



REQUEST FOR PROPOSALS

for

PROFESSIONAL WATER TANK ASSET
MAINTENANCE PROGRAM

JUNE 2015

**REQUEST FOR PROPOSAL
FOR
CITY OF SULLIVAN, MISSOURI**

RFP # 15006

CITY OF SULLIVAN, MISSOURI will receive proposals from qualified firms to contract for a long term perpetual full service professional water tank asset maintenance program, which shall include renovations and repairs, active mixing systems, bio-film removal, and inspections on **four [4]** elevated water storage tanks until **10:00 AM** on **Friday, July 10, 2015**. This proposal shall be for both the upfront renovations and long term maintenance. Parties interested in this Request for Proposal may obtain a copy of the RFP from the:

CITY OF SULLIVAN, MISSOURI
ATTN: Robert Schaffer, PE, CFM
210 West Washington
Sullivan, MO 63080

City Officials reserve the right to waive formalities in any proposal, and to reject any or all proposals in whole or in part with or without cause and/or to accept the proposal that in its judgment will be in the best interest of CITY OF SULLIVAN, MISSOURI irrespective of cost. The City specifically reserves the right to reject any conditional proposal and will normally reject those which make it impossible to determine the intent of the proposal.

All information outlined in the RFP, along with any other pertinent facts necessary for a proper evaluation of this proposal, should be delivered to the CITY OF SULLIVAN, MISSOURI, at the address above prior to the hour and date designated to the attention of Jan Koch, City Clerk. Proposals shall be submitted in duplicate, sealed, and mailed

or delivered in person by **10:00 AM on Friday, July 10, 2015** at which time said proposals will be recorded and turned over to City Officials for careful evaluation. The outside of the proposal package shall be marked with the following:

R.F.P. NUMBER: **15006**

**FULL SERVICE PROFESSIONAL WATER TANK ASSET MAINTENANCE
PROGRAM**

Any additional information necessary can be obtained by directing calls to:

CITY OF SULLIVAN, MISSOURI
ATTN: Robert Schaffer, PE, CFM
210 West Washington
Sullivan, MO 63080
573-468-8965

and reference R.F.P. # **15006**.

GENERAL INFORMATION

PURPOSE

CITY OF SULLIVAN, MISSOURI is soliciting proposals from qualified firms for a Full Service Professional Water Tank Asset Maintenance Program to professionally maintain the City's four water storage tanks, listed below, on an annual basis in order to keep the long-term life cycle costs of ownership a minimum and comply with GASB 34 requirements. This program shall include, but not be limited to, inspections, rehabilitation, repair, washouts, visual inspections and repainting of **four (4)** water tanks as follows:

500,000 Gallon Elevated – Well #10 Glaser Road Tower

250,000 Gallon Elevated – Mattox Drive/City Lake Park Tower

250,000 Gallon Elevated – Well No 3/Water Department Tower

250,000 Gallon Elevated – Well No 4/SPMF Tower

INTENT

It is the intent of **The City of Sullivan** to solicit a long term perpetual full service maintenance program with upfront renovation from a firm that will provide an integrated maintenance and professional management service for water storage tanks which includes: engineering services (specific to the maintenance of existing water storage tank covered by this RFP), professional asset management, all inspection services and all repair and renovation services. The proposal shall address all of the information outlined herein. Additionally, each prospective firm may include such other information as he or she deems pertinent to the proper evaluation of their proposal. Typewritten proposals only shall be submitted in duplicate, bound to create a single document containing all required material.

It is the responsibility of each prospective firm interested in this proposal to inspect the tanks prior to the submission of their proposal. All bidders are responsible for obtaining any information pertinent to the proper evaluation of the tanks.

Contact Mr. Robert Schaffer to make inspection of the tank.

**The Owner reserves the right to take a period not to exceed sixty (60) days to examine and evaluate all proposals before a decision is made and announced.*

Each firm is responsible for testing the current materials in place on the tanks for hazardous content. All work must comply with OSHA Confined Space Entry, Missouri Department of Natural Resources, A.W.W.A., and N.S.F. Regulations. Proposals will be considered, and should be written to provide the contracted maintenance.

Each firm will be responsible for E-Verify, OSHA 10-Hour, and prevailing wage on this project. The City of Sullivan has towers in both Franklin and Crawford Counties for the wage rates.

ITEMS TO BE ADDRESSED IN RFP

Each firm submitting a proposal shall include information on all of the following items. Additionally, each firm may submit other information as deemed appropriate for the proper evaluation of the firm's proposal.

- A. Each proposal shall include an informative narrative report introducing your firm that should include the following information:
 - a. Company Name
 - b. Company Address
 - c. Key Contact Name
 - d. Key Contact Title
 - e. Key Contact Phone
 - f. Key Contact E-mail

- g. Key Contact Address
- h. Describe the number of years Company has been in business.
- i. Describe the major types of services or work provided by Company.
- j. Describe the ownership of Company, publicly traded, etc.
- k. Describe Company's current business model and Corporate philosophy.
- l. Describe Company's supplier diversity classification.
- m. Describe Company's efforts to include supplier diversity in its own supply chain.
- n. Describe any Company bankruptcy during the past 5 years.
- o. Describe any major litigation Company is involved in.
- p. Describe the amount of revenue derived from top 5 customers
- q. Describe Company's efforts to utilize long term contracts to control costs.
- r. For each type of service listed below, indicate the number of projects performed in 2013 and 2014.
 - i. Tank Inspections
 - ii. Total Tank Painting Projects
 - iii. Tank Painting Projects with Lead Abatements
 - iv. Tank Painting Projects under your Management Program
- s. Describe the percentage of sales from tank asset management programs.
- t. Copy of the State Contractor's License **must be** included in the response to the RFP.

