



**Specifications for
115 kV Pole Inspection
And Preservation Services**

Bid Opening – 2:00, February 24, 2011

City of Grand Island
100 East 1st St.
P.O. Box 1968
Grand Island, NE 68801

Contact
City of Grand Island – Utilities Department
Travis Burdett, Assistant Utilities Director

Date Issued: February 2, 2011

**ADVERTISEMENT TO BIDDERS
FOR
115 KV POLE INSPECTION AND PRESERVATION SERVICES

FOR
CITY OF GRAND ISLAND, NEBRASKA**

Sealed bids will be **received at the office of the City Clerk**, 100 E. First St., Grand Island, NE 68801 or P.O. Box 1968, Grand Island, Nebraska, 68802 until 2:00 P.M. (local time), February 24, 2011, for furnishing 115 kV Pole Inspection and Preservation Services to the City of Grand Island. Bids will be publicly opened at this time in the Conference Room #1 located on 1st floor of City Hall. Bids received after specified time will be returned unopened to sender.

Specifications are on file in the Utilities Department. Bids shall be submitted on forms which will be furnished by the City.

Each bidder shall submit with his 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 20 days, at the bid price, if accepted by the City. **Your certified check, cashiers check or bid bond must be submitted in a separate envelope attached to 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.** Bid bonds must be issued by surety companies authorized to do business in the State of Nebraska.

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 comply with the City's insurance requirements and supply performance and payment bonds.

Bids will be evaluated by the Purchaser based on price, quality, adherence to schedule, plan and specification, economy and efficiency of operation, experience and reputation of 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 and 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 60 days after date of opening bids.

RaNae Edwards, City Clerk

GENERAL SPECIFICATIONS AND BID SHEET
115 kV Pole Inspection and Preservation Services

Sealed bids will be **received at the office of the City Clerk**, 100 East First St., Grand Island, NE 68801 or P.O. Box 1968, Grand Island, NE, until 2:00 P.M. (Local Time), **Thursday, February 24, 2011**, for 115 kV Pole Inspection and Preservation Services, as specified in these bidding documents, FOB Grand Island, NE.

Exceptions to Specifications - Any bidder who has exceptions to any specifications and requirements listed in the bidding documents must so state in the space provided below. It is the bidder's responsibility to clearly outline any exceptions. Failure by bidder to outline exceptions will require the successful bidder to comply with the specifications.

Exceptions to specifications: _____

Attached are detailed minimum specifications. The following general specifications also apply to this bid.

Bid Submittal All envelopes submitted by Bidder must state the item being bid on the face of envelope. All bidders must submit **one original and three (3) copies** of the bid document. Bid proposal package is also available on-line at www.grand-island.com under Calendar/Bid Calendar. Bids received after the specified time will be returned unopened to sender.

Bid Bond 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.

Performance Bond On award of the Contract, the successful Contractor shall furnish a Performance Bond which shall be in an amount equal to the full contract price, guaranteeing faithful compliance with all requirements of the Contract Documents and complete fulfillment of the Contract, and payment of all labor, material and other bills incurred in carrying out this Contract. According to Nebraska Law, the surety company executing the Performance Bond must be authorized to do business in the State of Nebraska.

Award Upon approval by the Grand Island City Council, a City of Grand Island Utilities Department Purchase Order shall be issued to the successful bidder.

Payment Prior to approving the invoice for payment, the City reserves the right to thoroughly inspect the maintenance to confirm compliance with specifications. The invoice will be paid after approval at the next regularly scheduled Council meeting occurring after departmental approval of invoice; the City Council typically meets the second and fourth Thursday of each month. Invoices must be received well in advance of Council date to allow evaluation and processing time.

Fair Employment Practices – Each bidder agrees that he/she will not discriminate against any employee or applicant for employment because of age, race, color, religious creed, ancestry, handicap, sex or political affiliation.

Data Privacy – Bidder agrees to abide by all applicable Local, State, and Federal laws and regulations concerning the handling and disclosure of private and confidential information concerning individuals and corporations as to inventions, patents and patent rights. The bidder agrees to hold the City harmless from any claims resulting from the bidder's unlawful disclosure or use of private or confidential information.

Independent Price Determination – By signing and submitting bid, the bidder certifies that: the prices in the bid have been arrived at independently, without consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor.

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 therefore. 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.

Clarification of Specification Documents – Vendors shall promptly notify the Purchasing Agent of any ambiguity, inconsistency or error which they may discover upon examination of the specifications. Interpretations, corrections and changes made to the specifications will be made by written addenda. Oral interpretations or changes to the specifications made in any other manner will not be binding on the City; and bidders shall not rely upon such interpretations or changes.

Bid Evaluation and Award – No bid shall be withdrawn for a period of thirty (30) days after bid due date. The City reserves the right to reject any and all bids, to waive technicalities and to accept the bid considered by the Purchaser to be in the City's best interest. The bid will be evaluated based on price, demonstration (if requested), delivery, quality, adherence to specifications, warranty and adaptability of the particular equipment for the specific use intended.

