



**Working Together for a
Better Tomorrow. Today.**

SPECIFICATION PACKAGE

for

BOILER FAN MOTOR REFURBISHMENT

Bid Opening Date/Time

**Tuesday, March 8, 2011 @ 2:00 p.m.
City of Grand Island, City Hall
100 East 1st Street, P.O. Box 1968
Grand Island, NE 68802-1968**

Contact

**City of Grand Island – Utilities Department
Platte Generating Station
308/385-5496**

Date issued: February 15, 2011

**ADVERTISEMENT TO BIDDERS
FOR
BOILER FAN MOTOR REFURBISHMENT
FOR
CITY OF GRAND ISLAND, NEBRASKA**

Sealed bids will be received at the office of the City Clerk, 100 E. First Street, P.O. Box 1968, Grand Island, Nebraska 68802, until Tuesday, March 8, 2011 at 2:00 p.m. local time for Boiler Fan Motor Refurbishment, FOB the City of Grand Island, freight prepaid. Bids will be publicly opened at this time in the Grand Island City Hall Council Conference Room #1 located on 1st floor of City Hall. Submit an original and three copies. Bid proposal package is also available on-line at www.grand-island.com under Business-Bid Calendar. Bids received after the specified time will be returned unopened to sender.

The successful bidder will be required to comply with fair labor standards as required by Nebraska R.R.S.73-102 and comply with Nebraska R.R.S. 48-657 pertaining to contributions to the Unemployment Compensation Fund of the State of Nebraska. Successful bidder shall maintain a drug free workplace policy. Every public contractor and his, her or its subcontractors who are awarded a contract by the City for the physical performance of services within the State of Nebraska shall register with and use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska.

Each bidder shall submit with the bid a certified check, a cashiers check, or bid bond payable to the City Treasurer in an amount no less than five percent (5%) of the bid price which shall guarantee good faith on the part of the bidder and the entering into a contract within fourteen (14) days at the bid price if accepted by the City. **Your certified check, cashier's check or bid bond must be submitted in a separate envelope attached to the outside of the envelope containing the bid.** Each envelope must be clearly marked indicating its contents. **Failure to submit the necessary qualifying information in clearly marked and separate envelopes will result in your bid not being opened or considered.** Surety companies authorized to do business in the State of Nebraska must issue bid bonds.

Bids will be evaluated by the Purchaser based on price, schedule, quality, adherence to schedule, plan and specifications, economy and efficiency of operation, experience and reputation of the bidder, ability, capacity, and skill of the bidder to perform contract required and adaptability of the particular items to the specific use intended.

The Purchaser reserves the right to reject any or all bids, to waive irregularities therein, and to accept whichever bid that may be in the best interest of the City, at its sole discretion.

No bidder may withdraw his bid for a period of thirty (30) days after date of bid opening.

RaNae Edwards, City Clerk

(All bids must be submitted on this form)
BOILER FAN MOTOR REFURBISHMENT
BID DATA FORM

CITY OF GRAND ISLAND
 GRAND ISLAND, NE

The undersigned bidder, having examined all specifications and other bidding documents, and all addenda thereto, and being acquainted with and fully understanding all conditions relative to the specified materials and equipment, hereby proposes to repair such equipment and deliver them FOB the City of Grand Island, freight prepaid, at the following price:

<u>ITEM DESCRIPTION</u>	<u>EXTENDED COST</u>
Base Bid:	
Material	\$ _____
Labor	\$ _____
Applicable Sales Tax*	\$ _____
TOTAL BASE BID	\$ _____

*** If bidder fails to include sales tax in their bid price or takes exception to including sales tax in their bid price, the City will add a 7.0% figure to the bid price for evaluation purposes; however, the City will only pay actual sales tax due.**

- By checking this box, Bidder acknowledges that Addenda Number(s) _____ were received and considered in Bid preparation.
- By checking this box, Bidder acknowledges the specified completion date of the project is **May 31, 2011**.

According to Nebraska Sales and Use Tax Requirements, Section 1-017, Contractors, check which option you have selected to file with the Nebraska Department of Revenue:

Nebraska law provides a sales and use tax exemption on contractor labor charges for the construction, repair, or annexation of any structure used for the generation, transmission, or distribution of electricity. Separately stated contractor labor would be exempt, all materials are taxable according to the contractor's option.

Option 1 (Section 1-017.05) _____ Option 2 (Section 1-017.06) _____ Option 3 (Section 1-017.07) _____

If the Nebraska sales and use tax election is not filed or noted above, the contractor will be treated as a retailer under Option 1 for sales and use tax purposes.