B. Provide a list of all systems that are currently being maintained by the Company in the categories listed below. Include the Name of the System, Person of Contact, Telephone Number of Contact, and Number of Tank(s) in the System under contract. **A minimum of ten [10] Missouri systems must be submitted as a minimum to be considered. Any company with less than ten (10) existing Missouri maintenance programs will not be considered.** Any company who has not been providing these services for more than ten (10) years will not be considered.

- a. Describe the number of tank asset maintenance programs.
- b. Describe the oldest currently active asset management contract.
- c. Please describe the following customers/references:
 - i. Top 5 largest customers
 - ii. 5 Longest existing contracts
 - iii. All Local existing contracts

- C. Each proposal shall include information regarding the Company's abilities to support the CITY OF SULLIVAN, MISSOURI during the execution of this asset maintenance program, including the following:
- a. Describe the facilities that would support the Municipal Utility, if awarded the contract. (Name, Address, Capabilities)
 - b. Describe the capabilities and functions of each of the Company's departments listed below and how they relate to supporting the Municipal Utility.
 - i. Management
 - ii. Operations
 - iii. Project Management
 - iv. Customer Service
 - v. Engineering
 - vi. Accounting
 - vii. Information Technology
 - viii. Any Others
 - c. Employees
 - i. Number of direct employees
 - ii. Number of indirect or subcontract employees
 - iii. Describe the Company's workforce, union or non-union.
 - iv. Describe any work stoppages in the last three years.
 - v. List the number of Professional Engineers on staff.
 - vi. List the number of Structural Engineers on staff.
 - vii. List the number of NACE Certified inspectors on staff.
 - viii. List the number of SSPC Certified inspectors on staff.
 - ix. List any other applicable licensed or certified personnel.
 - d. Painting Crews
 - i. Describe the average number of people on a tank renovation crew.
 - ii. Describe the average years of experience for a tank renovation crew member.
 - iii. Describe whether tank renovation crew members are direct employees or subcontract employees.
 - iv. List the subcontractors that you may utilize for the execution of this contract.
 - e. Repair Crews
 - i. Describe the average number of people on a service crew.
 - ii. Describe the average years of experience for service crew member.

iii. Describe whether service crew members are direct employees or subcontract employees.

f. Inspectors

i. Describe average years of experience for an inspector.

ii. Describe whether inspectors are direct employees or subcontract employees.

D. Proposals shall include the details of appropriate work and renovation plan for the tank. This shall include but not be limited to, the evaluation of the tank with particular regard to the internal and external structural condition of the tank and any of its appurtenances, need for painting and condition of the foundation.

a. Describe your currently available tank asset management program and the services provided.

b. Describe what is included and excluded from your standard contract.

c. Describe the typical renovation project.

d. Describe the methods for handling and disposing of hazardous wastes.

e. Describe the frequency and degree of inspections and cleaning procedures.

f. Describe the risks to the City in regards to your standard contract, ie price, limited liability, budget timing, etc.

g. Describe your tank asset maintenance program compliance to GASB requirements.

h. Describe how your tank asset maintenance program would assist with the Partnership for Safe Drinking Water certifications.

E. Proposal shall also specify the frequency and degree of inspection and cleanout services the Owner could expect under the terms of the maintenance contract.

The tanks shall be inspected annually with a complete report provided to the CITY OF SULLIVAN, MISSOURI. Every two (2) years, the tanks shall receive NSF approved chemical bio-film removal, washouts and disinfection.

Additionally, each perspective firm should address the requirements to assume responsibility for all corrections and repairs to the tanks necessitated by acts of vandalism or through normal deterioration.

F. Each proposer shall submit a detailed insurance certificate. This insurance certificate should detail all levels of insurance that may be required by CITY OF SULLIVAN, MISSOURI to accept a contractual obligation which shall be at a minimum provided by an insurance company which carries an AM Best rating of A- or better. In addition, all firms shall provide a detailed certificate which indicates they carry Pollution Liability Insurance in the amount of no less than \$10,000,000 of coverage as well as Professional Liability insurance of no less than \$2,000,000 and cover damages from the errors or omissions in the performance of professional engineering duties. Said pollution liability insurance must not be job specific but "blanket" coverage. A sample copy of this insurance certificate **must be** attached to the last page of this RFP. The CITY OF SULLIVAN, MISSOURI must be named as additional insured on certificate to be provided prior to start of work.

Insurance coverage specified herein constitutes the minimum requirements and said requirements shall in no way lessen or limit the liability of the Firm under the terms of the Contract. The Firm shall procure and maintain at their own expense any additional kinds and amounts of insurance that, in their own judgment, may be necessary for their proper protection in the prosecution of the work. The Firm shall carry insurance as prescribed herein and all policies shall be with companies satisfactory to City of Sullivan.

If a part of this Contract is sublet, the Firm shall require each sub-firm to carry insurance of the same kinds and in like amounts as carried by the prime Firm.

Certificates of insurance shall state that thirty (30) days written notice will be given to City Officials before the policy is canceled or non-renewed. No Firm or sub-firm will be allowed to start any work on this contract until certificates of all insurance required herein are filed and approved by City Officials. The certificates shall show the type, amount, class of operations covered, effective dates, and the dates of expiration of policies. In addition, the certificates shall name City of Sullivan as additional insured. The Firm shall secure and maintain in effect for the period of the Contract and pay all premiums for the following kinds of insurance.

