

CITY OF SPRINGFIELD
Public Works Department
2809 Clinard Drive
Springfield, Tennessee 37172
615-384-2746
www.SpringfieldTN.Gov
Email: PublicWorks@SpringfieldTN.Gov

**STORM DRAIN REHABILITATION
CONTRACT #PW2301**

BID #1224

**PUBLIC NOTICE INVITATION
TO BID #1224**

The City of Springfield Public Works Department is accepting sealed bids for:

STORM DRAIN REHABILITATION CONTRACT #PW2301

Bid proposal may be obtained from www.springfieldtn.gov. Contact Kenny Morris, Stormwater Coordinator at 615-384-2746 for additional information. Please reference Bid #1224 on the outside of the sealed envelope. Sealed bids must be received in the Office of the City Recorder, 405 North Main Street, Springfield, TN 37172 by 2:00 pm local time, Tuesday, January 10, 2023. The City of Springfield reserves the right to reject any and all bids.

Lisa H. Crockett
City Recorder

CITY OF SPRINGFIELD
PUBLIC WORKS DEPARTMENT
2809 CLINARD DRIVE
SPRINGFIELD, TENNESSEE 37172
615-384-2746
www.SpringfieldTN.Gov
Email: PublicWorks@SpringfieldTN.Gov

BID PROPOSAL #1224

For a
STORM DRAIN REHABILITATION CONTRACT #PW2301

Bid opening January 10, 2023 at 2:00 p.m.

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ADVERTISEMENT FOR BIDS
BID PROPOSAL #1224
STORM DRAIN REHABILITATION CONTRACT #PW2301

This contract is for lining of two (2) existing corrugated metal pipe (CMP) storm drains 18 inches in diameter & approximately 40 linear feet in length. The projects are located at 205 Timberlake Drive & 2509 S. Main Street, Springfield, TN. See Project Location Maps and contact Kenny Morris, Stormwater Coordinator at 615-384-2746 for additional information.

Sealed proposals will be accepted until 2:00 p.m. on January 10, 2023 and then publicly opened and read aloud. Proposals must be addressed to:

Office of the City Recorder
405 North Main Street
Springfield, Tennessee 37172
615-382-2200

Bid proposal shall be enclosed in a sealed envelope with all applicable forms completed. Each envelope shall bear on the outside the *bid number, bidder's name, address, license number and expiration date, that part of classification applying to the bid, the date and time of the bid opening and the project name and/or contract number*. Failure to show these items on the outside of the envelope will result in the bid being returned to the bidder unopened. Fax proposal are not accepted.

A Cashier's check or Bid Bond in an amount of no less than five percent (5%) of the bid submitted must accompany each bid. A Performance and Payment Bond in an amount of one hundred percent (100%) of the contract will be required for the successful Contractor.

All bidders shall be a licensed Contractor as required by the State of Tennessee Contractor's Licensing Act of 1976.

Bid proposal may be obtained at: <https://www.springfieldtn.gov/437/BidsRFQsRFPs>

Addenda(s) to proposal will be acknowledged by all bidders. Failure to acknowledge receipt of an Addendum letter(s) is grounds for rejection. It shall be the bidders' reasonability to confirm that the proposal contains all the documents indicated in the Table of Contents. Should any omissions occur, the appropriate documents may be obtained from the Public Works Department.

The City of Springfield reserves the right to waive any informalities or reject any and all bids.

NOTICE TO BIDDERS

Title VI of the Civil Rights Act of 1964

It is the policy of the CITY OF SPRINGFIELD to ensure equal employment opportunity without discrimination or harassment on the basis of race, color, religion, sex, sexual orientation, gender identity or expression, age, disability, marital status, citizenship, national origin, genetic information, or any other characteristic protected by law. The City complies with Title VI of the Civil Rights Act of 1964. Title VI requires that no person shall, on the grounds of race, color or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. With regard to all aspects of this contract, contractor certifies and warrants it will comply with this policy.

Further, the CITY OF SPRINGFIELD agrees to comply with the Department of Transportation Implementing Regulations (49 CFR Part 21).

Any person who believes they have been discriminated against should contact Candice Tillman, Title VI Coordinator, at Springfield City Hall.

For Title VI compliance purposes, we ask for voluntary disclosure of the following information:

Gender:	Male _____	Female _
Race:	Caucasian	—
	African American	—
	Hispanic	—
	Other (please specify)	—

NOTICE TO BIDDERS

Disadvantaged Business Enterprise Policy

It is the policy of the City of Springfield that Disadvantaged Business Enterprises (DBE's) to affirmatively ensure that any contract entered into pursuant to the contract, DBE's will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the basis of age, race, color, religion, national origin, sex or disability in consideration for an award.