 Bidder Company Name Date

 Company Address City State Zip

 Print Name of Person Completing Bid Signature

Telephone No. _____ Fax No. _____

By checking this box, Bidder acknowledges there are Exceptions noted to the bid.
NOTE: Any exceptions to specifications must be fully explained on a separate sheet attached to bid.

CHECKLIST FOR BID SUBMISSION
FOR
BOILER FAN MOTOR REFURBISHMENT

Bids must be received by the City Clerk before 2:00 p.m. on Tuesday, March 8, 2011.

The following items must be completed for your bid to be considered.

- A signed original and three copies of the bidding documents.
- A reference list of at least three motor repairs of similar scope and complexity.
- Firm lump sum pricing; firm unit pricing in case adjustments are necessary, and breakout of sales tax pricing.
- A proposed repair and delivery schedule.
- A detailed description of the proposed repair.
- Selection of Nebraska Sales Tax Option.
- Acknowledgment of Addenda Number(s) _____.
- Bidders must complete and sign the Bid Data Form provided in these Documents. All blank spaces must be filled in. Bidders shall acknowledge receipt of any Addenda information on the Bid Data Form.
- A certified check, cashiers check or bid bond in a separate envelope attached to the **outside of the envelope containing the bid**. Each envelope must be clearly marked indicating its contents. Failure to submit the necessary qualifying information in clearly marked and separate envelopes will result in your bid not being opened.

Please check off each item as completed.

Company

Signature

Telephone No. _____

Fax No. _____

INSTRUCTIONS TO BIDDERS

1. GENERAL INFORMATION.

The following instructions outline the procedure for preparing and submitting Bids. Bidders must fulfill all requirements as specified in these Documents.

2. TYPE OF BID.

Bidders shall be required to submit prices for all items listed in the Bid Data Form.

3. PREPARATION OF BIDS.

Bidders shall use only the Bid Data Form provided in these Documents. All blank spaces in the Bid Data Form, must be filled in, preferably in BLACK ink, in both words and figures where required. No changes to the wording or content of the forms is permitted. Written amounts shall govern in case of discrepancy between the amounts stated in writing and the amounts stated in figures.

Prices stated shall be f.o.b. with freight and full insurance paid by Bidder, to the job site located in Grand Island.

The Bidder shall acknowledge receipt of all addenda in the Bid Data Form. Bids received without acknowledgement or without the Addendum enclosed will be considered informal.

4. SUBMISSION OF BIDS.

All Bids must be submitted intact not later than the time prescribed, at the place, and in the manner set forth in the ADVERTISEMENT FOR BIDS. Bids must be made on the Bid Data Form provided here in. Each Bid must be submitted intact in a sealed envelope, so marked as to indicate its contents without being opened, and delivered in person or addressed and mailed in conformance with the instructions in the ADVERTISEMENT FOR BIDS.

5. BID SECURITY.

Bids must be accompanied by cash, a certified check, or cashier's check drawn on a bank which is insured by the Federal Deposit Insurance Corporation, or a bid bond issued by a Surety authorized to issue such bonds in the state where the Work is located, in the amount of 5 percent of the bid amount payable to OWNER. This bid security shall be given as a guarantee that the Bidder will not withdraw his Bid for a period of 30 days after bid opening, and that if awarded the Contract, the successful Bidder will execute the attached Contract and furnish a properly executed Performance Bond and Payment Bond each in the full amount of the Contract price within the time specified.

The Attorney-in-Fact that executes this bond in behalf of the Surety must attach a notarized copy of his power of attorney as evidence of his authority to bind the Surety on the date of execution of the bond. Where State Statute requires, certification by a resident agent shall also be provided.

6. RETURN OF BID SECURITY.

Within 15 days after the award of the Contract, the OWNER will return the bid securities to all Bidders whose Bids are not to be further considered in awarding the contract. All other retained bid securities will be held until the Contract has been finally executed, after which all bid securities, other than Bidders' bonds and guarantees which have been fortified, will be returned to the respective Bidders whose Bids they accompanied.

7. BASIS OF AWARD.

The award will be made by the OWNER on the basis of the Bid from the lowest responsive, responsible Bidder which, in the OWNER's sole and absolute judgment will best serve the interest of the OWNER. All Bids will be considered on the following basis:

Conformance with the terms of the Bid Documents.

Bid price.
Cost of installation.

Suitability to project requirements.
Delivery time.

Responsibility and qualification of Bidder.

The OWNER reserves the right to reject all Bids, or any Bid not in conformance with the intent of the Bid Documents, and to waive any informalities and irregularities in said Bids.