(All bids must be submitted on this form)

115 KV POLE INSPECTION AND PRESERVATION SERVICES
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 provide such service to the City of Grand Island at the following price:

<u>UNIT BID PRICING</u>	<u>COST</u>
1.) Above Ground Inspection, Sounding, Boring, Attachment Inspection, Information Verification, and Collection per Wood Pole	\$ _____
2.) Above Ground Inspection, Attachment Inspection, Information Verification, and Collection per Steel (Metal) Pole/Structure	\$ _____
3.) Treatment of Interior Wood Voids per Pole	\$ _____
4.) Interior Wood Fumigation per Pole	\$ _____
5.) Treatment of Wood Exterior and Wrapping per Pole	\$ _____
6.) Coating application per Steel (Metal) Pole/Structure	\$ _____
7.) Purchase and Disposal of Fill Dirt per Pole	\$ _____
8.) Miscellaneous Cost per Pole with Details	\$ _____

NOT TO EXCEED TOTAL BID PRICE: \$ _____
(Price in Figures)

*** 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.

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 Code

Print Name of Person Completing Bid

Signature

Telephone Number _____ Fax Number _____

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 the bid.

CHECKLIST FOR BID SUBMISSION
FOR
115 KV POLE INSPECTION AND PRESERVATION SERVICES

Bids must be received by the City Clerk before 2:00 P.M. on Thursday, February 24, 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 projects 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 schedule.
- A description of the preparation process and materials proposed.
- Selection of Nebraska Sales Tax Option.
- Acknowledgement 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. _____

MINIMUM INSURANCE REQUIREMENTS

CITY OF GRAND ISLAND, NEBRASKA

The Contractor shall secure and maintain throughout the duration of this Contract insurance, from companies authorized to do business in Nebraska, of such types and in such amounts as may be necessary to protect themselves and the interests of the City against all hazards or risks of loss as hereinafter specified. This insurance shall cover all aspects of the Contractor's operations and completed operations. The form and limits of such insurance, together with the underwriter thereof in each case, shall be approved by the City but regardless of such approval, it shall be the responsibility of the Contractor to maintain adequate insurance coverage at all times. Failure of the Contractor to maintain adequate coverage shall not relieve him 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 Contractor against all claims under applicable State worker's compensation laws. This insurance shall provide coverage in every state in which work for this project might be conducted. The Contractor shall also be protected against claims for injury, disease or death of employees which, for any reason, may not fall within the provisions of a workers' compensation law. This policy shall include an "all states" endorsement.

The liability limits shall not be less than the following:

Workers' Compensation	Statutory
Employer's 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 Contractor, Contractor'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

CONTRACT AGREEMENT

THIS AGREEMENT made and entered into by and between _____ 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 115 KV POLE INSPECTION AND PRESERVATION SERVICES; 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 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 II. 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 _____ Dollars \$ _____ for all services, materials, and work covered by and included in the contract award and designated in the foregoing Article I; payments thereof to be made in cash or its equivalent in the manner provided in the General Specifications.

ARTICLE III. 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 115 KV POLE INSPECTION AND PRESERVATION SERVICES.

ARTICLE IV. 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 complete the work on or before May 15th, 2011. It is understood and agreed that time is the essence of the contract.

CONTRACT AGREEMENT (Continued)

ARTICLE V. 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.

IN WITNESS WHEREOF, the parties hereto have executed this Contract Agreement.

Contractor _____

By _____

Date _____

Title _____

CITY OF GRAND ISLAND, NEBRASKA,

By _____
Mayor

Date _____

Attest: _____
City Clerk

The contract, insurance, and any required bonds are in due form according to law and are hereby approved.

Attorney for the City

Date _____

DETAILED SPECIFICATIONS

1.0 INTRODUCTION: The City of Grand Island is requesting bids to perform inspection of all poles, and preservation treatment of wood poles, on the 115 kV transmission lines of the City electric system. This encompasses the 1093 tie line extending from Substation E to Nebraska Public Power District's (NPPD) Grand Island Substation, the 1145A and 1145B NPPD tie lines to the south property line of the Platte Generating Station, and the City transmission loop around the City. The work is contained within a seven-mile radius of Grand Island as depicted on the area map attached as Appendix One. Five hundred seventy-seven (577) wood poles, ninety-four (94) metal (steel) poles and thirteen (13) lattice structures exist on the 115 kV transmission lines. Approximately 7.2 miles of the lines are "H" frame construction, while 16.7 miles of the lines are single pole construction, and 1.2 miles of dual-circuit single pole structures.

Below is a brief outline of the major work to be performed under this contract. Full requirements and specifications are found in the body of these Detailed Specifications for contract #11-PCC-1.

- A.) Visual inspection of pole
- B.) Testing & observation of pole condition before excavation
- C.) Excavation of pole
- D.) Excavation inspection of pole and grounds
- E.) Testing of pole
- F.) Preservation/fumigation/wrapping of pole
- G.) Site restoration
- H.) Reporting

2.0 WORK AREA: The work areas are to be considered City easements, and/or public right of ways, containing City owned 115 kV transmission line and other areas owned and/or used by the City Utilities Department. Many of the transmission poles are not readily accessible from public roads. The successful contractor shall use restricted easement access to some work sites.

All work, and work access shall be contained to City easements, and/or public right of ways. If a question exists, at the time of the work, concerning easements or public right of ways the City's representative may be contacted for clarification. In any event, no trespassing on private property will be permitted.