All contractors providing professional services for the City of Springfield shall take all necessary and reasonable steps in accordance with 49 CFR, Part 23, to ensure that DBE's have the maximum opportunity to compete for and perform subcontracts. The contractor shall not discriminate on the basis of age, race, color, religion, national origin, sex or disability in the award of subcontracts.

NOTICE TO BIDDERS

Drug Free Workplace Policy

The City of Springfield is a Drug Free Workplace and requires all bidders with “no less than five (5) employees receiving pay who contract with the City to provide construction services”, to prepare and include with their bid documents an Affidavit certifying compliance with the Drug Free Workplace Program as stipulated in Tennessee Code Annotated (TCA) 50-9-101 through 50-9-113. The statute forbids any local government from entering into any contract or awarding any contract for construction services with any employer who has not provided the affidavit of compliance.

DRUG-FREE WORKPLACE AFFIDAVIT

STATE OF _____

COUNTY OF _____

The undersigned, principal officer of _____, an employer of five (5) or more employees contracting with the CITY OF SPRINGFIELD to provide construction services, hereby states under oath as follows:

- 1. The undersigned is a principal officer of _____ (hereinafter referred to as the "**COMPANY**"), and is duly authorized to execute this AFFIDAVIT on behalf of the **COMPANY**.
- 2. The **COMPANY** submits this AFFIDAVIT pursuant to T.C.A. § 50-9-113, which requires each employer with no less than five (5) employees receiving pay who contracts with the state or any local government to provide construction services to submit an AFFIDAVIT stating that such employer has a drug-free workplace program that complies with Title 50, Chapter 9, of the *Tennessee Code Annotated*.
- 3. The **COMPANY** is in compliance with T.C.A. § 50-9-113.

FURTHER AFFIANT SAYETH NOT.

Principal Officer

STATE OF _____

COUNTY OF _____

Before me personally appeared _____, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who acknowledged that such person executed the foregoing AFFIDAVIT for the purposes therein contained.

SUBSCRIBED AND SWORN to me before this _____ day of _____, 20__.

(SEAL)

Notary Public

My Commission Expires: _____

NOTICE TO BIDDERS

IRAN DIVESTMENT ACT NOTICE

Tenn. Code Ann. § 12-12-106 requires the chief procurement officer to publish, using credible information freely available to the public, a list of persons it determines engage in investment activities in Iran, as described in § 12-12-105.

For these purposes, the State intends to use the attached list of “Entities determined to be non-responsive bidders/offerors pursuant to the New York State Iran Divestment Act of 2012.”

While inclusion on this list would make a person ineligible to contract with the state of Tennessee, if a person ceases its engagement in investment activities in Iran, it may be removed from the list.

If you feel as though you have been erroneously included on this list please contact the Central Procurement Office at CPO.Website@tn.gov.

List Date: August 24, 2021

Source: <https://www.ogs.ny.gov/iran-divestment-act-2012>

1. Ak Makina, Ltd.
2. Amona
3. Bank Markazi Iran (Central Bank of Iran)
4. Bank Mellat
5. Bank Melli Iran
6. Bank Saderat Iran
7. Bank Sepah
8. Bank Tejarat
9. China Precision Machinery Import- Export Corporation (CPMIEC)
10. ChinaOil (China National United Oil Corporation)
11. China National Offshore Oil Corporation (CNOOC)
12. China National Petroleum Corporation (CNPC)
13. Indian Oil Corporation
14. Kingdream PLC
15. Naftiran Intertrade Co. (NICO)
16. National Iranian Tanker Co. (NITC)
17. Oil and Natural Gas Corporation (ONGC)
18. Oil India, Ltd.
19. Persia International Bank
20. Petroleos de Venezuela (PDVSA Petróleo, SA)
21. PetroChina Co., Ltd.
22. Petronet LNG, Ltd.
23. Sameh Afzar Tajak Co. (SATCO)
24. Shandong FIN CNC Machine Co., Ltd.
25. Sinohydro Co., Ltd.
26. Sinopec Corp. (China Petroleum & Chemical Corporation)
27. SKS Ventures
28. SK Energy Co., Ltd.
29. Som Petrol AS
30. Unipet (China International United Petroleum & Chemicals Co., Ltd.)
31. Zhuhai Zhenrong Co.

IRAN DIVESTMENT ACT

“By the submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief that each bidder is not a person included within the list created pursuant to § 12-12-106.”

Signature: _____

Date: _____

Title: _____

SPECIAL PROVISION

REGARDING

EMPLOYING AND CONTRACTING WITH ILLEGAL IMMIGRANTS

The requirements of Public Acts of 2006, Chapter Number 878, of the State of Tennessee, addressing the use of illegal immigrants in the performance of any contract to supply goods or services to the City, shall be a material provision of this Contract, a breach of which shall be grounds for monetary and other penalties, up to and including termination of this Contract.

