CITY OF NORTH LITTLE ROCK, ARKANSAS
COMMERCE DEPARTMENT
Mary Beth Bowman, Director
Amy Smith, Assistant Director for Procurement
Crystal Willis, Admin. Sect. /Asst. Purchasing Agent

120 MAIN STREET
P.O. BOX 5757
NORTH LITTLE ROCK, AR 72119
501-975-8881 Phone
501-975-8885 Fax

INVITATION TO BID

Bid Number : 17-3462 Date Issued: April 20, 2017
Date & Time Bid Opening: Friday, May 5, 2017 at 10:00 a.m.

Inspection and Supplemental Treatment of Wood Poles for the NLR Electric Department

TOTAL PROJECT BID PRICE: $_____

Specifications attached.

Direct any questions related to the Swimming Pool Maintenance Services to:

- Andy Johnson at 501-517-6144

Questions related to the bidding procedures and/or documents should be directed to:

- Commerce Department at 501-975-8881

If you are obtaining this bid from our website, please be reminded that addendums may occur. It is therefore advisable that you review our listings for attachments including any changes to the bid.

The City of North Little Rock encourages participation of small, minority, and woman own business enterprises in the procurement of goods, services, professional services, and construction, either as a general contractor or sub-contractor. It is further requested that whenever possible, majority contractors who require sub-contractors, seek qualified small, minority, and woman businesses to partner with them

NOTE: FAILURE TO FILL OUT AND SIGN THE INVITATION TO BID SHEET WILL RESULT IN REJECTION OF THE BID.

EXECUTION OF BID

Upon signing this Bid, the bidder certifies that they have read and agree to the requirements set forth in this bid, including specifications, conditions and pertinent information regarding the articles being bid on, and agree to furnish these articles at the prices stated.

NAME OF FIRM:_____ DATE:_____

PHONE NUMBER:_____ AR TAX PERMIT NO._____

BUSINESS ADDRESS:_____

SIGNATURE OF AUTHORIZED PERSON &
TITLE:_____

UNSIGNED BIDS WILL BE REJECTED

TABLE OF CONTENTS:

1.0 General:

1.1 Scope: This specification is intended as a basis for the inspection and supplemental treatment of 6,250 wood poles for North Little Rock Electric Department. Poles less than 10 years old will only be visually inspected and reported if the visual inspection warrants no further action. All other poles are to be inspected both above and below the groundline area.

1.2 Contract Definitions:

1. OWNER: North Little Rock Electric Department

2. CONTRACTOR: Bid Recipient

1.3 CONTRACTOR Requirements: CONTRACTOR shall furnish all supervision, labor, tools, equipment, report forms, field adaptable handheld data collection devices, transportation, and material necessary for the inspection and treatment of OWNER's poles as identified. OWNER will furnish copies of this specification and necessary maps showing locations of poles which are the subjects for inspection and/or treatment. OWNER shall provide CONTRACTOR the legal right to access the work site.

CONTRACTOR is required to have a minimum of 10 years in the in-service pole inspection and treatment business. CONTRACTOR must have documented programs/policies conforming to the Environmental Protection Agency ("EPA"), the Occupational Safety and Health Administration ("OSHA"), the Department of Transportation ("DOT"), along with all federal and state pesticide regulations. These policies must include a safety manual, pesticide training manual and test, standards for safe storage of preservatives on vehicles, operating policies for CONTRACTOR's personnel to handle preservatives and procedures for disposing of empty containers used for pole treatment in compliance with label requirements, and OSHA regulations involving Personal Protective Equipment ("PPE").

CONTRACTOR shall maintain throughout the term of the applicable agreement, in full force and effect, in amounts reasonably satisfactory to OWNER and otherwise in compliance with applicable law, the following insurance coverages: Workers' Compensation, Commercial General Liability (including Public Liability, Personal Injury, Property Damage, and Contractual Liability) and Automobile Liability. Prior to the commencement of the work, CONTRACTOR shall furnish OWNER with a certificate evidencing said coverages.

1.4 Personnel Qualifications:

1.4.1 Foremen Qualifications: Each Foreman shall have:

- A minimum of eight weeks formal training in the art of inspecting and treating poles and/or
- A minimum of six months experience as a pole inspector
- Passed a written or demonstration test to the satisfaction of CONTRACTOR
- Passed a CONTRACTOR-approved pesticide training program,

qualifying the Foreman having the expertise and training to handle wood preservatives

- Met the applicable state requirements for a commercial applicator

OWNER reserves the right to ask for evidence of previous experience and training in the form of letters of reference and test results. Personnel are subject to approval by OWNER.

1.4.2 **Supervisor Qualifications:** The Supervisor shall:

- Have a valid state pesticide applicator's license in the appropriate category for treatment of wood poles
- Hold the position of CONTRACTOR's Supervisor in the state in which the work is to be performed
- Have sufficient field experience in the art of inspecting and treating poles

1.4.3 **Manager Qualifications:** The Manager shall:

- Have a valid state pesticide applicator's license in the appropriate category for treatment of wood poles
- Hold the position of CONTRACTOR's Manager in the state in which the work is to be performed
- Have sufficient field experience in the art of inspecting and treating poles

1.5 **Workmanship and Damages:** All work shall be performed in a workmanlike manner and shall be in accordance with this specification and all applicable federal and state regulations. OWNER considers work not in accordance with this specification, or work not in accordance with state and federal regulations, or unskilled or careless work, to be sufficient reason to order CONTRACTOR to stop work. Work will not be allowed to resume until deficiencies are corrected to the reasonable satisfaction of OWNER. Further, OWNER reserves the right to require CONTRACTOR to replace any worker before work is allowed to continue. If not satisfied, OWNER will consider this to be just cause for termination of the contract.

Any damages, real or personal, off the right-of-way arising solely from the negligent performance of the work specified herein, or any damages on the right-of-way arising solely as a result of negligent operations, shall be settled promptly by CONTRACTOR. OWNER recognizes that linemen must inspect all poles to their satisfaction prior to climbing, whether or not such poles have been inspected by a third party contractor. An inspection and/or treatment tag on a pole is not a guarantee the pole is safe to climb. OWNER should inform linemen that the inspection tag only means the pole was inspected in the stated year in accordance with the contract specifications. An inspection tag is neither an expressed nor implied warranty that the pole meets the National Electric Safety Code ("NESC"), the General Order No. 95 ("GO 95"), nor any other applicable standard. Linemen must also practice all other safety procedures when climbing poles and changing out or adding equipment or lines or cutting lines, all of which may create an unbalanced load. An unbalanced load may cause sound poles to fail.