Workman's Compensation and Employer's Liability Insurance

This insurance shall protect the Firm against all claims under applicable State Workmen's Compensation Laws. The liability limits shall not be less than the required Statutory Limits for Workmen's Compensation and Employer's Liability to include Sovereign Immunity Limits for Missouri Public entities per Section 537.610 RSMo.

Firm's Comprehensive General Liability Insurance

This insurance shall cover all operations in connection with the performance of this Contract in amounts not less than the following: Coverage in the amount of \$1,000,000 for each occurrence and \$2,000,000 general aggregate and \$2,000,000 products/completed operations aggregate for claims by third parties for bodily injury, property damage or personal injury. Coverage shall be provided on an occurrence form, not claims made. No exclusions or limitations related to height of work will be allowed.

The Comprehensive General Liability policy carried by both the prime and the sub-firms shall be maintained by the contractor for at least two years after completion of services.

Automotive Liability

The Firm shall maintain automobile liability insurance in the amount of not less than \$1,000,000 combined single limit for bodily injury or property damage liability to protect him from any and all claims arising from the use of the following:

- (1) Firm's own automobile and trucks.
- (2) Hired/leased or rented automobiles and trucks.

The aforementioned is to cover use of automobiles and trucks on and off the site of the project.

Owner's Protective Liability Policy

The Firm shall maintain Owner's Protective Liability Insurance with City of Sullivan, and their servants, agents, and employees as insured in amounts not less than \$1,000,000 each occurrence and \$2,000,000 general aggregate.

Builder's Risk Insurance

Until the project is completed and is accepted by the Owner, the Firm is required to maintain Builder's Risk Insurance adequate to fully cover the insurable portion of the project for the benefit of the Owner, the prime Firm, and sub-firms as their interest may appear.

Umbrella Liability

Umbrella or Excess Liability police in amounts of at least \$2,000,000 shall be provided.

- G. Each proposal should include a detailed contract document for the tanks to be included in this RFP. The specific timeframe for the contract document shall be limited to one [1] year at which time the contract shall be automatically renewed upon payment of the annual base fee. Within the contract document shall be a specific cancellation clause, which indicates procedures that CITY OF SULLIVAN, MISSOURI may take for cancellation of the contract.
- H. No short-term multi-year contracts (3-year, 5-year, 10-year) will be considered. **The firm may never cancel the contract for any reason other than non-payment by CITY OF SULLIVAN, MISSOURI.** The contract must include a detailed fee schedule with a not to exceed inflationary adjustment factor so the CITY OF SULLIVAN, MISSOURI can calculate future maintenance cost for an indefinite time. All future work shall be covered by the annual fee with no extra charges for future work.
- I. Proposal shall identify the method of compliancy with the Governmental Accounting Standards Board Statement 34 "Asset Management System". The method of compliancy must meet the GASB 34 Asset Impairment Modified Approach requirements and include specific interior and exterior coating renovation cycles, inspection cycles, measurement scales, and condition ranking. The Asset Management System detailed in the proposal must permit the CITY OF SULLIVAN, MISSOURI to justifiably categorize their water storage vessels as non-depreciating Capital Infrastructure Assets.
- J. Any permits, approvals, etc. required by the State of MISSOURI to accomplish all current and future work shall be the responsibility of the successful proposer.

K. Each bidder shall submit a formal **Safety Program** stating company policy on all safety procedures. Document procedures to include workers protection, confined space, and general safety procedures.

SCOPE

A detailed proposal shall adhere to the specifications given in this Request for Proposal. All surface preparation and coatings specified should be strictly *adhered* to; there will be no variance. These specifications are identified in this Request for Proposal as tank renovation specifications. In addition, all rules and regulations of the **MISSOURI Department of NATURAL RESOURCES** will be strictly adhered to. Additionally, a method for determining the scheduling for future repainting should be addressed for the tank. All permits, approvals, etc., required by the **MISSOURI Department of NATURAL RESOURCES** will be the responsibility of the successful firm.

- A. Visual Inspection Service (Alternating Every Other Year)
 - a. Engineering inspection and preventive maintenance.
 - b. Any needed repairs/touchup.
 - c. Provide emergency repair service.
 - d. Ensure tank complies with all federal and state regulations.
 - e. Maintain as per the maintenance program.

- B. Chemical Clean Washout Inspection Service-(Alternating Every Other Year)
 - a. NSF Approved Chemical Bio Film Removal
 - b. Washout, disinfect, and inspect the tank.
 - c. Any needed repairs/touchup.
 - d. Provide emergency repair service.
 - e. Ensure Tank complies with all federal and state regulations.
 - f. Maintain as per the maintenance program

YEAR 1 (2015) Well No 4 Tower

A. INTERIOR

- a. The complete interior (100%) shall be abrasive blast cleaned to SSPC-SP No. 10 "Near White" finish.
- b. After abrasive cleaning, all surfaces shall be cleaned of any dust residue or foreign debris.
- c. A high build epoxy liner manufactured by the Tnemec Company shall be applied as follows:
 - i. Primer Coat: One [1] complete coat of Zinc shall be applied to achieve a dry film thickness of 3 to 5 mils.
 - ii. Intermediate Coat: One [1] complete coat of Tnemec N140 Series Epoxy shall be applied to achieve a dry film thickness of 3 to 5 mils.
 - iii. Finish Coat: One [1] complete finish coat of Tnemec N140 Series Epoxy shall be applied to achieve a dry film thickness of 4 to 6 mils.
 - iv. Contrasting Color: Each coat of epoxy paint shall be of contrasting color.
 - v. Stripe Coat: One additional coat of epoxy shall be applied by brush and roller to all weld seams.
- d. Caulk Roof Seams
- e. After the liner has properly cured, the interior surfaces shall be disinfected per A.W.W.A. Spray Method No. 2 (200 PPM).
- f. The spent abrasive media shall be tested per TCLP-(8) Heavy Metals as mandated by the State.
- g. Once the tests results confirm the non-hazardous status of the wastes, the spent abrasive shall be disposed of properly.
- h. The Tanks shall be sealed and made ready for service.
- i. Install PAX PWM-200 per specifications (Addendum A)