1. The Contractor hereby attests, certifies, warrants, and assures that the Contractor shall not knowingly utilize the services of an illegal immigrant in the performance of this Contract and shall not knowingly utilize the services of any subcontractor who will utilize the services of an illegal immigrant in the performance of this Contract. The Contractor shall reaffirm this attestation, in writing, by submitting to the City a completed and signed copy of the "Attestation Form" provided by the City semi-annually during the period of this Contract. Such attestations shall be maintained by the contractor and made available to the City upon request.
2. Prior to the use of any subcontractor in the performance of this Contract, and semi-annually thereafter, during the period of this Contract, the Contractor shall obtain and retain a current, written attestation that the subcontractor shall not knowingly utilize the services of an illegal immigrant to perform work relative to this Contract and shall not knowingly utilize the services of any subcontractor who will utilize the services of an illegal immigrant to perform work relative to this Contract. Attestations obtained from such subcontractors shall be maintained by the contractor and made available to the City upon request.
3. The Contractor shall maintain records for all personnel used in the performance of this Contract. Said records shall be subject to review and random inspection at any reasonable time upon reasonable notice by the City.
4. The Contractor understands and agrees that failure to comply with this section will be subject to the sanctions of Public Chapter 878 of 2006 for acts or omissions occurring after its effective date. This law requires the City to prohibit a contractor from contracting with, or submitting an offer, proposal, or bid to contract with the City to supply goods or services for a period of one year after a contractor is discovered to have knowingly used the services of illegal immigrants during the performance of this contract.
5. For purposes of this Contract, "illegal immigrant" shall be defined as any person who is not either a United States citizen, a Lawful Permanent Resident, or a person whose physical presence in the United States is authorized or allowed by the Department of Homeland Security and who, under Federal immigration laws and/or regulations, is

authorized to be employed in the U.S. or is otherwise authorized to provide services under the Contract.

ATTESTATION REGARDING PERSONNEL USED IN CONTRACT PERFORMANCE

Contract Number:	
Contractor Legal Entity Name:	
Federal Employer Identification or Social Security Number:	

The Contractor, identified above, does hereby attest, certify, warrant, and assure that the Contractor shall not knowingly utilize the services of an illegal immigrant in the performance of this Contract and shall not knowingly utilize the services of any subcontractor who will utilize the services of an illegal immigrant in the performance of this Contract.

Signature of Owner or Corporate Officer

Date

NOTICE: This attestation MUST be signed by an individual empowered to contractually bind the Contractor. If said individual is not the chief executive or president, this document shall attach evidence showing the individual’s authority to contractually bind the Contractor.

SPECIAL PROVISION

Notice to Proceed

Contractor hereby agrees to commence work under this contract on or before a date to be specified in written "Notice To Proceed" of the Owner and to fully complete the project by **April 30, 2023**, thereafter as stipulated in the specifications. Contractor further agrees to pay as liquidated damages the sum \$200.00 for each Calendar Day thereafter as hereinafter provided.

The contractor will be allowed to use daytime one lane closures, provided all signs, temporary traffic control devices and flagmen per MUTCD are posted on each end of the one lane closure and approved by the Public Works Director.

SPECIFICATIONS

PIPE REHABILITATION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The Contractor shall furnish all labor, materials, equipment, and incidentals required to complete the pipe rehabilitation.
- B. The Contractor shall remove all pipeline obstructions and protruding lateral connections as required to complete the rehabilitation.
- C. Neither the lining system, nor its installation shall cause adverse effects to any City of Springfield systems or facilities. Product use shall not result in forming or producing any detrimental compounds or by-products in the stormwater discharge. The Contractor shall notify the Public Works Department, identify any by-products produced due to the installation operations, shall test and monitor the levels, and comply with all stormwater discharge restrictions.
- D. The Contractor shall cleanup, restore existing surface conditions, and structures and repair any system determined to be defective. The Contractor shall conduct installation operations and schedule cleanup in a manner to cause the least possible obstruction and inconvenience to traffic, pedestrians, businesses, and property owners or tenants.
- E. The Contractor shall be responsible for all Traffic Control per the MUTCD and approval of the Director. No payment will be made for traffic control devices, labor, etc. required by the manual, but all cost for such shall be included in the bid price. A minimum of two flagmen will be required when working in traffic.

1.02 SUBMITTALS

- A. Submit product data, design calculations, installation details, and shop drawings to the Public Works Department. The Contractor shall provide this information without delay or claim to any confidentiality. Submittals shall include the following:
 - 1. Lining supplier's name and a materials list.
 - 2. Lining schedules including field-verified lengths and diameters for all linings and appurtenances required.