1.6 **Quality Control:**

1.6.1 **Quality Control Inspection:** A Quality Control ("QC") inspection shall be performed for each Foreman's work at least once every four weeks on work completed since the previous QC inspection. The QC inspection will be conducted with CONTRACTOR's Supervisor or Manager, and at OWNER's option, with OWNER's representative when available. The QC inspection shall consist of the partial to complete re-inspection of those poles selected by the CONTRACTOR's Supervisor or Manager, or by the OWNER's representative, to compare the results shown in the pole inspection records with those existing in the field. The re-inspection shall include, but not be limited to, the re-excavation, re-treatment, and re-wrapping of those poles that were inspected below groundline. CONTRACTOR's cost of said re-treatments shall be borne by CONTRACTOR. At least three poles will be selected for each QC inspection. OWNER shall be issued a copy of the QC results within a reasonable amount of time upon request to CONTRACTOR.

1.6.2 **Discrepancies and Corrective Action:** Any serious errors will be brought to the attention of CONTRACTOR. Corrective action, reasonably satisfactory to OWNER, must be taken by CONTRACTOR to remedy the situation before the next QC check. The corrective action may include, but not be limited to, re-working each pole back to the previous QC check point at no cost to OWNER.

1.7 **Definitions for Inspection and Treatment:** Pole inspection and treatment categories are defined as follows:

1.7.1 **Reported Pole (Visual Inspection):** A reported pole is a pole less than 10 years old about which OWNER desires information, including poles the CONTRACTOR identifies as not present in the field, or any pole that is judged to be unserviceable prior to excavation (as specified in Section 3.2), or any pole which is determined by CONTRACTOR, in CONTRACTOR's reasonable opinion, to be inaccessible. Poles less than 10 years old may be subjected to further evaluation at CONTRACTOR's discretion. Copper naphthenate and Cellon treated poles shall be partial excavate inspected according to Section 3.3 regardless of age.

This inspection method provides no indication of groundline wood strength except for the possible notation of pole class. If used alone, this inspection provides little information to help OWNER improve its pole plant. This inspection method will miss most priority and reject poles.

1.7.2 **Sounding and Boring:** Poles shall be sounded with a hammer from either groundline or above groundline as applicable, to as high as an inspector can reach in order to locate exterior decay or interior pockets of decay. Inspector shall bore pole at least once to detect interior decay (a shell thickness indicator shall be used to detect the existence and extent of interior decay). If decay is present, the pole shall be bored a sufficient number of times to determine the location and extent of decay discernable with this method. Bored holes shall be plugged with tight-fitting treated wood dowels or plastic plugs.

This inspection method can miss poles without sufficient strength to meet NESC, GO 95, or other mandated overload capacity requirements, and there is the possibility of missing those poles with insufficient strength to support the current loading. This is particularly true when the decayed area is below ground level

or if the inspector's tools do not contact hidden, damaged areas. Used in conjunction with visual inspection, historical data shows approximately 50% to 60% of reject and priority poles will be found.

1.7.3 **Partial Excavation:** Poles that are partially excavated on one side of the pole as specified in Section 3.3 below.

This inspection method can be expected to identify many but not all inspected poles with decay below ground or other conditions causing a reduction in the required strength at groundline. Used in conjunction with visual inspection plus a sound and bore, historical data shows that approximately 80% to 90% of reject and priority poles will be found.

1.7.4 **Fully Excavated Pole:** Any pole passing the above ground visual inspection (other than poles defined in Section 1.7.1) which has been excavated around the entire circumference as specified in Section 3.4.

This inspection procedure constitutes the most thorough method known in the industry. Nevertheless obstructions such as rock, adjacent buildings, sidewalks, keys, roots, risers, deep decay, underground cables, and other obstacles prevent "full" excavation and/or treatment with respect to depth, circumference, or both. Typically, once the excavation is made to improve inspection accuracy, the procedure also includes treatments. Used in conjunction with visual inspection, historical data shows approximately 98% of reject and priority poles will be found.

1.7.4.1 **Externally Treated Pole:** A groundline treated pole is any fully excavated pole designated by OWNER which, upon inspection, is found to be a candidate for external preservative treatment. Treatment is specified in Section 5.2.

1.7.4.2 **Fully Excavated Rejected Pole:** A fully excavated rejected pole is any fully excavated pole that meets the criteria specified in Sections 3.2, 3.3.3, and/or 4.1.

1.7.4.3 **Externally Treated Reject Pole:** An externally treated reject pole is a fully excavated rejected pole that, after inspection, meets criteria for pole restoration. A pole found to be restorable will be groundline treated provided enough sound wood remains. The inspector will make a notation in the data as to whether a pole can or cannot be restored.

1.7.5 **Rejected Pole:** A rejected pole is any pole that meets the criteria specified in Sections 3.2, 3.3.3, and/or 4.1.

1.7.6 **Priority Pole:** A priority pole is any pole that is in need of immediate attention (restoration or replacement); usually has less than one-half of its original circumference and/or 13% or less remaining original strength (**if OWNER opts to specify alternative criteria, it must be specified in writing to CONTRACTOR**). The location of priority poles will be reported to OWNER's representative as specified by OWNER in writing.

1.7.7 **Percent Remaining Strength or Remaining Section Modulus:** The percent remaining strength is the estimated percentage of bending strength remaining in

a pole compared to its original strength when reductions are made for decay or mechanical defects noted by the Foreman. OWNER acknowledges that the percent of remaining strength is an estimate based on the information outlined herein.

1.7.8 **Internal Treatment:** CONTRACTOR's EPA-registered insecticide and preservative (as specified in Section 5.4) solution is applied internally under 40 PSI minimum pressure through a set of multiple borings to any insect cavities/voids and/or internal decay voids that constitute a size of 1/2" or larger.

1.7.9 **Fumigant Treatment:** CONTRACTOR's EPA-registered fumigant treatment. CONTRACTOR shall apply a fumigant treatment(s) to OWNER's poles as specified in Section 5.3.

1.7.10 **Through-Bored Poles**: Poles with a series of small diameter holes drilled through the groundline area of the pole during the manufacturing process to enhance the original treatment.