B. EXTERIOR

- a. All exterior surfaces must be pressure washed with a minimum of 4,000 P.S.I. to remove any surface contamination.
- b. All rusted areas must be Hand/Power tool cleaned per SSPC-SP2, SP3 cleaning methods.
- c. All rusted or bare areas must be spot primed with a rust inhibitive metal primer.
- d. One (1) full intermediate coat of a Tnemec Series coating shall be applied to complete exterior surfaces (100%).
- e. One (1) full finish coat of a Tnemec Series coating shall be applied to complete exterior surfaces (100%).
- f. Re-Trace/Replace Logo on two sides, (East side/West side).
- g. Paint Concrete Foundation

C. REPAIRS

- a. Install Overflow pipe screen and flapper assembly
- b. Install MO DNR compliant Roof Vent
- c. Install Locking Ladder Gate
- d. Install balcony mid-rail
- e. Install cable type safety climb device on all exterior ladder sections
- f. Remove Float existing float system
- g. Install 24" diameter riser manway
- h. Raise Top Rail of Balcony railing to 42".
- i. Coat foundations
- j. Secure Roof Ladder

YEAR 1 (2015) 500,000 Gallon Glaser Road Tank

A. INTERIOR

- a. The complete interior (100%) shall be abrasive blast cleaned to SSPC-SP No. 10 "Near White" finish.
- b. After abrasive cleaning, all surfaces shall be cleaned of any dust residue or foreign debris.
- c. A high build epoxy liner manufactured by the Tnemec Company shall be applied as follows:
 - i. Primer Coat: One [1] complete coat of Zinc shall be applied to achieve a dry film thickness of 3 to 5 mils.
 - ii. Intermediate Coat: One [1] complete coat of Tnemec N140 Series Epoxy shall be applied to achieve a dry film thickness of 3 to 5 mils.
 - iii. Finish Coat: One [1] complete finish coat of Tnemec N140 Series Epoxy shall be applied to achieve a dry film thickness of 4 to 6 mils.
 - iv. Contrasting Color: Each coat of epoxy paint shall be of contrasting color.
 - v. Stripe Coat: One additional coat of epoxy shall be applied by brush and roller to all weld seams.
- d. Caulk Roof Seams
- e. After the liner has properly cured, the interior surfaces shall be disinfected per A.W.W.A. Spray Method No. 2 (200 PPM).
- f. The spent abrasive media shall be tested per TCLP-(8) Heavy Metals as mandated by the State.
- g. Once the tests results confirm the non-hazardous status of the wastes, the spent abrasive shall be disposed of properly.
- h. The Tanks shall be sealed and made ready for service.
- i. Install PAX PWM-200 per specifications (Addendum A)
- j. All interior "dry" surfaces must be prepped the same as the exterior surfaces.

- k. Interior “dry” surfaces shall have one [1] spot coat of compatible coating applied on required surfaces and then one [1] full finish coat of a compatible coating applied to the entire surface (100%)

B. EXTERIOR

- a. All exterior surfaces must be pressure washed with a minimum of 4,000 P.S.I. to remove any surface contamination.
- b. All rusted areas must be Hand/Power tool cleaned per SSPC-SP2, SP3 cleaning methods.
- c. All rusted or bare areas must be spot primed with a rust inhibitive metal primer.
- d. One (1) full intermediate coat of a Tnemec Series coating shall be applied to complete exterior surfaces (100%).
- e. One (1) full finish coat of a Tnemec Series coating shall be applied to complete exterior surfaces (100%).
- f. Re-Trace Logos on East side/West side of water tower. School logo/EAGLES text as coordinated with the school.
- g. Paint Concrete Foundation

C. REPAIRS

- a. Repair Roof Vent
- b. Install cable type safety climb device on all exterior ladder sections
- c. Coat foundations

YEAR 1 (2016) 250,000 Elevated-Mattox/City Park Tower

A. INTERIOR

- a. The complete interior (100%) shall be abrasive blast cleaned to SSPC-SP No. 10 “Near White” finish.
- b. After abrasive cleaning, all surfaces shall be cleaned of any dust residue or foreign debris.
- c. A high build epoxy liner manufactured by the Tnemec Company shall be applied as follows:
 - i. Primer Coat: One [1] complete coat of Zinc shall be applied to achieve a dry film thickness of 3 to 5 mils.
 - ii. Intermediate Coat: One [1] complete coat of Tnemec N140 Series Epoxy shall be applied to achieve a dry film thickness of 3 to 5 mils.
 - iii. Finish Coat: One [1] complete finish coat of Tnemec N140 Series Epoxy shall be applied to achieve a dry film thickness of 4 to 6 mils.
 - iv. Contrasting Color: Each coat of epoxy paint shall be of contrasting color.