8. EXECUTION OF CONTRACT.

The successful Bidder shall, within 15 days after receiving notice of award, sign and deliver to the OWNER the Contract hereto attached together with the acceptable bonds as required in these Bid Documents. Within 15 days after receiving the signed Contract with acceptable bond(s) from the successful Bidder, the OWNER's authorized agent will sign the Contract. Signature by both parties constitutes execution of the Contract.

9. PERFORMANCE AND PAYMENT BONDS.

The successful Bidder shall file with the OWNER Performance and Payment Bonds in the full amount (100 percent) of the Contract price, as security for the faithful performance of the Contract and the payment of all persons supplying labor and materials for the Work under this Contract, and to cover all guarantees against defective workmanship or materials, or both, for a period of 1 year after the date of final acceptance of the Work by the OWNER. The Surety furnishing these bonds shall have a record of service satisfactory to the OWNER, be authorized to do business in the State where the OWNER's project is located and shall be named on the current list of approved Surety Companies, acceptable on Federal bonds as published by the Audit Staff, Bureau of Accounts, U.S. Treasury Department.

The Attorney-in-Fact (Resident Agent) who executes these bonds on behalf of the Surety must attach a notarized copy of his power-of-attorney as evidence of his authority to bind the Surety on the date of execution of the bond.

10. TIME OF COMPLETION.

The time of completion of the Work to be performed under this Contract is the essence of the Contract. The time allowed for the completion of the Work is stated in the Bid Data Form.

11. GRATUITIES AND KICKBACKS.

City Code states that it is unethical for any person to offer, give, or agree to give any City employee or former City employee, or for any City employee or former City employee to solicit, demand, accept, or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, or preparation of any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy, or other particular matter, pertaining to any program requirement or a contract or subcontract, or to any solicitation or proposal therefor. It shall be unethical for any payment, gratuity, or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor or any person associated therewith, as an inducement for the award of a subcontract or order.

12. FISCAL YEAR.

The City of Grand Island, Nebraska operates on a fiscal year beginning October 1st and ending on the following September 30th. It is understood and agreed that any portion of this agreement which will be performed in a future fiscal year is contingent upon the City Council adopting budget statements and appropriations sufficient to fund such performance.

CONTRACT AGREEMENT

THIS AGREEMENT made and entered into by and between **[SUCCESSFUL BIDDER]**, hereinafter called the Contractor, and the **CITY OF GRAND ISLAND, NEBRASKA**, hereinafter called the City.

WITNESSETH:

THAT, WHEREAS, in accordance with law, the City has caused contract documents to be prepared and an advertisement calling for bids to be published for *BOILER FAN MOTOR REFURBISHMENT*; and

WHEREAS, the City, in the manner prescribed by law, has publicly opened, examined, and canvassed the bids submitted, and has determined the aforesaid Contractor to be the lowest responsive and responsible bidder, and has duly awarded to the said Contractor a contract therefore, for the sum or sums named in the Contractor's bid, a copy thereof being attached to and made a part of this contract;

NOW, THEREFORE, in consideration of the compensation to be paid to the Contractor and of the mutual agreements herein contained, the parties have agreed and hereby agree, the City for itself and its successors, and the Contractor for itself, himself, or themselves, and its, his, or their successors, as follows:

ARTICLE I. That the following documents shall comprise the Contract, and shall together be referred to as the "Agreement" or the "Contract Documents";

1. This Contract Agreement.
2. City of Grand Island's Specification for this project.
3. **[NAME OF SUCCESSFUL BIDDER]** bid signed and dated **[DATE OF BID]**.

In the event of any conflict between the terms of the Contract Documents, the provisions of the document first listed shall prevail.

ARTICLE II. That the contractor shall (a) furnish all tools, equipment, superintendence, transportation, and other construction materials, services and facilities; (b) furnish, as agent for the City, all materials, supplies and equipment specified and required to be incorporated in and form a permanent part of the completed work; (c) provide and perform all necessary labor; and (d) in a good substantial and workmanlike manner and in accordance with the requirements, stipulations, provisions, and conditions of the contract documents as listed in the attached General Specifications, said documents forming the contract and being as fully a part thereof as if repeated verbatim herein, perform, execute, construct and complete all work included in and covered by the City's official award of this contract to the said Contractor, such award being based on the acceptance by the City of the Contractor's bid;

ARTICLE III. That the City shall pay to the Contractor for the performance of the work embraced in this contract and the Contractor will accept as full compensation therefore the sum (subject to adjustment as provided by the contract) of **[DOLLAR AMOUNT] (\$00.00)** for all services, materials, and work covered by and included in the contract award and designated in the foregoing Article II; payments thereof to be made in cash or its equivalent in the manner provided in the General Specifications.