2.0 General Precautions and Requirements for Preservative Applications:

2.1 **General Restrictions and Requirements:** All preservatives shall be handled and applied in accordance with the product label, and in a manner to prevent damage to vegetation and property. Only preservatives registered by the EPA and the appropriate State Department of Agriculture for the intended use of remedial pole treatments will be considered for approval by OWNER. Preservatives not labeled for use as remedial pole treatments shall not be used.

No preservatives shall be applied by CONTRACTOR where a pole is readily identifiable as: (i) located on any school property (Day care(s) and Grades K-12); (ii) in a vegetable garden; (iii) in organic farm fields; (iv) within 10' of a stream or standing water body; or (v) within 50' of a private well. OWNER acknowledges that all vegetable gardens, organic farm fields, and wells may not be identifiable by CONTRACTOR.

Any container in which a preservative is stored shall be stored in a securely locked container, tool box, or bolted to vehicles on the right-of-way and kept locked when left unattended. Empty preservative containers shall be removed from the right-of-way and kept in a locked compartment until disposal. Disposal of preservatives and their containers shall be in accordance with the product label as well as the rules and regulations of all appropriate federal and state agencies.

2.2 **Pesticide Licensing and Reporting Requirements:** CONTRACTOR shall be a certified commercial pesticide applicator for the preservative applications specified in this specification, and each crew shall be supervised by a full time Supervisor who is licensed and certified by the state where the work is to be performed. CONTRACTOR shall be responsible for the accurate recording and submittal of all pesticide usage forms required at the time of application by the various pesticide regulatory agencies and for meeting all applicable federal and state rules and regulations.

CONTRACTOR is required to have in its possession copies of the preservative labels and Safety Data Sheets ("SDS") for all pesticides being used. Upon request, the SDS and labels will be shown to anyone desiring this information. Properly completed shipping papers will also be carried on each vehicle which is transporting pesticides.

2.3 **Material Handling:** Accidental releases of preservative shall be immediately cleaned-up in a manner consistent with label requirements and federal and state regulations.

CONTRACTOR shall provide each crew with a recovery kit containing sufficient materials for cleaning-up and neutralizing accidental releases of both paste and liquid preservatives. The recovery kit shall consist of, but not be limited to, the following materials: absorption material (such as sawdust or oil dry), baking soda or laundry detergent, ammonia (undiluted), and trash bags for storage of waste.

2.4 **Proper Equipment:** CONTRACTOR shall provide each crew with all required PPE as specified by the label, such as goggles, sleeves, non-permeable gloves, and aprons. In addition, hard hats and a change of clothing will be provided. All field employees are required to wear work boots and hard hats.

CONTRACTOR shall provide a truck that has covers and locks adequate to satisfy applicable federal and state DOT regulations in which to store and transport the preservatives.

2.5 **Pesticide Training:** Each pole inspector and/or Foreman shall be required to pass a pesticide training program which addresses the biology of wood destroying insects and fungi, the proper and safe handling, storage, disposal, and transport of pesticides, product labels, SDS, and emergency procedures for accidental releases. CONTRACTOR's pesticide training program is to be in addition to state requirements for applicator licensing.

2.5.1 **Hazard Communication and Safety Program:** CONTRACTOR shall provide to its employees with a hazard communication program which addresses the purpose of using pesticides, SDS and product labels, protective safety equipment, and clothing and product information. A safety manual and program will be utilized by CONTRACTOR and its employees.

3.0 Inspection:

3.1 **Preparation:** When work is to be done in close proximity to a home, if possible, the property owner should be notified that a pole inspection is being performed by OWNER. Light brush will be removed from around the pole to allow for proper excavation, inspection, and/or treatment unless permission for removal is denied by property owner (excessive brush removal may require an additional charge). Property owner's denial will be indicated in the remarks column on the pole report. If permission for excavation is denied, the pole will be sounded and bored and fumigant treated, providing the pole is serviceable. CONTRACTOR will not inspect or perform work on poles inaccessible by Acts of God or by any causes beyond the control of CONTRACTOR. Reason for the lack of inspection will be noted in the remarks column of the pole report.

3.2 **Above-Ground Inspection:**

3.2.1 **Wood Poles:** A visual inspection of all wood poles shall be made from groundline to the top of the pole. The following defects visible from the ground with a naked eye will be noted: woodpecker holes, split tops, decayed tops, broken insulators, rotten/broken crossarms, broken ground wires, and slack/broken guy wires.

If the pole is obviously not suited for continued service due to readily identifiable serious defects, it shall either: (i) not be tested further and simply be reported and marked on the inspection form as a reported reject; or (ii) the pole may be sounded and bored to determine whether or not it is a priority pole and be reported on the

inspection form as a sound and bore reject.

3.2.2 **Concrete Poles:** A visual inspection only, shall be made from groundline to the top of the pole of all concrete poles. The following defects visible from the ground with a naked eye will be noted: Cracks, rust, spalling, exposed metal such as spiral wire or rebar, broken or burned ground wires, broken insulators, rotten/broken crossarms, and slack/broken guy wires.

3.2.3 **Composite or Fiberglass Poles:** A visual inspection only, shall be made from groundline to the top of the pole of all composite or fiberglass poles. The following defects visible from the ground with a naked eye will be noted: Cracks, broken or otherwise damaged areas, burned sections, deterioration of the poles protective coating including separation of layers or fibers protruding through the protective coating, broken insulators, rotten/broken crossarms, and slack/broken guy wires.

3.2.4 **Metal Poles / Laced Towers:** A visual inspection only, shall be made from groundline to the top of the pole/structure of all metal poles and laced towers. The following defects visible from the ground with a naked eye will be noted: Cracks, rust that is either completely through or nearly completely through metal, loose or missing bolts, bent or missing members, cracks in concrete foundation, broken insulators, broken ground wires and slack/broken guy wires.

3.3 **Partial Excavation:** All poles that pass the above ground visual inspection (other than poles defined in Section 1.7.1) shall be partially excavated on one side of the pole. Excavation will be 8" wide and 8" deep (exceptions include poles in pavement, poles with underground power risers, poles in vegetable gardens, or poles that are otherwise inaccessible; if accessible, these poles will be sound and bore inspected. Poles in vegetable gardens and poles in organic farm fields may be partial excavated at OWNERS option, however these poles shall not be treated with remedial treatments). The pole will be sounded and bored as specified in Sections 3.5 and 3.6 and the pole surface will be checked for signs of external decay.