- v. Stripe Coat: One additional coat of epoxy shall be applied by brush and roller to all weld seams.
- d. Caulk Roof Seams
- e. After the liner has properly cured, the interior surfaces shall be disinfected per A.W.W.A. Spray Method No. 2 (200 PPM).
- f. The spent abrasive media shall be tested per TCLP-(8) Heavy Metals as mandated by the State.
- g. Once the tests results confirm the non-hazardous status of the wastes, the spent abrasive shall be disposed of properly.
- h. The Tanks shall be sealed and made ready for service.
- i. Install PAX PWM-100 per specifications (Addendum A)

B. EXTERIOR

- a. All exterior surfaces must be pressure washed with a minimum of 4,000 P.S.I. to remove any surface contamination.
- b. All rusted areas must be Hand/Power tool cleaned per SSPC-SP2, SP3 cleaning methods.
- c. All rusted or bare areas must be spot primed with a rust inhibitive metal primer.
- d. One (1) full finish coat of a Tnemec Series coating shall be applied to complete exterior surfaces (100%).
- e. Re-Trace Logo on North side of tower.
- f. Paint Concrete Foundation

C. REPAIRS

- a. Install Overflow pipe screen and flapper assembly
- b. Install MO DNR compliant Roof Vent
- c. Install Locking Ladder Gate
- d. Install cable type safety climb device on all exterior ladder sections
- e. Install 24" diameter riser manway
- f. Secure Roof Ladder.
- g. Coat foundations

YEAR 1 (2016) 250,000 Gallon Elevated- Well No 3 Tower

A. INTERIOR

- a. The complete interior (100%) shall be abrasive blast cleaned to SSPC-SP No. 10 "Near White" finish.
- b. After abrasive cleaning, all surfaces shall be cleaned of any dust residue or foreign debris.
- c. A high build epoxy liner manufactured by the Tnemec Company shall be applied as follows:
 - i. Primer Coat: One [1] complete coat of Zinc shall be applied to achieve a dry film thickness of 3 to 5 mils.
 - ii. Intermediate Coat: One [1] complete coat of Tnemec N140 Series Epoxy shall be applied to achieve a dry film thickness of 3 to 5 mils.
 - iii. Finish Coat: One [1] complete finish coat of Tnemec N140 Series Epoxy shall be applied to achieve a dry film thickness of 4 to 6 mils.
 - iv. Contrasting Color: Each coat of epoxy paint shall be of contrasting color.
 - v. Stripe Coat: One additional coat of epoxy shall be applied by brush and roller to all weld seams.
- d. Caulk Roof Seams
- e. After the liner has properly cured, the interior surfaces shall be disinfected per A.W.W.A. Spray Method No. 2 (200 PPM).
- f. The spent abrasive media shall be tested per TCLP-(8) Heavy Metals as mandated by the State.
- g. Once the tests results confirm the non-hazardous status of the wastes, the spent abrasive shall be disposed of properly.
- h. The Tanks shall be sealed and made ready for service.
- i. Install PAX PWM-100 per specifications (Addendum A)

B. EXTERIOR

- a. All exterior surfaces must be pressure washed with a minimum of 4,000 P.S.I. to remove any surface contamination.
- b. All rusted areas must be Hand/Power tool cleaned per SSPC-SP2, SP3 cleaning methods.
- c. All rusted or bare areas must be spot primed with a rust inhibitive metal primer.
- d. One (1) full intermediate coat of a Tnemec Series coating shall be applied to complete exterior surfaces (100%).
- e. One (1) full finish coat of a Tnemec Series coating shall be applied to complete exterior surfaces (100%).
- f. Re-Trace Logo on North side of tower
- g. Paint Concrete Foundation

C. REPAIRS

- a. Install MO DNR compliant Roof Vent
- b. Install Locking Ladder Gate
- c. Install balcony mid-rail
- d. Install cable type safety climb device on all exterior ladder sections
- e. Remove Float existing float system
- f. Install 24" diameter riser manway
- g. Weld secure dome ladder
- h. Raise Top Rail of Balcony railing to 42".
- i. Coat foundations

YEAR 1 (2024) Well No 4 Tower

A. INTERIOR

- a. The complete interior (100%) shall be abrasive blast cleaned to SSPC-SP No. 10 "Near White" finish.
- b. After abrasive cleaning, all surfaces shall be cleaned of any dust residue or foreign debris.
- c. A high build epoxy liner manufactured by the Tnemec Company shall be applied as follows:
 - i. Primer Coat: One [1] complete coat of Zinc shall be applied to achieve a dry film thickness of 3 to 5 mils.
 - ii. Intermediate Coat: One [1] complete coat of Tnemec N140 Series Epoxy shall be applied to achieve a dry film thickness of 3 to 5 mils.
 - iii. Finish Coat: One [1] complete finish coat of Tnemec N140 Series Epoxy shall be applied to achieve a dry film thickness of 4 to 6 mils.
 - iv. Contrasting Color: Each coat of epoxy paint shall be of contrasting color.
 - v. Stripe Coat: One additional coat of epoxy shall be applied by brush and roller to all weld seams.
- d. Caulk Roof Seams
- e. After the liner has properly cured, the interior surfaces shall be disinfected per A.W.W.A. Spray Method No. 2 (200 PPM).
- f. The spent abrasive media shall be tested per TCLP-(8) Heavy Metals as mandated by the State.
- g. Once the tests results confirm the non-hazardous status of the wastes, the spent abrasive shall be disposed of properly.
- h. The Tanks shall be sealed and made ready for service.