Damage to property (public or private,) crops, fences, trees, and other items is the exclusive responsibility of the successful contractor.

The successful bidder shall provide for water, toilet, and other facilities as necessary for the work, and the bidder's personnel. No electrical power, materials, or facilities are available from the City Utilities Department.

The bidder shall provide appropriate rain tight disconnects, fusing, and ground fault protection for all equipment and power outlets used in the work of this contract. The ground leg of the ground fault protectors shall be attached by a single conductor, of the appropriate size, to the pole ground at a point close to the soil. Ground fault protection is required for all equipment and power outlets.

The bidder is ultimately responsible for providing all equipment and materials necessary to fulfill the work of this contract, including computers, tools, vehicles, and materials.

3.0 WORK COORDINATION: Work activities will be coordinated through the Electric Dispatch Center at (308) 385-5467. The 115 kV transmission lines will **not** be taken out of service. To increase safety and avoid unexpected delays and work interruptions, the Contractor shall closely coordinate activities with the Dispatch Center.

The Dispatch Center shall be notified directly by a phone call each time workers are present in or around work areas and when all workers have left work areas. This will allow the Dispatchers to make timely decisions for safety and security reasons.

Utility working hours are Monday through Friday from 8:00 a.m. to 5:00 p.m., the dispatch center is manned twenty four hours a day. Normally, no contracted work shall be performed on nationally recognized holidays, or Sundays. Saturday work is permissible with coordination in advance with the Electric Department.

4.0 SAFETY: High voltage pole lines are inherently dangerous. All persons working in the area of the City's electrical system shall be completely aware of the dangers and the appropriate working methods to always maintain safety. All persons working in or around the City electrical system must tour each work area before any work commences. Danger points such as exposed electrical equipment, tunnels, channels, foundations, and any projections from the ground, structures, or equipment shall be noted to avoid personal injury or damage to equipment or structures.

The safety of the successful contractor's personnel, the public, and all property, under this contract is the exclusive responsibility of the successful bidder. The City's representative shall have the authority to stop the work in progress and cause changes in safety practices of the work to increase safety. However, neither the City, nor City employees, nor City representatives, shall be held responsible for safety or safety practices or lack of the same, under this contract. The successful bidder is to maintain adequate safety precautions to protect workers, City personnel, Public property, Private property and City property, at all times. The bidder, and bidder's employees must fully comply with **all** Federal, State, and Local safety regulations.

The successful Bidder's vehicles and equipment (whether owned by the bidder, rented, loaned, or borrowed) shall be moved and placed carefully to avoid damage to fences, crops, roadways, property, tunnels, structures, and equipment. Persons operating vehicles and/or equipment in and around the City's electrical system shall maintain adequate clearance from high voltage structures or bus for safety and damage prevention. Said vehicles shall be controlled by qualified and licensed individuals at all times.

5.0 COMMUNICATIONS: Contractor shall have at each work location a cellular telephone with number supplied to the Utilities Department dispatchers for safety and work coordination. The cellular telephone **shall be monitored** during any work or the presence of any workers in or around City lines, substations, property, or equipment.

6.0 POLE INFORMATION: The City is supplying pole information in two forms; in a printed form as Appendix Two, and in electronic form as Appendix Three. Appendix Three of this document is

a Microsoft Excel spreadsheet showing all pole information.

The pole information provided by the City is as accurate and complete as known to the City. The information provided is to be verified and up-dated to reflect the actual findings of the inspectors during the course of the work.

A portable or hand-held personal computer shall be used to verify information and make remarks in the field for the work. Notes, remarks, and information verification shall be made directly into the field computer, not transcribed latter. Field notes shall be down loaded to a USB drive, provided by the City, and furnished to the Utilities Department representative on a Daily basis or other previously arrange time interval.

7.0 WOOD POLE INSPECTION: All wood poles, on the 115 kV transmission line surrounding the City of Grand Island and the City owned poles on the Nebraska Public Power District (NPPD) interconnection tie lines, are to be inspected. Wood poles will be inspected for defects, in the pole structure, arms, attachments, and grounding equipment from at least 18 inches below ground level to pole top. The findings of the inspections shall be utilized for decisions about wood pole treatment requirements, and other applicable maintenance.

Inspection shall be split into four separate parts.

- A.) Inspection and verification of pole information.
- B.) Inspection of pole hardware, attachments, and grounding.
- C.) Inspection of soil condition, pole condition at ground line, and the advisability of sub-soil inspection.
- D.) Inspection of the sub-soil pole condition.

Visual inspection shall include an inspection of surrounding soil and environment for indications of pole depth changes from initial placement, such as re-landscaping, or soil removal from within 10 feet of the pole. Indications of depth changes that may compromise safety or ability to perform sub-soil inspections shall be brought to the immediate attention of the City representative. Other, less severe, pole depth changes are to be properly noted in the reports without City representative notification.

Visual inspection shall also include observations of loose, defective, or missing hardware from a pole or pole structure. If vandalism is suspected (i.e. indication of a rifle shot, or other damage) to a pole or to a pole structure, the suspicions are to be noted as such in the reports.

Inspection above and below grade will include sounding, and/or the use of automated test equipment (i.e. PoleTest pole strength analyzer) to determine the quality of the internal wood to the pole. Sounding, and/or automated testing shall extend from below ground level to a point at least eight feet above grade.