3.3.1 **No Surface Decay:** If no surface decay is suspected and the borings indicate no internal decay, no further action is required. The partial excavation will be back-filled.

3.3.2 **Surface Decay:** If surface decay is suspected, the pole will be fully excavated as specified in Section 3.4 and decay will be removed as specified in Section 3.7. Evaluation and treating will be performed as specified in Sections 4.0 and 5.0.

3.3.3 **Extensive Decay:** If extensive decay is present and it is obvious that the pole is a reject as specified in Section 4.0 and does not require treatment as specified in Section 5.2, no further action is required and the pole will be back-filled.

3.3.4 **Internal Decay:** If internal decay is suspected or present and the pole is not a Southern Pine Species, the pole will be treated with a fumigant as specified in Section 5.3 and the partial excavation will be back-filled. If the pole is a Southern Pine Species, it will be fully excavated and evaluated as specified in Section 3.3.2 above.

3.3.5 **Internal Void:** If an internal void is present and the pole is not a Southern Pine Species, the pole will be treated with a fumigant as specified in Section 5.3 and an internal treatment as specified in Section 5.4 and the partial excavation will be back-filled. If the pole is a Southern Pine Species, it will be fully excavated and evaluated as specified in Section 3.3.2 above.

3.4 **Full Excavation:** All poles meeting the criteria specified in Sections 3.3.2, 3.3.4, and 3.3.5 shall be excavated around the entire circumference to a depth of 18" below groundline (exceptions include poles in pavement, poles with underground power risers, poles in vegetable gardens, and poles in organic farm fields; these poles will be sound and bore inspected. Poles in vegetable gardens and poles in organic farm fields may be full excavated at OWNER's option, however these poles shall not be treated with remedial treatments). Poles which cannot be excavated to the proper depth around the entire circumference for legitimate reasons (such as large rocks, large roots, or other obstructions) will have the obstruction and the extent of excavation noted in either the remarks or notes section of the pole report. The excavation will be approximately 10" from the pole at ground level and 4" from the pole at the 18" depth. For excavation in lawns, sod grass areas, or flower gardens, care will be taken to keep the surrounding area as clean as possible. The sod around pole shall be carefully cut and neatly stacked. Poles installed on slopes shall be excavated to a minimum depth of 18" on the down slope side and 18" on the high side. Tarpaulins or ground cloths shall be used whenever possible to minimize the possibility of any property damage and to aide in the tracking of excavated holes (exceptions should be rare, and would include situations where the slope is too steep or the ground surface too uneven to allow for effective use).

3.5 **Sounding:** Poles shall be sounded from as high as the inspector can reach to the exposed groundline area in order to locate interior pockets of decay. Hammer marks should be visible to indicate that the area was sounded.

3.6 **Boring:** Inspector shall bore the pole with a 3/8" bit. Bore hole(s) shall be located at groundline and should be drilled at a 45° angle to a depth of the center line of the pole. A shell thickness indicator shall be used to detect the existence and estimated extent of any interior decay.

If enclosed decay pockets are evident in a pole, a minimum of four borings will be taken to determine the size and extent of decay. Bored holes shall be plugged with tight-fitting treated wood dowels or plastic plugs.

3.7 **Chipping:** All poles that will be externally treated will have all loose and decayed wood removed from 18" below groundline to 6" above groundline. A quality chipping tool will be used for this procedure to obtain a smooth, clean removal of wood. External decay pockets will be shaved or chipped to remove decayed wood from the pole. Removed wood shall be removed from the hole and surrounding ground and disposed of properly.
Care should be taken not to remove good wood as this will reduce the strength of the pole. The pole will be scraped using a check scraper or wire brush to remove dirt from treatment zone.

4.0 Evaluation:

4.1 **Determining Remaining Groundline Strength or Minimum Groundline Circumference:** Measurements of the following decay and damage conditions shall be collected and input into a strength calculating program which will calculate the remaining strength of the pole: shell rot, exposed pockets, enclosed pockets, and mechanical damage.

Decay measurements are entered with consideration for the orientation to the line of lead and the program models the resulting cross section. Multiple types of damage are combined within the calculations and the center of gravity of the pole cross section is adjusted accordingly.

The output is shown as estimated Percent Remaining Strength. The traditional Groundline Effective Circumference will be reported as well. This is the circumference of a smaller, sound pole that approximates the bending capacity equivalent to the decayed pole's remaining strength. The strength calculating program will only display percentages of remaining strength for fully excavated poles (minimum requirements are two, 8" deep by 8" wide excavations). An estimated Groundline Effective Circumference is the only reported value for poles which are not excavated.

A "Reject Pole" is:

- An excavated pole with a remaining strength of 67% or less

Non-excavated poles will be rejected based on the reject criteria in Table 1 or other criteria approved in writing by OWNER. Groundline Effective Circumferences for non-excavated poles are estimates of true pole condition based on the limitations of the inspection method.

A "Priority Pole" is:

- A pole with an effective circumference of less than 50% of its original circumference and/or 13% or less remaining original strength and shall be reported to OWNER's representative as specified by OWNER in writing (if OWNER opts to specify alternative criteria, it must be specified in writing to CONTRACTOR as specified in Section 1.7.6)

4.2 **Previously Restored Poles:** Poles previously restored with C-Truss(es) or similar equivalent shall be evaluated just above the second lowest band and at the top of the truss as outlined in Section 4.3.

- Poles that do not meet the minimum shell requirements will be classified as rejects.
- Poles that meet the minimum shell requirements will be classified as serviceable poles and internally treated above ground according to Section 5.4.
- Loose, missing or severely corroded bands and seals will be noted.

4.3 **Determining Reinforceable Candidates:** When the initial inspection results in the rejection of a pole, the pole shall be marked for replacement or reinforcement. The following inspections shall be performed to determine if the pole is reinforceable.

4.3.1 Inspection Point 1: Groundline Pole Condition

- Poles exhibiting **shell rot** at or below groundline shall have a minimum remaining sound wood circumference of 33% or greater than the original groundline circumference and/or 4% remaining strength.
- Hollow poles and poles with internal decay shall maintain one-half inch (1/2") of average sound shell at or below groundline for single or double truss applications.