B. EXTERIOR

- a. All exterior surfaces must be pressure washed with a minimum of 4,000 P.S.I. to remove any surface contamination.
- b. All rusted areas must be Hand/Power tool cleaned per SSPC-SP2, SP3 cleaning methods.
- c. All rusted or bare areas must be spot primed with a rust inhibitive metal primer.
- d. One (1) full intermediate coat of a Tnemec Series coating shall be applied to complete exterior surfaces (100%).
- e. One (1) full finish coat of a Tnemec Series coating shall be applied to complete exterior surfaces (100%).
- f. Re-Trace Logo
- g. Paint Concrete Foundation

YEAR 1 (2024) 500,000 Gallon Glaser Road Tank

D. INTERIOR

- a. The complete interior (100%) shall be abrasive blast cleaned to SSPC-SP No. 10 "Near White" finish.
- b. After abrasive cleaning, all surfaces shall be cleaned of any dust residue or foreign debris.
- c. A high build epoxy liner manufactured by the Tnemec Company shall be applied as follows:
 - i. Primer Coat: One [1] complete coat Zinc shall be applied to achieve a dry film thickness of 3 to 5 mils.
 - ii. Intermediate Coat: One [1] complete coat of Tnemec N140 Series Epoxy shall be applied to achieve a dry film thickness of 3 to 5 mils.
 - iii. Finish Coat: One [1] complete finish coat of Tnemec N140 Series Epoxy shall be applied to achieve a dry film thickness of 4 to 6 mils.
 - iv. Contrasting Color: Each coat of epoxy paint shall be of contrasting color.
 - v. Stripe Coat: One additional coat of epoxy shall be applied by brush and roller to all weld seams.
- d. Caulk Roof Seams
- e. After the liner has properly cured, the interior surfaces shall be disinfected per A.W.W.A. Spray Method No. 2 (200 PPM).
- f. The spent abrasive media shall be tested per TCLP-(8) Heavy Metals as mandated by the State.
- g. Once the tests results confirm the non-hazardous status of the wastes, the spent abrasive shall be disposed of properly.
- h. The Tanks shall be sealed and made ready for service.

E. EXTERIOR

- a. All exterior surfaces must be pressure washed with a minimum of 4,000 P.S.I. to remove any surface contamination.
- b. All rusted areas must be Hand/Power tool cleaned per SSPC-SP2, SP3 cleaning methods.
- c. All rusted or bare areas must be spot primed with a rust inhibitive metal primer.
- d. One (1) full intermediate coat of a Tnemec Series coating shall be applied to complete exterior surfaces (100%).
- e. One (1) full finish coat of a Tnemec Series coating shall be applied to complete exterior surfaces (100%).
- f. Re-Trace Logo
- g. Paint Concrete Foundation

YEAR 1 (2025) 250,000 Elevated-Mattox/City Park Tower

D. INTERIOR

- a. The complete interior (100%) shall be abrasive blast cleaned to SSPC-SP No. 10 "Near White" finish.
- b. After abrasive cleaning, all surfaces shall be cleaned of any dust residue or foreign debris.
- c. A high build epoxy liner manufactured by the Tnemec Company shall be applied as follows:
 - i. Primer Coat: One [1] complete coat of Zinc shall be applied to achieve a dry film thickness of 3 to 5 mils.
 - ii. Intermediate Coat: One [1] complete coat of Tnemec N140 Series Epoxy shall be applied to achieve a dry film thickness of 3 to 5 mils.
 - iii. Finish Coat: One [1] complete finish coat of Tnemec N140 Series Epoxy shall be applied to achieve a dry film thickness of 4 to 6 mils.
 - iv. Contrasting Color: Each coat of epoxy paint shall be of contrasting color.
 - v. Stripe Coat: One additional coat of epoxy shall be applied by brush and roller to all weld seams.
- d. Caulk Roof Seams
- e. After the liner has properly cured, the interior surfaces shall be disinfected per A.W.W.A. Spray Method No. 2 (200 PPM).
- f. The spent abrasive media shall be tested per TCLP-(8) Heavy Metals as mandated by the State.
- g. Once the tests results confirm the non-hazardous status of the wastes, the spent abrasive shall be disposed of properly.
- h. The Tanks shall be sealed and made ready for service.

E. EXTERIOR

- a. All exterior surfaces must be pressure washed with a minimum of 4,000 P.S.I. to remove any surface contamination.
- b. All rusted areas must be Hand/Power tool cleaned per SSPC-SP2, SP3 cleaning methods.
- c. All rusted or bare areas must be spot primed with a rust inhibitive metal primer.
- d. One (1) full finish coat of a Tnemec Series coating shall be applied to complete exterior surfaces (100%).
- e. Re-Trace Logo
- f. Paint Concrete Foundation

YEAR 1 (2026) 250,000 Gallon Elevated- Well No 3 Tower

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Warranty/Maintenance Responsibilities

All materials, parts, equipment, and labor shall be warrantied and maintained for the duration of this contract. This warranty shall include up to full replacement of those materials, parts, and equipment supplied within the scope of this contract. This warranty shall include the mixer and associated control panel for the life of the contract, include full replacement, if needed.

AFFIDAVIT

I, _____, being an authorized representative of the firm
of _____, located in the City of
_____, State _____, Zip Code _____, Phone
_____, have read and understood the contents of the formal proposal and
hereby submit our proposal accordingly as of this date _____.