The total cost of the Contract includes:

Base Bid:	\$.00
Sales Tax on Materials/Equipment:	\$.00
Sales Tax on Labor:	<u>\$.00</u>
Total	\$.00

The City of Grand Island, Nebraska operates on a fiscal year beginning October 1st and ending on the following September 30th. It is understood and agreed that any portion of this agreement which will be performed in a future fiscal year is contingent upon the City Council adopting budget statements and appropriations sufficient to fund such performance.

ARTICLE IV. The Contractor hereby agrees to act as agent for the City in purchasing materials and supplies for the City for this project. The City shall be obligated to the vendor of the materials and supplies for the purchase price, but the Contractor shall handle all payments hereunder on behalf of the City. The vendor shall make demand or claim for payment of the purchase price from the City by submitting an invoice to the Contractor. Title to all materials and supplies purchased hereunder shall vest in the City directly from the vendor. Regardless of the method of payment, title shall vest immediately in the City. The Contractor shall not acquire title to any materials and supplies incorporated into the project. All invoices shall bear the Contractor's name as agent for the City. This paragraph will apply only to these materials and supplies actually incorporated into and becoming a part of the finished product of the BOILER FAN MOTOR REFURBISHMENT.

ARTICLE V. That the Contractor shall start work as soon as possible after the contract is signed and the required bonds and insurance are approved, and that the Contractor shall deliver the equipment, tools, supplies, and materials F.O.B. Platte Generating Station, and complete the work on or before **May 31, 2011**.

ARTICLE VI. The Contractor agrees to comply with all applicable State fair labor standards in the execution of this contract as required by Section 73-102, R.R.S. 1943. The Contractor further agrees to comply with the provisions of Section 48-657, R.R.S. 1943, pertaining to contributions to the Unemployment Compensation Fund of the State of Nebraska. During the performance of this contract, the Contractor and all subcontractors agree not to discriminate in hiring or any other employment practice on the basis, of race, color, religion, sex, national origin, age or disability. The Contractor agrees to comply with all applicable Local, State and Federal rules and regulations. The Contractor agrees to maintain a drug-free workplace policy and will provide a copy of the policy to the City upon request. Every public contractor and his, her or its subcontractors who are awarded a contract by the City for the physical performance of services within the State of Nebraska shall register with and use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska.

GRATUITIES AND KICKBACKS

City Code states that it is unethical for any person to offer, give, or agree to give any City employee or former City employee, or for any City employee or former City employee to solicit, demand, accept, or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, or preparation of any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy, or other particular matter, pertaining to any program requirement or a contract or

subcontract, or to any solicitation or proposal therefor. It shall be unethical for any payment, gratuity, or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor or any person associated therewith, as an inducement for the award of a subcontract or order.

[SUCCESSFUL BIDDER]

By _____ Date _____

Title _____

CITY OF GRAND ISLAND, NEBRASKA

By _____ Date _____
Mayor

Attest: _____
City Clerk

DRAFT

The contract is in due form according to law and hereby approved.

Attorney for the City Date _____

REQUEST FOR BIDS - GENERAL SPECIFICATIONS

The Bid shall be in accordance with the following and with all attached BID DATA and DETAILED SPECIFICATIONS.

All prices are to be furnished and installed FOB, Grand Island, Nebraska. **All prices shall be firm, and shall include all sales and use taxes as lawfully assessed under laws and regulations of the State of Nebraska.** * If bidder fails to include sales tax in their bid price or takes exception to including sales tax in their bid price, the City will add a 7.0% figure to the bid price for evaluation purposes; however, the City will only pay actual sales tax due.

Bids shall include the following on the **outside** of the mailing envelope: **"Boiler Fan Motor Refurbishment"**. All sealed bids are due no later than **Tuesday, March 8, 2011 at 2:00 p.m. local time**. Submit **an original and three copies** of the bid to:

Mailing Address: City Clerk
City Hall
P. O. Box 1968
Grand Island, NE 68802

Street Address: City Clerk
City Hall
100 E. First Street
Grand Island, NE 68801

Bids will be opened at this time in the City Hall Council Conference Room #1 located on 1st floor of City Hall. Any bid received after the specified date will not be considered. No verbal bid will be considered.

Bids will be evaluated by the Purchaser based on price, schedule, quality, adherence to schedule, plan and specifications, economy and efficiency of operation, experience and reputation of the bidder, ability, capacity, and skill of the bidder to perform contract required and adaptability of the particular items to the specific use intended.