Note: All shell thickness requirements listed in Sections 4.3.2 and 4.3.3 are for poles up to and including 65' in length. For poles 70' and longer, all shell requirements shall be increased by 1" (3" at the lower band position for a single truss, or 2" for a double truss, and 5" at the top of the truss):

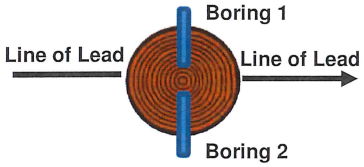
4.3.2 Inspection Point 2: Lower Band Pole Condition

- A **single truss** application requires two inches (2") or greater of average sound shell at fifteen inches (15") from groundline.

- A **double truss** application may have less than two inches (2") but requires greater than or equal to one inch (1") of average sound shell at fifteen inches (15") from groundline.

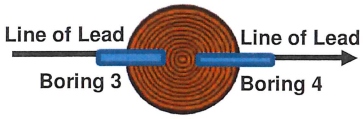
Procedure to determine lower band average sound shell:

A. Drill two (2) 3/8" diameter holes at fifteen inches (15″) above groundline perpendicular to the line of lead. Refer to Figure 3 for line of lead orientations for common line construction types.



B. If the average sound shell from these 2 borings is *two inches (2") or greater*, proceed to **Inspection Point 3** below.

C. If the average sound shell is *less than two inches (2″)*, bore 2 additional holes in the line of lead. If the average of all 4 borings is *two inches (2") or greater*, proceed to **Inspection Point 3**.



D. If the average is still *less than two inches (2") but greater than one inch (1")*, the pole can be reinforced with double trusses, which combined, provide the desired strength. Proceed to **Inspection Point 3** below to determine double truss required height above groundline.

E. If the average sound shell is *less than one inch (1"),* the pole may be deemed non-restorable or consult with a supervisor for alternative restoration methods.

4.3.3 Inspection Point 3: Top of Truss Pole Condition

- A **standard truss** requires an average sound shell of four inches (4") or greater at the installed height of the standard truss required, typically five feet (5').

- A **tall truss** requires four inches (4") or greater of average sound shell anywhere from six to eight feet (6'-8') above groundline.

Procedure to determine top of truss average sound shell:

A. Drill two (2) 3/8" diameter holes at five feet (5') above groundline perpendicular to the line of lead.

B. If the average sound shell from these two (2) borings is *four inches (4") or greater*, reinforce the pole with the appropriate truss or trusses as shown in Figure 4 or 5.

C. If the average sound shell is *less than four inches (4")*, Drill two (2) 3/8" diameter holes at six or eight feet (6' or 8') above groundline perpendicular to the line of lead in order to find four inches (4") or greater of average sound shell

D. If the average sound shell from these two (2) borings is *four inches (4") or greater*, reinforce the pole with a truss with an installed height above groundline at least as tall as where 4" or greater of average sound shell is found.

Note: *In the instance where a pole would require double trussing due to average sound shell thickness at 15", but obstructions on the pole or a customer request would limit a restoration to only 1 truss, the pole can be checked for 2" of average sound shell at 26" and a single tall truss can be installed with lower banding installed at 26".*

4.3.4 All inspection holes shall be plugged with tight-fitting treated wood dowels or plastic plugs.

5.0 Treatment:

5.1 **General:** All fully excavated poles (as specified in Section 3.4) which are serviceable shall be treated as specified in Section 5.2. All non excavated poles (except as defined in Section 1.7.1) and certain excavated poles shall be treated with a fumigant treatment as specified in Section 5.3 (note reinforceable candidates cannot be treated with a fumigant treatment until after the pole has been reinforced). If internal decay is indicated, an appropriate solution shall be selected and applied (as specified in Section 5.4).

5.2 **External Groundline Treatment:** All poles which are fully excavated and serviceable are to be groundline treated with a preservative paste which shall be applied to the pole (a minimum of 1/16" thick) from 18" below groundline to 3" above groundline. Reinforceable candidates will not be externally treated. The preservative paste shall be composed of the following ingredients:

MP500-EXT	
Ingredients	**Amount**
Copper Carbonate (Metallic Copper Equivalent is 1%)	1.73%
Sodium Tetraborate Decahydrate	43.7%
Inert Ingredients	54.57%
Total	**100.00%**

Alternative materials will require prior approval from OWNER. Alternative materials will

be applied at the maximum rate according to the product label. Long-term retention studies should be made available to assure results.

CONTRACTOR shall treat all exposed pockets and checks using a brush or trowel. Where obstructions occur (such as fences, curbs, and walls) the preservative shall be applied up to obstruction to insure complete coverage.

5.2.1 **Wrapping of External Treatment:** A polyethylene-backed kraft paper moisture barrier is to be applied over the wood preservative. The moisture barrier shall cover preservative to a depth of 18" and extend 1" above the top of treatment zone, for a total of 22". It shall be of sufficient length to go around the pole with an overlap of approximately 4" and shall be stapled to the pole at the top and side seams of the barrier.

Pasture wrap shall also be used in areas of livestock; it will be stapled around the top edge of the moisture barrier to act as an additional protective barrier.

5.3 **Fumigant Treatment: All** serviceable poles (except as specified in Section 1.7.1 and Through-Bored Poles) will receive a fumigant treatment(s) based on the following criteria:

- Poles that were identified for full excavation according to Section 3.4 which cannot be 75% excavated due to obstructions (i.e. curbs, pole keys, large roots, fences, etc.), and all poles where internal decay is present or suspected and/or where voids of less than ½" are present.
- Non-Southern Pine Species Poles that were partial excavate inspected according to Sections 3.3.4 and/or 3.3.5.
- Poles that were sound and bore inspected according to Sections 3.3 and/or 3.4 where external decay is present or suspected and/or where internal decay is present or suspected and/or where voids of less than ½" are present.

CONTRACTOR shall apply the fumigant treatment(s) to poles using the following treatment(s)/application method(s):

MITC-FUME® (Contains 97% Methylisothiocyanate)	
Pole Circumference (Inches)	**Number of Holes Drilled**
28 or less	Two holes spaced 120° apart and 6" to 8" higher than the previously bored hole.
29 to 35	Three holes spaced 120° apart and 6" to 8" higher than the previously bored hole.
36 to 49	Four holes spaced 90° apart and 6" to 8" higher than the previously bored hole.
50 to 59	Five holes spaced 70° apart and 6" to 8" higher than the previously bored hole.
60 to 69	Six holes spaced 60° apart and 4" to 6" higher than the previously bored hole.
70 to 79	Seven holes, the first two at groundline 180° apart, and the remaining five spaced 60° apart and 4" to 6" higher than the previously bored hole).