3. Shop drawings and product data to demonstrate compliance with the contract specifications and identify construction materials.
4. Manufacturers' shipping, storage, and handling recommendations for all system components.
5. MSDS sheets for all materials to be furnished for the project.
6. Detailed installation procedures for each process stage.
7. Certified test reports showing the lining for this Contract was manufactured and tested in accordance with all applicable ASTM Standards specified and referenced herein.
8. A complete description for the proposed technology. Include full details of the procedure including environmental conditions control, quality assurance procedures, and etc.
9. Design data and specification data sheets listing all parameters used in the liner design and thickness calculations. All calculations shall be prepared under and stamped by a registered professional engineer.
10. Manufacturer's recommended installation method for each liner diameter and thickness to be installed including detailed procedures describing the application method.

11. A detailed summary about the proposed quality controls to be performed by the Contractor including:
 - a. Proposed procedures for quality control.
 - b. Product sampling and testing method and frequency for product sampling and testing in raw material form and cured product form.
 - c. Inspection forms and guidelines for quality control inspections.
- B. Submit the name and experience for lead personnel including verifiable references.

1.03 REFERENCE STANDARDS

- A. American Society for Testing and Materials (ASTM)
 1. ASTM D543 – Standard and Practice for Evaluating the Resistance of Plastics to Chemical Reagents
 2. ASTM D638 – Standard Test Method for Tensile Properties of Plastics
 3. ASTM D790 – Standard Test Method for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
 4. ASTM D792 – Standard Test Methods for Density and Specific Gravity of Plastics by Displacement
 5. ASTM D2412 – Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading
 6. ASTM F1216 – Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube
 7. ASTM F1743 – Standard Practice for Rehabilitation of Existing Pipelines and Conduits by Pulled-in-Place Installation of Cured-in-Place Thermosetting Resin Pipe (CIPP)

8. ASTM D638 – Standard Test Method for Tensile Properties of Plastics
 9. ASTM D2990 – Standard Test Methods for Tensile, Compressive, and Flexural Creep and Creep-Rupture of Plastics
- B. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.04 EXPERIENCE AND CERTIFICATIONS

- A. The Contractor performing the rehabilitation work shall be experienced and equipped to complete this work expeditiously and in a satisfactory manner and shall be certified and/or licensed as an installer by the lining manufacturer.
- B. Demonstrate that the lead personnel including the supervisor, the foreman, and lead crew personnel have demonstrated the competency and experience to perform the scope of work contained in this Contract. Personnel replaced by Contractor during the execution of the work shall have similar verifiable experience as personnel originally submitted for project.

1.05 GUARANTEE

- A. All work performed shall be guaranteed by the Contractor and manufacturer for a 3-year period from the final acceptance date. During this period, the Contractor shall remove and replace any and all serious defects discovered, as determined by the Public Works Department, which may materially affect the pipe's integrity, strength, function, and/or operation in a satisfactory manner to the Public Works Department at no cost to City of Springfield. Defects replaced during this 3-year period shall be fully warranted by Contractor and manufacturer for a period of two years from date the defect was repaired.

1.06 QUALITY ASSURANCE

- A. Materials suppliers shall be responsible for providing all test requirements specified herein as applicable. In addition, all linings to be installed under this Contract may be inspected at the plant for compliance with these specifications by an independent testing

laboratory. The Contractor shall require the manufacturer's cooperation with these inspections.

- B. The Public Works Department may inspect materials after delivery. Materials shall be subject to rejection at any time if it fails to meet any requirements specified, even though materials may have been accepted as satisfactory at the manufacturer. Materials or components rejected after delivery shall be marked for identification and removed from the job site.
- C. In the event that an installation is rejected, the Contractor shall repair the pipe segment to the satisfaction of the Public Works Department at no additional cost to City of Springfield.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Care shall be taken in shipping, handling, and laying to avoid damaging components. Any components damaged in shipment shall be replaced as directed by the Public Works Department.
- B. Any component which has received a blow that may have caused damage, even though no such damage can be seen, shall be marked as rejected and removed at once from the work.
- C. While stored, components shall be adequately supported and protected in a manner as recommended by manufacturer.
- D. All materials shall be maintained at a proper temperature and always protected from environmental hazards (as applicable) prior to installation.

1.08 WATER

- A. Water for all construction operations may be made available at the contractors request from identified City fire hydrants at normal commercial rates.
- B. Water usage shall be in accordance with City backflow and metering polices.