The successful bidder will be required to comply with fair labor standards as required by Nebraska R.R.S.73-102 and comply with Nebraska R.R.S. 48-657 pertaining to contributions to the Unemployment Compensation Fund of the State of Nebraska. Contractor shall maintain a drug free workplace policy. Every public contractor and his, her or its subcontractors who are awarded a contract by the City for the physical performance of services within the State of Nebraska shall register with and use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska.

The equipment and materials must be new, the latest make or model, unless otherwise specified. Prior to approving the invoice for payment, the City reserves the right to thoroughly inspect and test the equipment to confirm compliance with specifications. Any equipment or material which does not meet the City's requirements will be returned at vendor's expense for correction. The invoice will be paid after approval at the next regularly scheduled Council meeting and occurring after departmental approval of invoice; the City Council typically meets the second and fourth Tuesday of each month. Invoices must be received well in advance of Council date to allow evaluation and processing time.

Each bidder shall submit with the bid a certified check, a cashiers' check, or bid bond payable to the City Treasurer in an amount no less than five percent (5%) of the bid price which shall guarantee good faith on the part of the bidder and the entering into a contract within fourteen (14) days at the bid price if accepted by the City. **Your certified check, cashier's check or bid bond must be submitted in a separate envelope attached to the outside of the envelope containing the bid.** Each envelope must be clearly marked indicating its contents. **Failure to submit the necessary qualifying information in clearly marked and separate envelopes will result in your bid not being opened or considered.** Surety companies authorized to do business in the State of Nebraska must issue bid bonds.

Successful bidder shall comply with the City's insurance requirements; performance and payment bonds are required for this project as outlined in the Detailed Specifications and Instructions to Bidders.

All bids shall be valid for at least thirty (30) working days after the bid deadline for evaluation purposes.

All bids must be on the bid form and must be signed and dated to be accepted. Please contact Tim Luchsinger at 308-385-5494 for questions concerning this specification.

BOILER FAN MOTOR REFURBISHMENT
DETAILED SPECIFICATIONS

SCOPE: The Contractor shall supply all material, labor, tools, equipment, supervision, technical expertise and shipping to refurbish the following two motors:

- Forced Draft Fan motor
- Induced Draft Fan motor

DESCRIPTION: The Platte Generating Station is located at 1035 W. Wildwood Drive, two miles south of Grand Island, Nebraska. These motors were replaced with new motors and will be refurbished and held as spares. The motors were inspected and currently at Hupp Electric Motors in Cedar Rapids, Iowa. The Contractor shall be responsible for picking up the motors at Hupp and delivering the completed motors to the Platte Generating Station. Motor nameplate data is as follows.

Forced Draft Fan	
HP	1250
RPM	720
Frame	8409S
Enclosure	WP11
Manufacturer	GE

Induced Draft Fan	
HP	3000
RPM	900
Frame	85HSZ
Enclosure	WP11
Manufacturer	GE

CODES AND STANDARDS: The material and workmanship shall conform to the applicable standards of ANSI, IEEE, NEMA, EASA, and AFBMA. In case of conflict between any of the industry standards relative to the requirements covered in this specification, the requirements of NEMA shall govern.

REQUIREMENTS: The Contractor shall inspect and repair the motors as follows.

Forced Draft Fan Motor

1. Clean motor windings and rotor
2. Balance rotor
3. Replace motor leads
4. Spincast and fit both bearings
5. Polish both bearing journals
6. Replace insulation of ODE bearing OD
7. Replace both sight glasses
8. Replace motor heater leads
9. Install new filters

Induced Draft Fan Motor

1. Rewind motor
2. Balance rotor
3. Replace nine 10 ohm RTD's
4. Spincast and fit both bearings
5. Replace insulation on ODE bearing OD
6. Replace four oil rings
7. Replace both sight glasses
8. Replace motor heater leads
9. Install new filters

Motor Cleaning. If the motor is not being rewound, all parts and windings will be cleaned free of dirt, grit, grease and oil with appropriate cleaning agents. Stators will be cleaned using either air pressure, solvent, steam, pressurized water or any combination thereof deemed necessary to clean according to normal shop practices. Any stator cleaned with the use of water shall be baked dry. A drying process shall be used which eliminates all moisture. After being dried, a megger, hi-pot, and surge comparison test shall be conducted and recorded.

Motor Rewind A core loss test shall be conducted prior to the burn out process and winding removal. All winding dimensions shall be measured and recorded. The connection end of the winding shall be cut off, labeled and put aside for future reference in the winding process. The windings will be prepared for removal from the core by being placed in a controlled heat oven. The stator core temperature shall not exceed 750 degrees F. The old windings will be removed in such a manner as not to harm core or laminations. The slots shall be cleaned and bars removed. The core shall also be checked for loose or damaged laminations. A second core loss test shall be conducted and the results recorded and compared to the initial readings. Any significant deterioration in values shall be corrected with appropriate repair methods. At this point the current output of the core loss tester shall be raised to sufficient level to check for hot spots.