80 to 90	Eight holes, the first two at groundline 180° apart, and the remaining six spaced 50° apart and 4" to 6" higher than the previously bored hole.
Greater than 90	Nine holes, the first two at groundline 180° apart, and the remaining seven spaced 45° apart and 4" to 6" higher than the previously bored hole.

CONTRACTOR's inspector shall bore 7/8" slanting holes to a minimum of 12" depth, using impermeable gloves to insert one tube into each hole. Holes shall be plugged using tight-fitting treated wooden dowels or plastic plugs. For non-excavated poles, the first hole(s) are generally bored at groundline. For excavated poles, the first hole(s) may be bored below groundline.

5.4 Internal Treatment:

5.4.1 Internal Treatment: Internal treatment will be with the following solution:

Hollow Heart® CB Dilute Solution	
Ingredients	**Amount**
Copper Ethanolamine Complex (Equivalent to 2% Copper Metal)	5.84%
Disodium Octaborate Tetrahydrate	5.0%

Poles containing decay pockets of 1/2" or larger shall be treated by pumping the preservative into the cavity through a series of 3/8" diameter holes. If wood destroying insects are encountered in the pole, the pole will be sounded to locate the top of the insect gallery and enough holes drilled to thoroughly treat the wood and flood the galleries. The solution will be applied at a minimum pressure of 40 PSI. Beginning with the lowest hole, the preservative will be pumped into the cavity until the material flows out of the next highest hole. This hole will then be plugged and additional preservative pumped into the cavity until the cavity is filled or a maximum of one gallon is used. Sufficient holes will be bored and preservative used to assure coverage of the decayed area. All holes will be plugged with tight-fitting treated wood dowels or plastic plugs.

5.4.2 Internal Treatment for Wood Destroying Insects: At OWNER's option, poles containing signs of wood destroying insects shall be treated with the following solution:

Hollow Heart® CB Plus Dilute Solution	
Ingredients	**Amount**
Copper Ethanolamine Complex (Equivalent to 2% Copper Metal)	5.84%
Disodium Octaborate Tetrahydrate	5.0%
Cypermethrin (Field Mixed with the Copper Ethanolamine Complex and Disodium Octaborate Tetrahydrate)	0.25%

Poles containing signs of wood destroying insects shall be treated by pumping the preservative(s) into the cavity through a series of 3/8" diameter holes. The solution will be applied at a minimum pressure of 40 PSI. Beginning with the lowest hole, the preservative will be pumped into the cavity until the material flows out of the next highest hole. This hole will then be plugged and additional preservative pumped into the cavity until the cavity is filled or a maximum of

one gallon is used. Sufficient holes will be bored and preservative used to assure coverage of the decayed area. All holes will be plugged with tight-fitting treated wood dowels or plastic plugs. The pole will be sounded to locate the top of the insect gallery and enough holes drilled to thoroughly treat the wood and flood the galleries.

6.0 Restoration of Work Site:

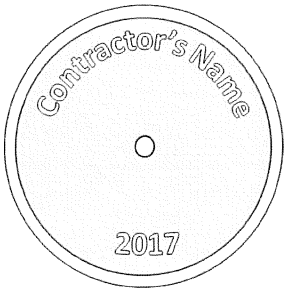
6.1 Back-Filling: After excavation and/or treatment, all poles will be solidly back-filled. The first half of the excavation will be back-filled and tamped completely around the pole by walking on the replaced excavation; the second half will be back-filled and tamped completely around the pole. The excess earth should be banked up to a maximum of 3" above normal ground level to allow for settlement. In grass areas, the sod shall be carefully placed around the pole. Rocks or stones should not be laid against the pole except where they serve to key the pole or where no other fill is available. Extreme care should be taken not to tear the moisture barrier while back-filling.

6.2 Clean-Up: No debris, loose dirt, etc. is to be left in the pole area. Private property turf, including that between the curb and the sidewalk, bushes, plants, and shrubbery are to be replaced with care. If any preservative is released on the ground, it shall be immediately cleaned-up. All containers shall be disposed of in accordance with the product label.

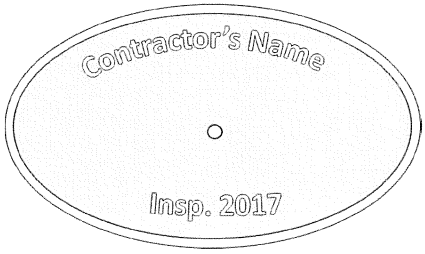
7.0 Pole Marking (Tagging): All inspected poles shall be marked with a weather proof tag identifying the work performed, CONTRACTOR's name, and the year of inspection in a fashion similar to the designations shown in the following drawings. The tagging scheme used by CONTRACTOR must be shown to OWNER's representative and approved before it is used.

Tags shall be supplied by CONTRACTOR and placed 5' to 6' above groundline on the road side of the pole, below the utility pole identification marker. If inspecting or treating a pole that has previously been inspected or treated, the tag will be attached directly below the existing tag(s).