PART 2 - PRODUCTS

2.01 MATERIALS AND COMPONENTS

- A. Lining manufacturer shall be identified for approval.
- B. The liner shall be constructed to withstand installation pressures and curing temperatures, and have sufficient strength to bridge missing pipe segments and stretch to fit irregular pipe sections.
- C. The liner tube may be single or multiple layer construction and when compressed at installation pressures, will meet or exceed the design thickness after cure.
- D. The manufactured tube's exterior shall have distance markings along its length at regular intervals not to exceed 5 feet. Use these marks as a gauge to measure elongation during insertion. Should a reach's overall elongation exceed 5 percent, the liner tube shall be rejected and replaced.
- E. The tube shall be homogeneous across the entire wall thickness, containing no intermediate or encapsulated layers. No material shall be included in the tube that may cause delamination.
- F. Seams in the tube shall meet the requirements of ASTM D5813.
- G. The interior wall color after installation shall be a relatively light reflective color so a clear detailed examination may be made.
- H. The City of Springfield or its representatives must be given an opportunity to witness the manufacturing for all linings for this project. If the City decides to inspect the lining manufacturing, the Contractor shall provide full access to witness the manufacturing process and any and all information related to the manufacturing as requested without delay and without claims about confidentiality or product privacy. The City is responsible for costs associated with witnessing the lining manufacturing.
- I. When cured, the lining shall form a continuous, hard, impermeable lining which is chemically resistant to any chemicals normally found in stormwater runoff. The lining shall be chemically resistant to trace amounts of gasoline and other petroleum products commonly found in municipal stormwater and soils adjacent to the pipe to be lined. The lining shall provide the maximum available abrasion resistance.

- J. The Contractor shall measure the existing pipelines in the field prior to ordering lining. The lining's length shall be as deemed necessary by the Contractor to effectively carry out inserting and sealing the lining at the outlet and inlet manholes.
1. The lining tube shall be manufactured or fabricated to a size that will tightly fit the internal circumference of the pipe being rehabilitated after being installed and cured.
 2. The lining shall be able to fit into irregularly shaped pipe sections and through bends and dips within the pipeline.
 3. Allowance for longitudinal and circumferential expansion shall be taken into account when sizing and installing the lining.
 4. The tube shall be properly sized to the existing pipe's diameter and the length to be rehabilitated and be able to stretch to fit irregular pipe sections and negotiate bends.
 5. Contractor shall verify lengths in field prior to ordering to ensure that tube will have sufficient length to extend entire length of the run, which is defined as the length of the existing host pipe measured from the interior walls of the structures, and/or from the ends of the pipe when/if the pipe extends into a structure. Contractor shall also measure inside diameter and circumference of existing pipelines at face of each structure in field prior to ordering liner so that liner can be installed in a tight-fitted condition with little or no wrinkling.
- K. The Contractor shall verify the proposed lining thicknesses and submit the associated calculations. The lining shall be designed in accordance with the applicable ASTM provisions for "partially deteriorated gravity pipe conditions," unless it is noted on the Drawings that "fully deteriorated gravity pipe conditions" shall apply based. Contractor should submit the completed inspection to determine if "partially deteriorated" or "fully deteriorated" apply. The lining shall meet the following minimum design conditions, unless the City agrees to the change or as noted on the Drawings:
1. AASHTO H-20 Live Load with two trucks passing
 2. Constrained soil modulus of native soil in the pipe zone = 1,000 psi
 3. Soil weight with 120 pounds per cubic foot and a coefficient of friction of $Ku' = 0.130$ shall be used for the installed depths.

4. The long-term flexural modulus used in the design calculations shall be estimated by multiplying the lowest short-term flexural modulus specified in the ASTM standards by a long-term retention of mechanical properties factor equal to 50 percent.
5. Design safety factor = 2.0
6. Typical groundwater levels shall be estimated at 1/2 the distance between the pipe's invert and the ground surface. If actual groundwater depth information is available from USGS or other sources, it may be used in the calculations. If the pipe is within 50 feet of a creek or other water body or if indicated on the Drawings, the groundwater depth used in the calculations should be the maximum depth from the ground surface to the pipe crown.
7. Service temperature range shall be 40 °F to 100 °F.
8. Maximum long-term deflection shall be 5percent.
9. Minimum pipe ovality shall be 2 percent.
10. The lining thickness to be used shall be the largest thickness as determined by calculations for deflection, bending, buckling, and minimum stiffness.
11. The lining shall be designed to withstand all imposed loads, including live loads and, if applicable, hydrostatic pressure. The liner shall have sufficient wall thickness to withstand all anticipated external pressures and loads that may be imposed after installation.
12. The lining shall be watertight.
13. The lining shall provide a minimum 50-year service life and shall have the following minimum initial and long-term properties:

Property	Test Method	Initial (psi)	Long-term (psi)
Flexural Strength	ASTM D790	4,500	2,250
Flexural Modulus of Elasticity	ASTM D790	300,000	150,000

2.02 END SEALS

- A. End seals shall be molded or formed as a one-piece cylinder which when installed will form a 360-degree seal between the host pipe and the newly installed liner. Use of caulking in lieu of an end seal will not be allowed.