Coring or drilling of the appropriate size and frequency shall be performed, as required, to assure an accurate assessment of each wood pole's internal integrity both above and below grade. Additionally, an assessment of the internal wood moisture content shall be performed to determine if moisture is or will exceed 30%, the level decay can start.

Wood poles that are not serviceable due to wood defects, obvious decay, or internal voids or

wood poles with an estimated service life less than ten years, even after treatment, shall be marked with a blue line two feet above grade. This colored line will indicate the pole is in need of replacement. The pole shall be noted for replacement in the daily and final reports, as well as verbally informing the City's representative.

The City of Grand Island Utilities Department reserves the right to decide the actual treatment action or procedure, within reason, including the determination not to do any treatment, to be taken by the successful bidder based upon the findings of the inspections, and the successful bidder's recommendations.

8.0 EXCAVATION OF WOOD POLES: Wood poles subject to excavation shall have adequate strength, and depth, for a minimum excavation of 18 inches below ground level. Ground conductors, down guys, and support wires shall be handled carefully to prevent breakage.

The excavated soil shall be inspected for undecomposed organic material and other debris which shall be removed and destroyed. The cleaned soil and additional sandy loam fill, as required, shall be used to refill around the treated pole. New sandy loam fill dirt shall be purchased from a reputable supplier, not scooped up from the nearest open spot. The City's representative shall have the right to inspect and approve or reject the fill soil prior to project use. Flowers, landscaping, or other growing ground cover shall be replaced with new similar cover, after backfill and compaction.

Replacement fill shall be mechanically tamped with weighted hydraulic tamper in approximately 6 to 8 inch intervals. Soil compaction shall meet or exceed the original soil compaction. A four inch buildup around base of each treated pole sloping to two inches of compacted fill at 12" from the pole shell.

Broken ground wires should be reported immediately to the Utilities Department representative. The Utilities Department shall be responsible for repair of the ground. No backfilling will be done until the repair is performed.

Only every other pole or pole structure in a section of line shall be excavated at a time. No more poles may be excavated than can be refilled in a day. No poles will be left excavated overnight.

9.0 TREATMENT OF WOOD POLES:

All wood poles shall be treated for preservation. Defective poles marked with a blue line shall be treated the same as other wood poles. Poles with internal voids or infestations shall have voids filled. Then the interior wood fumigated to prevent additional decay or wood loss. Bore holes shall be tightly capped with solid treated wood plugs. The shell will be treated, then wrapped from 18 inches below grade to one inch, minimum, above the compacted fill and replacement vegetation.

Treatment of the wood shall prevent future damage from insect infestation and fungal growth and decay for a period of at least ten years from date of application. Complete information regarding treatment and fumigation abilities and life are to be submitted with the bid. Said information shall be used in the bid evaluation process.

10.0 STEEL STRUCTURE INSPECTION: All steel structures including steel poles and steel lattice towers, on the 115 kV transmission line surrounding the City of Grand Island and the City owned poles on the Nebraska Public Power District (NPPD) interconnection tie lines, are to be inspected. This specification defines the inspection and assessment of steel transmission line steel structures to determine the extent of corrosion and/or other damage. Structures found to be in serviceable condition will have a protective coating applied.

10.1 Definitions for General Corrosion Inspection

Corrosion inspection, terminologies are defined as follows:

Soil Resistivity: Is a significant indicator in determining how corrosive a soil environment is. Soils with low resistivity allow for the easy flow of current between an anode and cathode creating a higher level of corrosion activity. Soils with a resistivity of 1000 ohm-cm or less tend to be very corrosive, while soils with a resistivity of 10,000 ohm-cm are considered much less of an influence to corrosion. Soil resistivity measurements are taken with a Collins rod and bridge or other comparable device to sample soil resistivity at various depths and points of the structure site.

Soil pH: The pH measurement of soil surrounding a structure determines how acidic the soil is and helps to define its potential influence in the corrosion process. Measurements of a pH around 7 show a relatively neutral environment while measurements of 5.5 or less are considered to be acidic. Soil pH measurements are taken near the first leg or at a location deemed appropriate by the inspector.

Redox: Otherwise known as the measurement of oxygen reduction, redox measures the dissolved oxygen content in the soil. Redox measurements collected in close proximity to the structure can help to determine whether a structure is at risk from microbial influence corrosion (MIC). Measurements are taken from the partial excavation at the first leg or at a location deemed appropriate by the inspector.

Structure to soil potential measurements: Measure the structure to soil potential within the environment. Typically, this is done utilizing a digital or analog potential meter. The more negative the measurement is (< -0.850 mV), the more likely it is that the structure will have a reduced potential for corrosion. The less negative the measurement (> -0.400 mV), the more likely it is to corrode. Half Cells Voltage Measurements are taken from a distance of approximately (2) two feet from each structure. Readings are taken and recorded in the inspection log.

Very Low Corrosion: A reported structure that demonstrates a low potential for corrosion and no indicators for active corrosion. A partial excavation on each leg of the structure confirms possible existing damage. This structure is reported as having "Very Low" activity or insignificant levels of corrosion. Place in a 10 year Reinspect cycle for monitoring.