Signature of Authorized Representative

Attest

ADDENDUM A

SUBMERSIBLE MIXER SECTION 11730

PART 1 – GENERAL

1.1 SCOPE

- A. This section covers submersible tank mixing systems up to 0.5 HP in size intended for continuous use while submersed in potable water storage tanks. Each mixer shall have the ability to function continuously on a year-round basis, regardless of drain and fill cycles. Each mixer shall consist of a low-voltage, water-filled submersible motor, an impeller and a non-submersible control center that houses all control electronics.

1.2 THE REQUIREMENT

- A. CONTRACTOR shall furnish and install submersible mixing system together with all drives, motors, controls, and accessories necessary for a complete and operable system.
- B. UTILITY shall furnish electrical conduit with 110-120 VAC, GFCI-protected disconnect switch or circuit breaker up to the point of installation of the mixing system control center. UTILITY shall also provide conduit from control center to tank penetration for submersible motor cable and penetration through tank for same cable. UTILITY may choose to have CONTRACTOR do this work at additional charge.

1.3 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. Comply with the applicable reference specifications as specified in the General Requirements

1.4 CONTRACTOR SUBMITTALS

- A. NSF Certification
 - 1. Copies of the NSF-61 certified listing for all material being placed inside the tank and headspace, including the motor power cable.
- B. Installation, Operations, and Maintenance Manuals shall be obtained from the equipment manufacturer and submitted. The following sections shall be included:
 - 1. General equipment specifications and data sheets
 - 2. Installation, start-up, operation, and maintenance instructions
 - 3. Factory-recommended maintenance schedule and list of recommended spare parts
 - 4. Wiring diagrams specifying what electrical wiring needs to be done onsite during and prior to the installation, and by which responsible party
 - 5. List of equipment or tooling necessary for diagnostics, trouble-shooting, repair or general maintenance

1.5 QUALITY ASSURANCE

- A. Each mixing system shall be tested prior to deployment according to standard engineering practices at the factory testing facilities. Certification of this completed testing shall accompany mixer installation documentation.

1.6 WARRANTY

- A. Warranty does not cover damage due to: (i) lightning, flood or other acts of nature, or failure of or inappropriate application of peripheral devices including lightning or surge protectors; (ii) negligence of Buyer or any third party; (iii) vandalism or any other misuse or mistreatment of the product; or (iv) installation by non-licensed contractor. Lightning protection is recommended in areas historically prone to lightning AND is the responsibility of the Buyer for proper installation in accordance with local, state, and national code requirements. Warranty is perpetual on all units and labor during the life of the maintenance contract.

PART 2 – PRODUCTS

2.1 PERFORMANCE

- A. Based on models validated and/or calibrated with experimental data from laboratory-scale and real scale representative systems for similarly-sized reservoirs, manufacturer shall show mixing system shall have an output flow-rate that is equal to, or larger than, the following:
 - 1. For tanks larger than 500,000 gallons in volume, mixer shall output at least 10,000 GPM
- B. In addition, mixing system shall completely mix reservoir according to the following minimum performance requirements. These requirements can be measured and validated after installation by operators with readily-available tools such as temperature probes and total chlorine grab samplers.
 - 1. Temperature Uniformity

For tanks larger than 80 feet in height or 500,000 gallons in volume: All temperatures shall converge to within 0.2°C within 72 hours after mixer is installed and activated. During continuous operation of the mixer, all temperatures will converge to within 0.2°C at least once every 24 hours.
 - 2. Disinfectant Residual Uniformity

For tanks larger than 80 feet in height or 500,000 gallons in volume: Disinfectant residual within top five feet of tank and bottom five feet of tank will converge to within 0.20 ppm within 7 days after mixer is installed and activated. During continuous operation of the mixer, disinfectant residual will converge to within 0.20 ppm at least once every 72 hours.

2.2 GENERAL

- A. Mixing system consists of an impeller mounted on a submersible motor and supported approximately three feet in height from the tank floor in order for it to launch a jet of water from the bottom of the tank up toward the surface of the water. Floating devices shall not be acceptable. Mixer duty cycle shall be variable with the size and volume of the tank. Mixer control and operation shall be independent of tank drain and fill cycles to ensure constant mixing. Wet-side of Mixer shall weigh less than 75 pounds (~34 kg) and dry-side shall weigh less than 50 pounds (~22 kg). Both wet-side and dry-side shall be able to be hoisted, installed, and/or removed by on-site personnel without additional equipment needed, and so

that there is no crush hazard or entanglement hazard present, and so that weight of mixer on tank floor does not cause damage to interior coating.

- B. Mixing system active components shall be elevated at a minimum of 18 inches above tank floor to avoid disturbing accumulated tank sediment or entraining particles and causing accelerated wear of moving parts.
- C. Power source for mixer shall be 110VAC grid power to allow unit to continue 24/7 operation where necessary.

2.3 CONSTRUCTION

- A. Components – wet-side: shall be NSF/ANSI Standard 61 certified.

Equipment entering tank shall not adhere to, scratch, or otherwise cause damage to internal tank coating or put undue stress on the materials of the tank construction. Equipment shall fit through a standard hatch of size 18x18 or larger. UTILITY may prefer to puncture side-wall or ceiling of tank (in place of puncturing the hatch-way) to allow motor cable entry into the tank for ease of installation and protection against freezing/ice damage.