PART 3 - EXECUTION

3.01 PRE-INSTALLATION

- A. The Contractor shall notify all affected property owners at least 72 hours in advance, giving the date, start time, and estimated completion time for the work being conducted.
- B. The Contractor shall clean each pipe length to be lined and shall dispose of any resulting material offsite.
- C. The Contractor shall conduct a pre-rehabilitation inspection for all pipes to be rehabilitated. The inspection shall be to identify pipe defects, to document all lateral connection locations, and to confirm additional needed point repair locations other than those indicated on the Drawings. The contractor's project manager and/or superintendent shall review the pre-rehabilitation inspection to ensure quality control, including but not limited to locations of lateral connections, and locations of point repairs to be performed. Inspections shall be submitted to the Public Works Department who will review pre-rehabilitation inspection to confirm point repair locations to be performed by the Contractor. The Contractor may not proceed with lining installation until the Public Works Department has reviewed and approved the Contractor's inspection documentation. A minimum of 3 working days shall be provided to review each pre-rehabilitation inspection data submittal.
- D. The Contractor shall be responsible for verifying active connections prior to rehabilitation. If the Contractor discovers a connection that appears to be illegal, the Contractor shall immediately notify the Public Works Department. Upon completing the rehabilitation work, a list with all private connections abandoned or reconnected as part of the work shall be submitted to the Public Works Department. The compiled list shall include the following information:

1. Location for each connection based on the CCTV inspection logs, which shall include an accurate distance measured from the starting location and a notation (by clock-reference) stating where on the pipe circumference the lateral connects.
 2. Status (Active or Inactive)
- E. During the pre-rehabilitation inspection and prior to installing the lining, all protruding connections greater than or equal to 3/4-inch shall be internally cut or ground down flush with the pipe wall using a robotic cutter specifically designed for this purpose. The internal cutter shall be able to cut cast iron, PVC, vitrified clay pipe, concrete pipe, ductile iron pipe, and Orangeburg pipe. All materials/cuttings shall be removed from the drain and properly disposed.
- F. The Contractor shall provide bypass pumping, dewatering, damming, or control of water flow. Lining installation shall not begin until the Contractor has installed the required bypass system and until all pumping facilities have been installed and tested under full operating conditions. Once the lining process has begun, existing runoff flows shall be maintained until the composite has been fully cured, fully televised, and the ends finished.
- G. The Contractor shall furnish and install the lining in the pipes full length as shown on the Drawings. The lining installation shall be in complete accordance with applicable ASTM F1216 provisions and the manufacturer's recommendations.
- H. If the lining manufacturer believes the infiltration rate in the drain segment is high enough to risk washing out the resin, the Contractor shall perform required measures to minimize infiltration prior to installation. If any infiltration runners or gushers as defined by NASSCO PACP are observed during the pre-rehabilitation inspection, the Contractor shall submit in writing for approval by the Public Works Department the methods and materials for mitigating any adverse impacts from the infiltration. Infiltration runners or gushers that are observed may be stopped by injecting a chemical hydrophilic grouting using a remote packer as an acceptable and preferred method.
- I. The Contractor shall evaluate liner installations for the potential of adverse odor issues such as from styrene and implement measures including, but not limited to, supplemental ventilation, service plugging, and monitoring in accordance with pertinent state and federal rules and regulations. The evaluations shall include issues that may occur from long duration installations, extended curing times, close proximity to buildings, and/or resident's sensitivities, impairments, or known health conditions relative to respiratory issues.

