Sleeve EMIo1-6961
- Assemble AC motor
- Paint to match existing color.

### **1.03 NEW MOTOR SPECIFICATIONS**

#### **A. Acceptable Motors:**

- Siemens
- Toshiba
- U.S.Electric
- TECO/Westinghouse
- Equivalent as determined by the City

#### **B. Materials**

- See name plate data for general information.
- Casing: Cast iron, ASTM A48, Class 30C.
- Totally enclosed fan cooled.
- NEMA premium efficient rating.
- 36 month manufacturer warranty
- 3 Phase 60 Hertz.
- 1.15 service factor continuous
- Class B temperature rise, Class F insulation with phenolic alkyd resin varnish – 2 dips and bakes.
- Oversized cast iron main conduit box rotatable in 90 degree increments – fully gasketed with NPT threaded entrance.
- CSA certified for Class I, Division II, Groups B, C, D, Temp code T3C, non-sparking, non static fan.
- Bi directional rotation.
- Cast Iron frame, end bells, fan cover, and main conduit box.
- 10 45 carbon steel shaft. Stainless steel nameplate.
- Aluminum die cast squirrel cage rotor construction.
- Paint system: phenolic rust proof base plus polyurethane top coat.
- Vacuum De-gassed regreasable ball bearings (or roller)
- Automatic grease discharge fittings.
- Labyrinth type metal finger on both ends.
- Cast iron inner and outer bearing caps on both ends.
- Grounding terminal in main box.
- Inverter duty magnet wire capable of withstanding voltage spikes of up to 2200 volts.
- Motor shall be designed for use with adjustable frequency drives.

- Keyed shaft on drive end.
- Vertical mounted C face mount.
- Drip fan cover required for vertical mounting.
- Three lead wiring configuration.