Active Corrosion: A reported structure that demonstrates the potential for mild to severe corrosion or the existence of corrosion in process. Again, a partial excavation on each leg of the structure confirms possible existing damage. This category of structure

can be broken into smaller more manageable groups based upon the potential for corrosion and the level of present activity.

- Mild Corrosion Cell - Re-Inspect and monitor corrosion in a 10 year cycle.
- Moderate Corrosion Cell - Re-Inspect and monitor corrosion in a 10 year cycle.
- Severe Corrosion Cell - Excavate and evaluate as soon as possible.

Priority Structure: A reported structure that reveals that there has been structural damage due to corrosion, mechanical damage, or Acts of God, which may exceed the Customer's threshold of allowable corrosion. The allowable thinning, edge loss pitting or structural damage is determined by the Customer policy of structure loading and applicable NESC factors of safety.

11.0 STEEL STRUCTURE EVALUATION:

11.1 Visual Inspection

A visual inspection of all structures shall be made from ground line to the top of the structure for clearly visible defects. Items listed by Contractor requiring maintenance shall be noted on report sheet.

A visual inspection is for safety purposes only. The Contractor does not guarantee that the visual inspection will reveal all potential safety problems.

11.2 Corrosion Assessment

Weighted Decision Method shall be used to determine the overall corrosion cell ranking. This method is based upon instrument readings for specific site conditions effecting corrosion activity combined with a partial excavation. Each factor has a conformance level that is summed to achieve an overall ranking score which has a direct correlation to corrosion within that cell.

11.3 Concrete Foundation Assessment

Where applicable, and in addition to the corrosion assessment, concrete foundations will be evaluated by means of a rudimentary hammer impact test. Foundations that show negligible effects from the hammer impact points will require no further testing unless otherwise indicated. Impact points that reveal flaking concrete and/or exposes coarse aggregate will require further investigation into the condition and strength of the concrete.

11.4 Structural Assessment

The overall evaluation of corrosion severity will be determined through the visual assessment and direct physical measurement of steel members to determine actual section loss. Structures will be inspected and categorized according to the following

information.

11.5 General Inspection

Thickness measurements to determine the extent of corrosion damage are taken with an Ultrasonic meter or other suitable device. Pit depths are measured with a pit gauge when excavation reveals that there is existing damage present. Edge loss and thinning are measured using a pit gauge or other suitable device.

Based on the structural measurements, structures will be categorized under four distinct levels of corrosion/mechanical damage. Conditions A, B, C, or D categories are defined as follows:

- **Condition A** – Good Condition- Steel and galvanizing is in near original condition. Only minor surface rust is evident in a few small areas. *Structures in this condition category will have a protective coating applied.*
- **Condition B** – From surface corrosion to pitted rust corrosion - steel condition may range from surface rust in several areas to all buried surfaces showing rust and some minor pitting. For a Condition B rating, no loss of steel thickness shall exceed 1/16 inch. In addition, no steel member shall have a loss of total cross section greater than 10%. *Structures in this condition category will have a protective coating applied.*
- **Condition C** – Corroded and Bent Steel Members- Leg/grillage has at least one steel member that has lost between 10% and 25% of cross section. Condition C will also include steel members which are bent and in need of repair. *Structures in this condition category will have a protective coating applied only by direction from the customer.*
- **Condition D** – Heavily Corroded - Members exceed the loss of steel limits defined in Condition C (greater than 25% loss of section). The Structure will typically have large loss of section, with areas of it completely rusted away or perforated due to corrosion. *Structures in this condition category will be reported to the customer for further attention.*

11.6 Priority Structure

A priority structure is a structure that reveals more than a 50% loss of cross section in either one or more tower legs or pole flats. These structures will be communicated directly to the customer for their immediate attention.

12.0 EXCAVATION OF STEEL STRUCTURES: All structures passing the above ground visual inspection shall be partially excavated to a depth of 18" below ground line. If damage is noted at 18", then excavation to 24" is completed and recorded.

13.0 PREVENTATIVE COATING APPLICATION TO STEEL POLES/TOWERS:

13.1 General

Conditions

The terms and requirements of the Contract Documents apply to all the work of this section.

Description

Provide all labor, supervision, materials, testing, equipment, accessories and services necessary to prepare all surfaces and apply coatings to structures.

Submittals

Submit two (2) copies of product data sheets, planned surface preparation methods, materials safety data sheets (MSDS) and application information for approval by the Customer.

Safety Precautions

Please note the following:

- Meet all OSHA, Federal and State requirements, local regulations and the Customer Safety Standards.
- Lead based paint is the responsibility of the Customer; Osmose will advise as to the safest, most cost effective method of remediation and will perform the work in compliance with all local, state, and federal codes including 29CFR1926.
- Precaution will be taken for protection against fire, dust, fumes and skin contact. Suitable ventilation should be provided if painting in enclosed locations.
- Examine the components to which this work shall be applied and report any deficiencies or apparent conflict with this specification to the Customer in writing. Work shall not proceed until such conditions have been remedied. Starting of painting work shall indicate the Contractor's acceptance of the surface.
- Sufficient time shall be allowed to the Contractor to permit proper application and curing of the special finishing materials.
- Before the start of coating work a pre-construction site meeting shall be held between the Contractor and Customer. At this meeting, a review shall be conducted on the interpretation of standard of acceptance or rejection of coating work. Each phase of the work such as receipt and storage of coating materials, equipment to be used, preparation of substrate, application of each coat and the degree and extent of Contractor inspection requirements shall be specifically reviewed. Also at the meeting, a field demonstration of surface preparation and coating application shall be conducted and an agreement shall be reached regarding conformance with this specification.
- Contractor shall not paint exteriors in rain, snow, fog, or mist unless using moisture-cured coating. Paint shall not be applied when the steel surface temperatures exceed limits specified by the paint manufacturer.