3.02 INSTALLATION

- A. The Contractor shall install a hydrophilic seal at each structure face prior to inverting or pulling in the uncured lining.
- B. If the lining does not fit tightly against the original pipe at its termination points, at no additional cost to the City of Springfield, the full circumference of the lining exiting the host pipe shall be filled with a resin mixture compatible with the liner and approved by the liner manufacturer. There shall be no groundwater leakage between the existing pipe and the lining at the headwall connection or lateral connections. Any leakage found shall be eliminated by the Contractor at no additional cost to the City of Springfield.
- C. The installed lining shall be cured in accordance with manufacturer's recommendations.
- D. The lining shall be cured into a hard impermeable pipe of the minimum specified thickness, providing a structurally sound, uniformly smooth interior and tight- fitting lining within the existing pipe.
- E. Vent and/or exhaust noxious fumes or odors generated during and remaining after the curing process has been completed. This process shall remain in place at all manholes, laterals, etc., until noxious odors have dissipated to an acceptable level in accordance with OSHA requirements for the materials used and there is no potential health hazard left to the general public or the construction workers.
- F. Identify and submit for approval to the Public Works Department the points to where process water will be discharged if other than a downstream sanitary sewer system at an acceptable discharge rate. Prior coordination with the Springfield Water and Wastewater Department is required if discharging to a sanitary sewer manhole. NO discharge to storm drains or drainage systems shall be allowed.
- G. Provide piping, pumps, valves, and other equipment to discharge process water.
- H. All cutting and sealing of liner at connections and/or structures shall provide watertight seals. All cut edges of cured liner shall be thoroughly sealed. There shall be no leakage of groundwater between liner and existing pipe.
- I. The installed lining shall be continuous over the pipe section's entire length and be free from visual defects such as foreign inclusions, dry spots, pinholes, fins, major wrinkles, and delamination. The lined invert and lower third of the pipe in normal stormwater flow depth shall be of particular concern to defect avoidance. The lining shall be impervious and free from any pipe leakage to the surrounding ground or from the ground to inside the lined pipe.

3.03 REINSTATING SERVICES

- A. After the new lining has been cured, the Contractor shall reconnect the existing laterals as designated by the pre-installation report generated by the Contractor. This shall be done without excavation from the pipeline's interior using a television camera and a remote cutting device that reestablishes the lateral connection to not less than 90 percent of the original diameter. All connections between the lining and the lateral connection shall be watertight. All openings shall be clean and neatly cut, and the cut shall be buffed with a wire brush to remove rough edges and provide a smooth finish. The bottom of the openings shall be flush with the bottom of the lateral pipe with no protruding material able to hinder flow or catch debris.
- B. Inactive laterals will be abandoned by not reopening the connection after installing the lining.
- C. Provide a fully operational backup device for reinstating laterals. If for any reason the remote cutting device fails during a lateral's reinstatement, immediately deploy the standby device to complete the reinstatement. The backup device shall be fully functional without needing to remove parts from the primary device. The backup equipment shall be on site throughout the reinstatement process.

3.04 FIELD TESTING AND ACCEPTANCE

- A. The Contractor shall perform an inspection for visible leaks on each lining segment in the Public Works Departments presence after curing the liner and prior to internally re-instating laterals. Any lining not able to meet this testing requirement shall be repaired and retested at no additional cost to the City.
- B. Field acceptance for the lining shall be based on the Public Works Departments evaluation of the installation including reviewing the lining curing data, the post- rehabilitation inspection data, and the certified test data for the installed lining. All sample testing and repairs to the installed liner as applicable shall be completed and documented in written form before final acceptance.
- C. The Contractor shall perform random sampling and testing to determine the installed lining's flexural properties and thickness. The testing frequency may be increased by the Public Works Department and performed by the Contractor at no additional cost to the City when the required tests show the installed lining does not meet the specifications.
- D. Tests shall be performed by an independent testing laboratory certified by the American Association for Laboratory Accreditation (A2LA). The Contractor shall submit to the Public Works Department the name and location for the independent testing laboratory, a certified statement from the laboratory indicating they are independent from and not associated with the Contractor in any way, and the ASTM certification for the independent testing laboratory.
- E. All expenses for sampling and testing the installed lining shall be paid by the Contractor. The cost for all manufacturers' testing to qualify products furnished to the project site shall be the Contractor's responsibility.

- F. Sampling and testing for the installed lining shall conform to the following requirements.
1. Remove one restrained sample of the installed lining at least 18- inches in length. The sample shall be captured by installing the lining through a section of PVC or similar cylindrical tube within the installation's most downstream point. The Contractor may elect to cut the sample longitudinally and take 1/2 the sample for direct shipping to the laboratory and keep the other sample 1/2 for additional testing if necessary.
 2. A minimum of two plate samples shall be prepared and cured in the downtube of the installation column.
 3. The lining thickness shall be measured in accordance with *ASTM D5813*. *Flexural properties shall be determined in accordance with ASTM D790*. The Contractor shall label and date all samples for shipping to the independent testing laboratory. The Public Works Department shall be copied on all transmittals to the independent testing laboratory. Testing results shall be submitted to the Public Works Department within 30 days after installing the lining or payment will be withheld.
 4. Any lining not meeting the specified installed strength and/or thickness requirements, regardless of the amount below the specified requirements, shall not be approved for payment until the deficiency has been corrected by the Contractor in a manner approved by the Public Works Department at no additional cost to the City. Options considered for correcting deficient lining installations include the following.
 - a. Remove the existing lining and re-line the pipe.
 - b. Re-line the pipe with the existing lining in place. Note that this will not be accepted if Public Works Department determines that the pipe section has capacity concerns.
 - c. Accept the following penalties depending on the structural and thickness test results.
 - 1) If the tests are within 90 percent of the specification, the payment reduction shall be 10 percent of the bid price per item.