Each submersible mixer shall consist of the following components, regardless of the power source selected:

- 1. Impeller
 - AISI Type 316 Stainless Steel
 - Balanced to within 0.5 gram-inches
 - Passivated per ASTM A380 to minimize corrosion
 - Not more than 8 inches in overall height
 - Not more than 4.5 inches in diameter
 - Not more than 2.2 lbs in weight
 - Shall not create cavitation at any rotational speed up to 2500 RPM
 - 2. Motor
 - AISI Type 316 Stainless Steel body
 - Chlorine/Chloramine resistant rubber seals
 - Fully submersible
 - Low Voltage (10-45V)
 - High Voltage 110 VAC motor not permitted
 - Low power (0.5 HP maximum)
 - Water-filled motor
 - Water-lubricated motor
 - Variable RPM
 - 3. Mounting Tripod
 - AISI Type 316 Stainless Steel
 - Three-foot long detachable legs, or pedestal mount
 - NSF/ANSI Standard 61 certified EPDM rubber, non-skid, non-scratch feet or insulating pad
 - Attachments secure motor cable away from impeller
 - Overall weight of wet-side unit not to exceed 75 lbs to avoid damaging tank floor
 - Overall height of unit not to exceed 5 ft
- B. Components – Option 1 for dry-side: Each 110VAC control center shall consist of the following components:
 - 1. Enclosure
 - Lockable
 - Over-hanging lip as moisture seal
 - Vandal-resistant, 14 gauge, AISI Stainless Steel 304 construction

Overall weight of control center not to exceed 50 lbs

2. Power supply
 - 48V DC power supply
 - Operating temperature range -40°C to +70°C
 - Automatic Thermal shut-off protection built-in
 - Power Factor meets EN61000-3-2
 - RoHS-compliant design
 3. Motor Controller
 - Conformal-coated PC Board to control motor speed
 - Green and Red LED Indicator lights show motor status
 - Operating temperature range -40°C up to 85°C
 - Manual speed control located on board (potentiometer)
 - Thermal shut-off protection built-in
 - Current overload protection built-in
 4. SCADA Control Board
 - Conformal-coated
 - Digital Output signal indicating motor running
 - Digital Output signal indicating fault
 - Digital Input/output signal allowing remote motor on/off
 - RS-232 or dry contact connections
 - Green and Red LED status indicator lights connected on enclosure
- C. All motors and controls which interface with 110VAC grid power shall be connected to a dedicated branch circuit, 15-Amp, 5mA trip level, GFCI-protected 120-volt, 60-Hz, single-phase connection at the control center.

2.4 CONTROLS

- A. Each unit shall be equipped with all necessary controls, interwired, to provide the following minimum functions:
1. On/Off switch to control power to mixer.
 2. Automatically-activated motor shut-off if water level drops below motor height in tank.
 3. Any other controls shown on electrical and instrumentation drawings.

2.5 GFCI-PROTECTED DISCONNECT SWITCH

- A. Each unit shall have a dedicated 15-Amp, 5mA trip level, GFCI circuit breaker for 120-volt, 60-Hz, single-phase grid power. Connection from circuit breaker to control center shall terminate in a disconnect switch located within 10 feet (3m) of mixer control center. Disconnect switch shall be housed in a lockable, waterproof (NEMA 3r minimum) housing.

2.6 ACCEPTABLE MANUFACTURERS:

- A. PAX Water Technologies (San Rafael, California), or equivalent Gallons-Per-Minute (GPM) output model from another manufacturer (i.e. 2x SB-10,000) (for further information, contact: 1-866-PAX-Mixer, or www.paxwater.com)

PART 3 – EXECUTION

3.1 INSTALLATION

- A. The CONTRACTOR shall furnish services of a factory-trained installation contractor or crew having experience with installation procedures and operation and maintenance requirements for the type of equipment installed under these specifications. Mixer must be able to be

installed through an 18x18 inch hatch. Mixer must be able to be installed without draining tank or taking tank out of service. Wet-side of Mixer shall weigh less than 75 pounds (~34 kg) and dry-side shall weigh less than 50 pounds (~22 kg). Both wet-side and dry-side shall be able to be hoisted, installed, and/or removed by on-site personnel without additional equipment needed, and so that there is no crush hazard or entanglement hazard present, and so that weight of mixer on tank floor does not cause damage to interior coating.

- B. Tank penetration is recommended to be above tank water line, typically through the hatch side-wall.
 - 1. Fitting will prevent moisture intrusion into tank and ideally be horizontally oriented.
 - 2. Fitting shall be 1 inch diameter fitting to allow cable to pass through.
 - 3. Strain relief for power cable shall be part of the contractor-supplied fitting for tanks more than 30 feet in depth.
 - 4. For tanks more than 70 feet in depth, or at customer's discretion, a water-tight penetration may be installed under the water-line.

- C. Installation of the in-tank ("wet-side") components may be performed in any of the following ways
 - 1. Installation by a factory-trained and drinking-water-certified potable water tank diver.
 - 2. Installation by personnel with confined space training while the tank is drained and empty.
 - 3. Installation by tank manufacturer personnel during tank manufacture.

- D. Installation of the outside-of-tank ("dry-side") components may be performed by:
 - 1. Third party representatives or CONTRACTORS according to the manual provided.
 - 2. UTILITY personnel according to the manual provided

- E. GFCI-Protected Disconnect switch shall be installed by:
 - 1. UTILITY personnel prior to arrival of installation crew onsite.
 - 2. Licensed electrical contractor per arrangement with CONTRACTOR.

- F. The mixer and control center shall be installed in accordance with approved procedures submitted and as shown, unless otherwise approved in writing from the Factory.

3.2 TRAINING

- A. PAX Water Technologies staff (or their representatives) will instruct designated UTILITY personnel in the safe and proper operation of the PAX Water Mixer. This training will reference the operations manual provided with equipment, and show how to check for proper functioning of the equipment.