Stators that are rewound shall have the same cross sectional area of wire, number of turns per coil, number of coils, and coil connections as original winding. This data and the flux density shall be verified as correct by using a computerized winding data check program. The City shall be notified and advised if a winding is not within the parameters. No winding data shall be changed without City approval. The winding data test information shall be included in the repair history file. A copy of the computer printout shall be supplied to the City.

The insulation system used in rewound motors shall be a Class H system. Flexible motor leads shall be replaced during a stator rewind. Replacement leads shall be stranded copper wire with a 150 degree C or greater rated insulation, appropriately sized for the motor rated voltage and horsepower, lead length shall be 8" to 10" unless otherwise specified. The lead wires shall be protected from mechanical damage and sharp edges inside the motor and connection box. Lead connections and coil jumpers shall be bundled, tightly laced and secured to prevent movement and abrasion that could result in premature winding failure. Lead wires shall terminate with a crimped-on lug unless otherwise specified.

All RTD's heaters, thermals, or other sensing/heating devices shall be reinstalled or replaced with like or equivalent devices unless otherwise specified. Replacement RTD's or any temperature sensing device shall be checked before they are installed in the winding, after rewind and before varnish treatment.

Form Coils. All insulation materials except surface insulation on the magnet wire shall be mica based and must be compatible with the VPI treatment. All taping shall be half lap. The minimum coil insulation system shall consist of 3 half lapped tape layers and 3 wrapper layers for the slot section and 3 half lapped tape layers on the end turns.

Motors with form wound coils shall have 0.015" thick 24 KV dielectric rated slot liners. They shall also have insulating separators between the top and bottom coils and between the top coil and wedges in all stator slots. Coil end turns shall be supported by using one felt spacer block between each adjacent coil when the knuckle is 6 inches or less from the stator core; by using two evenly spaced felt blocks when the knuckle is 6 to 12 inches from the stator and by using three felt spacer blocks when the knuckle is over 12 inches. Each coil knuckle shall be tied to an end support ring (surge ring) when the knuckle is 12 inches or less from the stator core. When the knuckle is more than 12 inches from the stator core, each coil shall be tied to a second support ring that is approximately 9 inches from the stator core.

The end support rings shall be made of steel or epoxy filled fiberglass rope that will become rigid when heat processed. If the stator was originally equipped with steel support rings, the original rings will be reinsulated and reused.

All green windings (new windings installed in the stator core that has not yet been varnish processed) shall be tested at scheduled levels using the programmed Advanced Winding Analyzer (Baker surge tester or equivalent). Winding treatment shall be an Epoxy VPI system and the treated winding shall be hi-pot (high potential) tested at full value (2 X rated voltage +1000).

Terminal lugs shall be attached to lead cables by crimping or pressure-indenting the lug barrel using a lug sized to suit the lead cable stranding in accordance with recommendation of the lug manufacturer. The crimping tool shall have pressure control such that it is not released from the lug until the minimum recommended crimping force has been applied. Not more than one lead cable may be crimped in any one lug. Windings shall be varnished according to the VPI process using an epoxy varnish. The VPI process shall include monitoring the capacitance of the stator to insure that the winding is completely impregnated. The amount of vacuum, the time under vacuum, the level of pressure and the time under pressure shall be recorded.

Balancing. Balancing shall be performed on reconditioned, repaired, or replaced rotating assemblies. The assembly to be balanced shall be fully configured. Balancing shall be accomplished in two phases for both static and dynamic correction and will be carried out to the practical limits of the balance machine. Acceptable balance shall be based on final test run of the assembled motor. Balance weights shall be permanently mechanically attached or welded in such a manner that they will not become detached during operation. Corrosion resistant bolts and nuts shall be used, as necessary.

Sleeve Bearings. Journal to bearing clearance shall be checked and recorded on all sleeve-bearing motors. In the absence of OEM data, or customer specifications, tolerances will be determined by using accepted EASA (Electrical Apparatus Service Association) standards. Bearing shall be fit to the shaft by bluing (or equivalent) and scraping until a 75% contact is evident in the bottom 1/3 of the bearing.

Auxiliaries. Embedded RTD's or Thermocouples (TC's) shall be replaced with the same type, installed in the same manner, and wired to the same location as the originals. Space heaters, if replaced, shall be the same type and installed in the same locations as the original.