- Where concrete foundation repair is done, structure painting shall not be done until concrete work is complete and concrete has set sufficiently to prevent damage.
- When possible, the Contractor will advise Customer on methods and materials for increasing production efficiencies. Modifications of surface preparation, coating application method, curing times, number of coats, final dry thickness, or any other suggestions that may result in cost savings or increased quality.

Material Delivery, Storage and Handling

All coating materials shall be stored in enclosed structures to protect them from the weather and maintained at temperatures between 45 and 95 degrees F. Storage area shall be kept neat, clean and all damage thereto or to its surroundings shall be made good by the Contractor. Shelf life shall not exceed manufacturer's recommendations, or one year, whichever is less.

Inventory shall be kept of all materials including number of gallons, product code, batch number and date of manufacture.

During the progress of the work, all discarded coating materials, containers, rags, etc., will be removed from the project in order to avoid danger of fire.

Codes and Standards

Unless otherwise required in this specification, the following publications shall govern the work:

- Steel Structures Painting Council ("SSPC") Surface Preparation Specifications as found in the Steel Structures Painting Manual, Volume No. 2, Latest revisions.
- SSPC - SP2 Hand Tool Cleaning or SSPC – SP3 Power Tool Cleaning.
- Steel Structures Painting Council Paint Application Specification as found in the Steel Structures Painting Manual, Volume No. 2, latest revision.

Quality Assurance

Notify the Customers' representative in writing of any problems using the coating systems as specified herein.

13.2 Materials

Approved materials for coating are as follows:

- Thinner – Wasser MC-Thinner, MC-Thinner 100, MC-Thinner XMT
- Accelerant – Wasser PURQUIK
- Prime Coat - Wasser MC-Miozinc Primer or Equivalent.
- Finish Coat - Wasser MC-Tar or Equivalent.

13.3 Execution

Structure Inspection

Steel members, which are missing, damaged, or deteriorated to the point where they are weakened, shall be immediately reported to the Customers' representative for repair/replacement procedure.

Before preparation and painting, inspect all connections for loose bolts/nuts. If there is any question as to the adequacy of bolt/nut, replace with approved equivalent of same size. Replacement of bolts/nuts shall occur before surface preparation.

Surface Preparation: General

The surface preparation procedures are as follows:

- Perform all preparation and cleaning procedures in strict accordance with the manufacturer's instructions and as herein specified for each particular substrate condition as applicable. The Contractor is not liable for damages due to existing lead based paints. Treatment of such coatings that are loose and would interfere with proper remediation of the structure will be negotiated on an individual basis.
- All surfaces to be prepared for painting shall, at a minimum, meet the requirements of the Steel Structures Painting Council's specification SSPC-SP2 "Hand Tool Cleaning" or SSPC-SP3 "Power Tool Cleaning". That is, cleaning shall remove all loose mill scale, loose rust, dirt and other loose detrimental foreign matter. It is not intended that adherent mill scale, rust and paint be removed by this process. Mill scale, rust and paint are considered adherent if they cannot be removed by lifting with a dull putty knife.
- In preparing a previously painted surface, it is necessary to remove all corrosion and all paint, which shows evidence of corrosion, peeling, excessive thickness, brittleness, blistering, checking, scaling, or general disintegration. It is essential that the removal of the old paint be carried back around the edges of the spot or area until an area of completely intact and adhering paint film, with no rust or blisters underneath is attained.
- Special attention must be given to cleaning around rivets, bolts, nuts, previously welded surfaces, edges, angles and corners of members. The areas beneath and around replacement bolts and nuts shall be cleared before they are replaced.
- A sample area to be used as a reference standard shall be prepared for each region by the Contractor on a representative structure. Prior to work start, the Contractor inspector and the Customer shall mutually agree to the acceptable degree of cleaning for this reference standard.
- Cleaned surfaces shall be inspected and approved by the Contractor inspector before coating application.
- All rivets, welds, corners, joints and openings shall be cleaned. Tools shall be operated in such a manner that no burrs or sharp edges are left on metal surfaces and no sharp cuts are made into the steel.
- The media waste generated during the surface preparation may contain lead. The Contractor must follow OSHA 29 CFR Part 126 dated May 4, 1993.

Preparation of Materials

Immediately after opening the coating material container, the applicator shall check the material for evidence of any skimming, curdling or otherwise degraded material. If any of these conditions exist, the coating shall not be used.

Before any coating material is applied; it must be well mixed consistent with manufacturer guidelines. Excessive mixing such as with a power mixer should be avoided since it could introduce moisture, which can accelerate curing and make application more difficult.

The MC - Miozinc is a single component primer that may require thinning for proper application and can be thinned with MC-Thinner, MC-Thinner 100 or MC-Thinner XMT as needed for application.