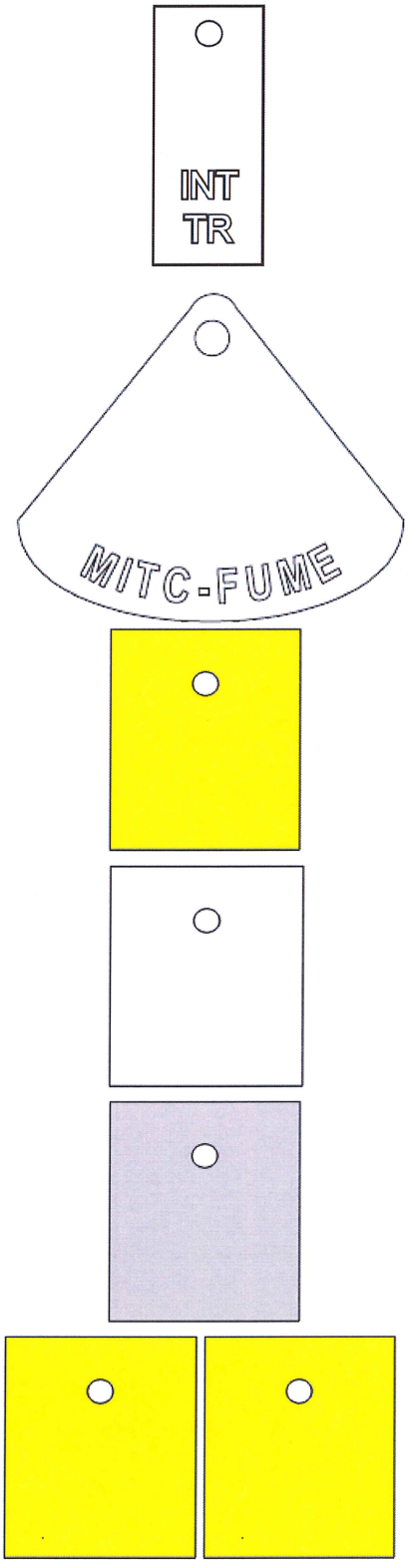
The following are illustrations of the various types of "tags" used and an explanation as to when they are used. It is important that the proper tag be used on every pole that is inspected.



This round tag represents an inspection via a full 18" excavation and treatment with an approved paste. The tag shows CONTRACTOR's name and the actual year the work is performed.



This oval tag is to be used whenever a sound and bore or partial excavate inspection takes place. The tag shows CONTRACTOR's name and the actual year the work is performed.



This tag is used whenever internal treatment is injected into a pole. This tag will be used in conjunction with one or more of the above tags depending on the type of inspection performed.

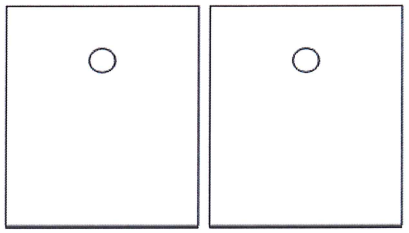
This tag is an example of a fumigant treatment tag. This tag shall be used whenever MITC-FUME® is applied to a pole. This tag will be used in conjunction with one of the above tags depending on the type of inspection performed.

One yellow reject tag is used to denote that the pole is a reinforceable reject.

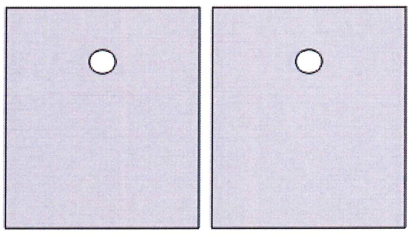
One white tag **may** be used to denote that the pole is a non-reinforceable reject.

One silver tag **may** also be used to denote that the pole is a non-reinforceable reject.

Two yellow tags are used to denote a danger or priority pole that is reinforceable.



Two white tags **may** be used to denote a priority pole that is non-reinforceable.



Two silver tags **may** also be used to denote a priority pole that is non-reinforceable.

8.0 Data Collection and Deliverable:

8.1 Data Requirements: OWNER desires to conduct a comprehensive pole inspection and maintenance program. OWNER shall advise CONTRACTOR in writing of the type of data OWNER wants collected by CONTRACTOR. The data will be delivered within a geospatial software environment for viewing, searching, and reporting.

OWNER desires to improve the overall quality and completeness of pole inspection data as a secondary objective of the project. The combination of a data viewing tool together with improved data quality will help improve OWNER's ability to manage pole life cycle costs. The importance of the data-collection effort requires that it be performed professionally by experienced field personnel using technology that ensures delivery of high-quality data.

CONTRACTOR will provide appropriate hardware, software, and project management to ensure that OWNER receives data that meets its requirements for accuracy and completeness.

8.2 Data Specifications: A CONTRACTOR-supplied or OWNER-supplied landbase that is acceptable to CONTRACTOR will be deployed by CONTRACTOR electronically to the field. A unique identifier will be created for each pole. Each pole will be placed on the digital landbase using GPS and/or relative positioning.

8.3 Data Delivery: Data collected will be delivered online in a geospatial enabled web-based application that includes both map and attribute views of the data. The online application shall provide access to reports and data queries with support of user generated search functions. Poles must be able to be searched and sorted into groups based on their condition, their attributes, their attachments (when applicable), and highlighted in a map view.

The online application shall provide a landbase backdrop that includes aerial imagery capable of being viewed at various zoom levels. CONTRACTOR's geospatial online application will be compatible with industry standard web browsers such as Windows Internet Explorer 7.0 or 8.0, or Firefox 2.0 or later. All incremental data deliveries will be updated on the geospatial online application. CONTRACTOR shall host the data in the online application, but OWNER shall retain ownership of data (see Section 8.4 for information regarding data archiving).

The geospatial online application shall provide the capability to view and download reports in Adobe PDF format. Reports shall consist of pole detail, weekly, and year-to-date summaries. CONTRACTOR's web-based application must support the ability to view all invoices, in Adobe PDF format, with the ability to relate each individual pole record with the corresponding invoice.

Data export functionality shall include the ability to export to an ESRI Personal geodatabase, Microsoft Access, or a comma delimited (Excel Spreadsheet) file format. The geospatial online application shall support the printing of map views and, if applicable, viewing of digital images.

CONTRACTOR shall demonstrate how its online application provides OWNER with a calculated Percent Remaining Strength for poles with decay (where applicable).

8.4 **Data Archiving:** CONTRACTOR will host the geospatial online application for the duration of the pole inspection project and for a maximum of 90 days after the end of the calendar year in which the project was completed. Options for additional archiving shall be made available at an additional cost. OWNER shall retain ownership of all data. Use of the geospatial online application will be governed by CONTRACTOR's online hosting agreement.

9.0 CONTRACTOR Information:

9.1 **CONTRACTOR's Policies:** Documentation of CONTRACTOR's policies for conforming to EPA, OSHA, and DOT regulations can be provided upon request. Examples may include:

- Summary of CONTRACTOR's safety manual
- Summary of CONTRACTOR's pesticide training manual and test
- Summary of CONTRACTOR's standards for safe storage of preservatives on vehicles
- Labels and SDS for all preservatives to be used
- Operating policies for CONTRACTOR's personnel to handle preservatives and disposing of empty containers used for pole treatment
- Summary of OSHA regulations regarding PPE
- Certificate of Liability Insurance

9.2 **Work Schedule:** CONTRACTOR can also supply, upon request, a schedule outlining the number of crews proposed to complete work along with start dates and completion dates.