Final Inspections and Tests. All motors shall be subjected to an insulation resistance test, dielectric absorption (polarization index) test, high potential test, and surge test using a programmed Advanced Winding Analyzer (or equivalent). Test data shall be documented.

RTD's or any temperature sensing devices shall be tested. A final check will be made to ensure that the correct device has been installed. Type of RTD or device should be marked on the nameplate.

Motors shall be run at full voltage. No load current on each phase shall be noted along with actual phase-to-phase voltage. All test data shall be documented and made available to the customer. Motors shall be run for one hour or until bearing temperature stabilizes - whichever takes longer. The final temperature shall be documented and the motors checked for end play and end float. Final run vibration checks shall be conducted and documented. If any reading exceeds 0.1 in/sec, correction is required.

Before shipping all motors shall be painted with Sherwin-Williams MC42 enamel, or approved equivalent. All shaft extensions without pulleys shall be protected with a rust inhibiting coating. Motors requiring oil before start up shall be tagged accordingly.

After repairs have been completed, all required information and data shall be documented. Provide the City a complete written report of the motor repair to include all electrical tests and balance results. The report shall be delivered within 10 days of the motor delivery.

WARRANTY: The Contractor shall warranty the motor to be free from defects for a period of one (1) year. Motor rewinds shall be warranted for a period 3 years. If during the warranty period a motor defect or failure is determined or incurred, the Contractor shall repair the motor at its expense, including shipping.

MATERIALS, EQUIPMENT, AND SERVICES PROVIDED BY THE CONTRACTOR: The Contractor shall provide all engineering, design, equipment, tools, material, labor, supervision, shipping and all other equipment and materials necessary to completely perform the work.

SCHEDULE: Motor repairs shall not exceed a 60-day period after award of contract. The Contractor shall include a repair and delivery schedule with the bid. All work shall be completed as soon as possible.

QUALIFICATIONS: The Contractor shall be a firm specializing in the repair of large motors similar to the size being bid. The Contractor shall submit with the bid references of motor repairs to similar size motors.

SERVICE RATES: The Contractor shall include in the Bid firm lump sum pricing.

The Platte Generating Station is NOT tax exempt and is subject to 7.0% sales tax. See the Nebraska Department of Revenue web site at www.revenue.state.ne.us for contractor's tax information.

CONTACT: Questions regarding this specification may be directed to Tim Luchsinger at the Platte Generating Station, (308)385-5494 or tluchsinger@giud.com .

REFERENCE MATERIAL:

- Motor Data Sheets

INSURANCE: The Contractor shall comply with the attached Insurance Requirements.

MINIMUM INSURANCE REQUIREMENTS
CITY OF GRAND ISLAND, NEBRASKA

The successful bidder shall obtain insurance from companies authorized to do business in Nebraska of such types and in such amounts as may be necessary to protect the bidder and the interests of the City against hazards or risks of loss as hereinafter specified. This insurance shall cover all aspects of the Bidder's operations and completed operations. Failure to maintain adequate coverage shall not relieve bidder of any contractual responsibility or obligation. Minimum insurance coverage shall be the amounts stated herein or the amounts required by applicable law, whichever are greater.

1. WORKERS COMPENSATION AND EMPLOYER'S LIABILITY

This insurance shall protect the Bidder against all claims under applicable State workers compensation laws. This insurance shall provide coverage in every state in which work for this project might be conducted. The liability limits shall not be less than the following:

Workers Compensation	Statutory Limits
Employers Liability	\$100,000 each accident
	\$100,000 each employee
	\$500,000 policy limit

2. BUSINESS AUTOMOBILE LIABILITY

This insurance shall be written in comprehensive form and shall protect the Bidder, Bidder's employees, or subcontractors from claims due to the ownership, maintenance, or use of a motor vehicle. The liability limits shall be not less than the following:

Bodily Injury & Property Damage	\$ 500,000 Combined Single Limit
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3. COMPREHENSIVE GENERAL LIABILITY

The comprehensive general liability coverage shall contain no exclusion relative to explosion, collapse, or underground property. The liability limits shall be not less than the following:

Bodily Injury & Property Damage	\$ 500,000 each occurrence
	\$1,000,000 aggregate

4. UMBRELLA LIABILITY INSURANCE

This insurance shall protect the Bidder against claims in excess of the limits provided under employer's liability, comprehensive automobile liability, and commercial general liability policies. The umbrella policy shall follow the form of the primary insurance, including the application of the primary limits. The liability limits shall not be less than the following:

Bodily Injury & Property Damage	\$1,000,000 each occurrence
	\$1,000,000 general aggregate

5. ADDITIONAL REQUIREMENTS

The City may require insurance covering a Bidder or subcontractor more or less than the standard requirements set forth herein depending upon the character and extent of the work to be performed by such Bidder or subcontractor.