The MC - Tar finish coat is a single component product that may require thinning for proper application and can be thinned with MC-Thinner, MC-Thinner 100 or MC-Thinner XMT, depending on conditions.

Thinning will help to provide a more even, consistent coverage. Adhere to mixing and application restrictions as identified in the coating manufactures data sheets.

During periods of lower temperatures, adding an accelerant such as Purquik will aid in the curing process. Adhere to mixing and application restrictions as identified in the coating manufactures data sheets.

Application Conditions

No coating shall be applied when air and substrate temperatures exceed the manufacturer's recommendations.

Coating Schedule

After the proper surface preparation, components shall be coated as follows:

- One primer coat of Wasser MC-Miozinc Primer to achieve a wet film thickness of 4.8 – 8.0 mils and a finish dry film of 3.0 – 5.0 mils. This product is a primer and is not intended as a film building coating. It is important that it not be applied in excess of the above recommended film thickness.
- Apply two finish coats of Wasser MC - Tar. Each coat shall have an 8.1 – 11.3 mils wet film thickness and a 5.0 - 7.0 mils dry film thickness. The first coat shall be applied approximately one inch above the anticipated second coat location to establish a checkpoint to evaluate the final dry film thickness, which shall be at least 13.0 mils.
- Note: A baseline reading on the uncoated substrate shall be made with the dry film gage to help determine final dry film thickness.

Application

Copies of coating manufacturer's instructions, materials safety data sheets (MSDS) and this specification shall be available at the work site for workmen's use.

Animals may be attracted to these coatings. Digestion of these materials by animals may lead to their sickness. Consequently, when a structure will be exposed to domestic farm animals Contractor will take reasonable action to prevent contact of any farm animals which may reasonably be anticipated to have access to the painted surfaces or to unused paint in containers. Previously opened paint cans, shall be removed from work areas after each workday.

The paint application procedure is as follows:

- Coatings shall be applied only to thoroughly cleaned and properly prepared surfaces.
- All work shall be done under competent supervision by skilled labor, and Customer safety requirements.
- Unless otherwise specified, all coating systems shall be applied by brush.
- Film shall not be stirred if it forms on the surfaces of paint in the containers. Remove the film, and if necessary. Strain the material before using.
- All coatings shall be applied in a competent skillful manner to achieve the specified film thickness.
- The application shall leave no holes or other defects.
- Care shall be taken to protect adjacent equipment, surfaces and property from coatings during coating operations. Protective mats and drop cloths shall be provided where necessary.
- Paint shall be well worked into all joints, connections, rivets, bolts and welds with a brush.
- Unless otherwise specified, coatings shall be applied to a minimum height of 12" above ground line.
- Unless otherwise specified, coatings shall be applied to a minimum depth of 24" below ground line.

Curing Time

Cure times to touch and recoat are affected by humidity, and to a somewhat lesser extent, by temperature. Manufacturers will typically recommend different curing times for different humidity and temperature ranges, the applicator will strictly adhere to these recommendation.

Finish coats shall be applied as quickly as possible after the primer has thoroughly dried. If the primer surfaces are contaminated before top coating, they should be adequately repaired, prepped, and recoated.

Repair of Defects

All damage to previous coats shall be repaired before application of any further coat of material.

Areas with inadequate wet film coating thickness shall have additional compatible coatings applied until they meet this specification.

Damaged or contaminated areas shall be cleaned as originally specified and the full coating system reapplied in accordance with this specification.

Coating Inspection

Prior to start of work, the Contractor shall coat a representative area. The application method as well as coating appearance, coverage and film build shall be mutually agreed to by the Contractor inspector/Foreman and the Customer.

The Customer has the right to inspect work at any time to assure contract compliance.

The Contractor Inspector/Foreman shall record inspection and painting work on the inspection detail report. Prior to the start of work, the Contractor shall ensure that personnel are adequately informed in the use and recording of this report.

The Contractor's Foreman shall acquaint him or herself with the requirements of this specification, the Manufacturer's Standards, the scope of work. The Contractor's Coating Foreman shall provide him or herself with wet film thickness gage and other equipment as necessary to inspect and monitor the work of painters under his direction. The Contractor's Coating Foreman shall also provide him or herself with temperature gages to determine surface temperatures of substrates to be coated.

Paint thickness measurements can be made with dry or wet film thickness gages. Dry thickness measurements shall be made with a properly calibrated Mikrotest or similar dry film thickness gage in accordance with the Steel Structures Painting Council Method, SSPC-PA2, "Measurement of Dry Paint Thickness with Magnetic Gages". Wet paint thickness measurements will be made using specific manufacturer approved gages.

Where the Customer representative's spot check reveals inadequate film build up, the Contractor shall provide an additional coat at Contractor's expense over the entire area where the inadequacy occurs.

Cleanup

After painting and inspection have been completed, all equipment, scaffolding, surplus materials and wastes resulting from painting shall be collected and removed from the work area. Proper disposal of these materials shall be in compliance with the direction contained within this document. All local, state and federal requirements concerning the disposal of solid waste and hazardous waste shall be complied with.