10.0 **Invoicing:** CONTRACTOR shall prepare and furnish OWNER with a detailed invoice of the number of billable items (as defined in the Contract Documents) for the covered period and the amount due.

TABLE 1
MINIMUM GROUNDLINE EFFECTIVE CIRCUMFERENCE
(MEASURED AT POINT OF MAXIMUM DECAY)

Original Circumference of Pole (Inches)	Minimum Effective Circumference Allowed (Inches)
24	21
25	21.75
26	22.75
27	23.50
28	24.50
29	25.25
30	26.25
31	27
32	28
33	28.75
34	29.75
35	30.50
36	31.50
37	32.25
38	33.25
39	34
40	35
41	35.75
42	36.75
43	37.50
44	38.50
45	39.25
46	40
47	41
48	41.75
49	42.75
50	43.50
51	44.50
52	45.25
53	46.25
54	47
55	48
56	48.75
57	49.75
58	50.50
59	51.50
60	52.25

TERMS AND STANDARD CONDITIONS
CITY OF NORTH LITTLE ROCK, ARKANSAS

PLEASE READ CAREFULLY

1. When submitting an "Invitation to Bid," the bidder warrants that the commodities covered by the bid shall be free from defects in material and workmanship under normal use and service. In addition, bidder must deliver new commodities of the latest design and model, unless otherwise specified in the "Invitation to Bid."

2. Prices quoted are to be net process, and when an error is made in extending total prices, the City may accept the bid for the lesser amount whether reflected by extension or by the correct multiple of the unit price.

3. Discounts offered will be taken when the City qualifies for such. The beginning date for computing discounts will be the date of invoice or the date of delivery and acceptance, whichever is later.

4. When bidding other than the brand and/or model specified in the "Invitation to Bid," the brand and/or model number must be stated by that item in the "Invitation to Bid," and descriptive literature be submitted with the bid.

5. The City reserves the right to reject any and all bids.

6. The Purchasing office reserves the right to award items, all or none, or by line item(s).

7. Quality, time and probability of performance may be factors in making an award.

8. Bid quotes submitted will remain firm for 30 calendar days from bid opening date; however, the prices may remain firm for a longer period of time if mutually agreeable between bidder and the Department of Commerce and Governmental Relations.

9. Bidder must submit a completed signed copy of the front page of the "Invitation to Bid" and must submit any other information required in the "Invitation to Bid."

10. In the event a contract is entered into pursuant to the "Invitation to Bid," the bidder shall not discriminate against any qualified employee or qualified applicant for employment because of race, sex, color, creed, national origin or ancestry. The bidder must include in any and all subcontracts a provision similar to the above.

11. Sales or use tax is not to be included in the bid price, but is to be added by the vendor to the invoice billing to the City. Although use tax is not to be included in this bid, vendors are to register and pay tax direct to the Arkansas State Revenue Department.

12. Prices quoted shall be "Free on Board" (F.O.B.) to destination at designated facility in North Little Rock. Charges may not be added after the bid is opened.

13. In the event of two or more identical low bids, the contract may be awarded arbitrarily or for any reason to any of such bidders or split in any proportion between them at the discretion of the Department of Commerce and Governmental Relations.

14. Specifications furnished with this Invitation are intended to establish a desired quality or performance level, or other minimum dimensions and capacities, which will provide the best product available at the lowest possible price. Other than designated brands and/or models approved as equal to designated products shall receive an equal consideration.

15. Samples of items when required, must be furnished free, and, if not called for within 30 days from date of bid opening, will become property of the City.

16. Bids will not be considered if they are: 1. Submitted after the bid's opening time. 2. Submitted electronically or faxed I (unless authorized by Purchasing Agent).

17. Guarantees and warranties should be submitted with the bid, as they may be a consideration in making an award.

18. **CONSTRUCTION**

A. Contractor is to supply the City with evidence of having and maintaining proper and complete insurance, specifically Workman's Compensation Insurance in accordance with the laws of the State of Arkansas, Public Liability and Property Damage. All premiums and cost shall be paid by the Contractor. In no way will the City be responsible in case of accident.

B. When noted, a Certified check or bid bond in the amount of 5% of total bid shall accompany bid.

C. A Performance Bond equaling the total amount of any bid exceeding $10,000.00 must be provided for any contract for the repair, alteration or erection of any public building, public structure or public improvement (pursuant to Act 351 or 1953 as amended by Act 539 of 1979).

19. **LIQUIDATED DAMAGES** - Liquidated damages shall be assessed beginning on the first day following the maximum delivery or completion time entered on this bid form and/or provided for by the plans and specifications.

20. **AMBIGUITY IN BID** - Any ambiguity in any bid as the result of omission, error, lack of clarity or non-compliance by the bidder with specifications, instructions, and all conditions of bidding shall be construed in the light most favorable to the City.

21. The bid number should be stated on the face of the sealed bid envelope. If it is not, the envelope will have to be opened to identify.

22. Whenever a bid is sought seeking a source of supply for a specified period of time for materials and services, the quantities of usage shown are estimated ONLY. No guarantee or warranty is given or implied by the participants as to the total amount that may or may not be purchased from any resulting contracts. These quantities are for the bidders information ONLY and will be used for tabulation and presentation of bid and the participant reserves the right to increase or decrease quantities as required.

23. The City of North Little Rock reserves the right to reject any and all bids, to accept in whole or in part, to waive any informalities in bids received, to accept bids on materials or equipment with variations from specifications in those cases where efficiency of operation will not be impaired, and unless otherwise specified by the bidder, to accept any item in the bid. If unit prices and extensions thereof do not coincide, the City of North Little Rock may accept the bid for the lesser amount whether reflected by the extension or by the correct multiple of the unit price.

24. Additional information or bid forms may be obtained from:
COMMERCE DEPARTMENT, 120 Main Street, P.O. Box 5757, North Little Rock, Arkansas 72119 (501) 975-8881 www.nlr.ar.gov

Bidding documents must be submitted on or before the bid's opening date and time. Unless noted, sealed bids must be submitted to the Commerce Department at 120 Main Street, North Little Rock, AR 72114 or PO Box 5757, North Little Rock, AR 72119