Insurance as herein required shall be maintained in force until the City releases the Bidder of all obligations under the Contract.

The Bidder shall provide and carry any additional insurance as may be required by special provisions of these specifications.

6. CERTIFICATE OF INSURANCE

Satisfactory certificates of insurance shall be filed with the City prior to starting any work on this Contract. **The certificates shall show the City as an additional insured on all coverage except Workers Compensation. The certificate shall state that thirty (30) days written notice shall be given to the City before any policy is cancelled (strike the "endeavor to" wording often shown on certificate forms). If the bidder cannot have the "endeavor to" language stricken, the bidder may elect to provide a new certificate of insurance every 30 days during the contract. Bidder shall immediately notify the City if there is any reduction of coverage because of revised limits or claims paid which affect the aggregate of any policy.**

ATTACHMENTS:

- Motor Data Sheets

If the drawing is not attached, please contact the Engineer for a copy

M O T O R D A T A

Model No. -----	5K840967C12
Serial No. -----	8410023
Application -----	Forced Draft Fan
Enclosure -----	WP II
Code -----	G
Bearings -----	Sleeve *
Lubrication -----	Oil
Type -----	K
Frame -----	8409S
Poles -----	10
Horsepower -----	1250
Synchronous Speed -----	720
Phases -----	3
Cycles -----	60
Volts -----	4000
Shaft Extension -----	DS2
Insulation Class -----	B- Custom Polyseal
Secondary Volts -----	-
Secondary Amps -----	-
Secondary Ohms -----	-
Temperature Rise -----	90°C By RTD @ 1250 HP
Rotation (Opposite Pulley End) -----	Dual
Full-load Speed -----	710
Full-load Amps -----	174
Air Gap -----	.055
End Play -----	1/2" Min.
Net Weight -----	9980 Lbs. Approx.
Motor Terminal -----	G.E. Std.
Heater Watts -----	1200
Heater Volts -----	115

* BRGS. ARRANGED FOR FORCED FEED LUBRICATION. PUMP, TANK & PIPING TO BE SUPPLIED BY OTHERS THAN G.E.

OIL REQUIREMENTS -

RATE OF FLOW - 1/2 GPM/BRG
 OIL PRESSURE - 10 - 15 PSI
 OIL VISCOSITY - 300 SSU @ 100°F

6 (2/PHASE) 10 OHM RTD IN STATOR WINDING
 CHROMEL ALUMEL THERMOCOUPLE IN EACH BRG.
 1/8 INCH LAMINATED SHIM PACKS - UNDER EACH MOUNTING BOLT
 FURNISHED
 VERTICAL JACKING SCREWS FURNISHED

MOTOR DATA

Model No. -----	5K851178C2
Serial No. -----	8409980
Application -----	I.D. Fan
Enclosure -----	WP II
Code -----	G
Bearings -----	SLEEVE *
Lubrication -----	OIL *
Type -----	K
Frame -----	8511Z
Poles -----	8
Horsepower -----	3000
Synchronous Speed -----	900
Phases -----	3
Cycles -----	60
Volts -----	4000
Shaft Extension -----	DS2 Special
Insulation Class -----	B Custom Polyseal
Secondary Volts -----	-
Secondary Amps -----	-
Secondary Ohms -----	-
Temperature Rise -----	85°C By RTD # 3000 HP
Rotation (Opposite Pulley End) -----	Dual
Full-load Speed -----	890
Full-load Amps -----	391
Air Gap -----	.085
End Play -----	1/2" Min
Net Weight -----	18,900 Lbs. Approx.
Motor Terminal -----	G.E. Std.
Heater Watts -----	1600
Heater Volts -----	115/230

* BRGS. ARRANGED FOR FORCED FEED LUBRICATION. PUMP,
TANK & PIPING TO BE SUPPLIED BY OTHERS THAN G.E.

OIL REQUIREMENTS:

RATE OF FLOW - ONE GPM/BRG
OIL PRESSURE - 10 - 15 PSI
OIL VISCOSITY - 300 SSU AT 100°F

6 (2/PHASE) 10 OHM RTD'S IN STATOR WINDING
CHROMEL ALUMEL THERMOCOUPLE IN EACH BRG.
1/8 INCH LAMINATED SHIM PACKS, UNDER EACH MOUNTING BOLT
FURNISHED
VERTICAL JACKING SCREWS FURNISHED