Final Inspection

The responsible Customer representative shall verify that all aspects of the work have been completed before final acceptance. Field inspection reports, including any discovered problems, shall be documented and kept by both the Contractor and the

Customer representatives. Work not inspected by Customer within ten (10) days of completion shall be deemed acceptable.

14.0 DISPOSAL OF DEBRIS: The bidder is responsible for the proper disposal of all debris from the work and cleanup performed under this contract (#11-PCC-1). Disposal shall include items such as wet and dried residues, fumigants, pole wrap materials, mineral oil, spent solvent, hazardous material wastes, and any other waste from the work.

The bidder shall include a short description of the disposal method to be used for each of the several waste streams of the project. The proposed disposal methods shall be the only means used for disposal under this contract. The proposed disposal methods shall also be used in the evaluation of the bid. Not providing complete disposal methods and anticipated waste streams will be considered non-responsive and said bid will not be considered for award.

The bidder is responsible to comply with the most current of all Federal, State, and Local disposal requirements for all waste materials. Copies of all records relevant to disposal shall be given to the City, including manifests, disposal certificates and other pertinent documentation. Where applicable, original documents shall be given to the Utilities Department, copies being retained by the bidder.

The bidder shall hold harmless, and indemnify, the City of Grand Island, City Council members, and all other City employees from liability due to the improper handling, transporting or disposal of any hazardous wastes, discovered or generated by the work covered by this contract (#11-PCC-1).

The City, since 1979, has tested all known oil filled equipment for Polychlorinated Biphenyls (PCB's.) All known PCB or PCB Contaminated items and equipment have been removed from service and properly destroyed. Any items found to be PCB or PCB contaminated during the work shall be reported to the City's representative. The City will properly dispose of the items.

15.0 COMPLETION DATE: The project shall not extend past the completion date proposed in the bid with one exception. To prevent or reduce damage to crops, poles located in fields shall be inspected first.

16.0 BIDDER REQUIREMENTS: All work, work coordination, oversight, and work quality are the successful bidder's responsibility.

The bidder, and the on-site supervisor, shall provide four references of wood pole inspection and treatment work completed in the last five years. Submitted references must be for work similar to that required by this contract, covering equipment rated to at least 115kV.

A list of the bidder's key personnel shall be submitted with the bid. The list is to include a short resume of pertinent work information. The list is to include on-site supervisor.

The bidder shall submit a list of equipment, other than hand tools or other common tools, to be used to fulfill the requirements of this contract (#11-PCC-1). The list is to include any heavy equipment or vehicles to be used inside or around the substations.

17.0 SUBCONTRACTING: Subcontracting will not be allowed.

18.0 DOCUMENTATION: The City expects the bidder to be familiar with the work to be performed, the proper documentation, and the correct display of documents. The City may not be held liable or responsible for the failure of the contractor to acquire or display required documentation or licenses.

Ten copies of the final report, both printed and on Compact Disc, shall be given to the Utility in the format specified in the bid. The documentation shall be comprehensive and complete.

Reports are to include:

- 1.) Initial Equipment Inspection Findings (As Found Report)
 - A.) Pole information
 - B.) Pole above soil condition
 - C.) Depth of Pole
 - D.) Pole attachments loose, damaged, or missing
 - E.) Pole below soil condition
- 3.) Coring, sounding, and/or other interior condition locator findings
- 4.) Performed treatment and fumigation
- 5.) Expected result of treatment
- 6.) Final Comprehensive Report

These reports are to be complete, but concise. Test reports are to cover all tests performed.

The Final Comprehensive Report is to include recommendations the bidder would have concerning the poles or future pole maintenance.

19.0 WARRANTY: All work performed, products, and treatments shall be warranted to be free from defect and to perform to the level specified by the original manufacturer, and to the current standards, whichever is the more stringent. All maintenance work and items used shall be warranted for at least one year from the date of City approval of final payment for all the work performed under this contract.

20.0 BID AND UNIT PRICING: The bidder shall submit a "Not To Exceed" total bid price that includes all costs to perform the work as required by this specification, including taxes, fees, permitting or other such costs.

The bidder shall supply unit pricing under the following categories:

- 1.) Above Ground Inspection, Sounding, Boring, Attachment Inspection, Information Verification, and Collection per Wood Pole.
- 2.) Above Ground Inspection, Attachment Inspection, Information Verification, and Collection per Steel (Metal) Pole and lattice structure.
- 3.) Treatment of Interior Wood Voids per Pole.

- 4.) Interior Wood Fumigation per Pole.
- 5.) Treatment of Wood Exterior and Wrapping per Pole.
- 6.) Coating application per Steel (Metal) Pole/Structure
- 7.) Purchase and Disposal of Fill Dirt per Pole.
- 8.) Miscellaneous Cost per Pole with details.

21.0 PAYMENT: Bidder is to invoice per the unit pricing. Invoices may be submitted for work completed on monthly basis. There will be no pre-payment on materials or labor.

Ten percent (10%) of each invoice shall be retained until the completion of the entire work and final acceptance. Full payment will be made upon satisfactory completion of the entire project, including proof of payment of all obligations or encumbrances, and all disposal manifests, and certificates.

The Bidder should allow at least three weeks for payment as the City Council usually meets twice monthly to approve payments.

Total payments, including applicable taxes, to the successful bidder may not exceed the accepted "Not to Exceed" total bid price in any circumstance.