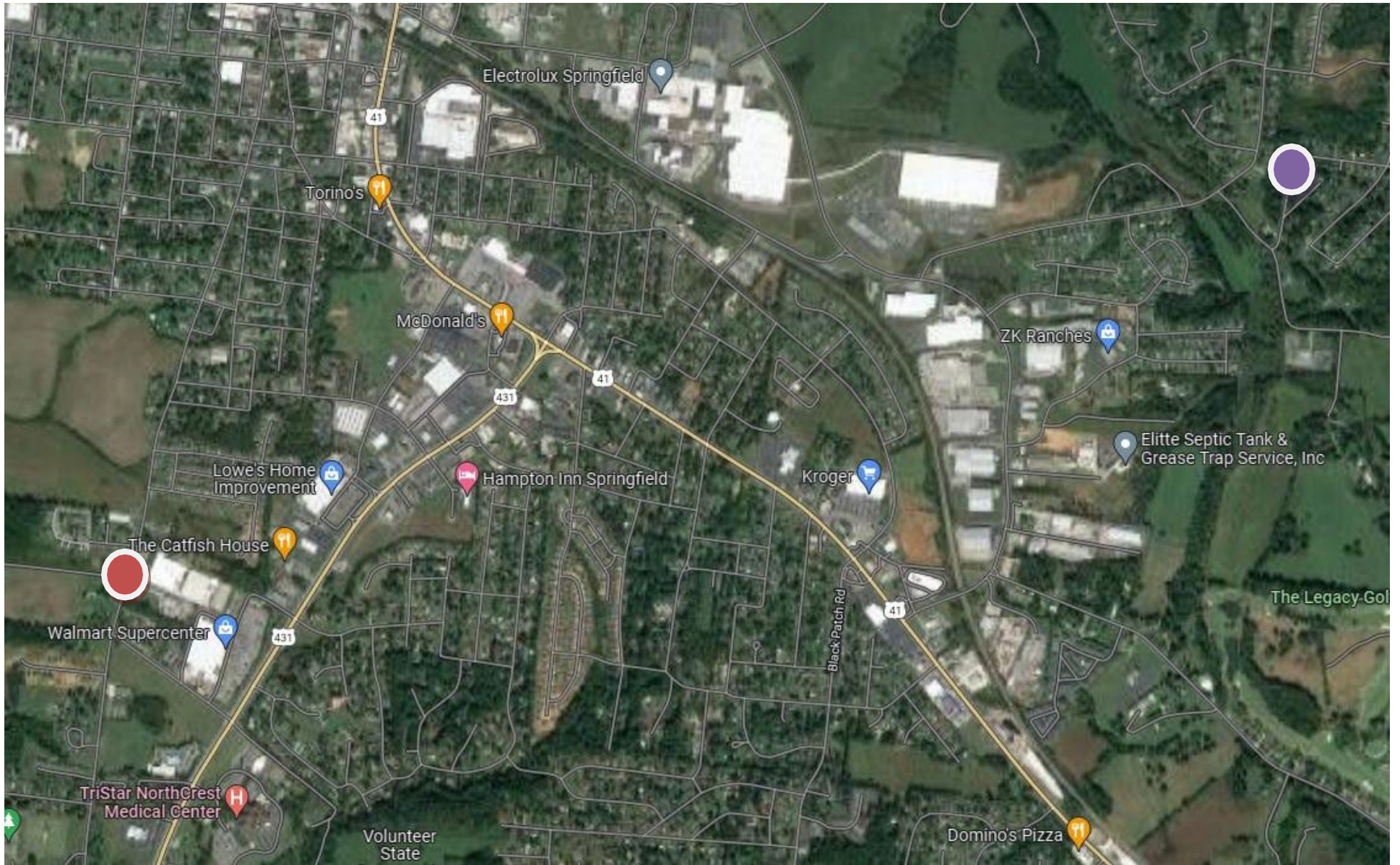
- 2) If the tests are between 75 percent and 89 percent of the specification, then 75 percent of the bid price shall be paid.
 - 3) If the tests are below 75 percent, the Contractor must reline or replace the segment.
- G. The Contractor shall perform a post-rehabilitation inspection for all pipes rehabilitated. The post-rehabilitation inspection shall be performed following the lining installation and reinstating all active laterals. The Contractor's project manager and/or superintendent shall review the post-rehabilitation inspection report to confirm the findings. If it is determined that any repairs are needed at any segment, a new inspection shall be performed of the entire segment(s) after the repairs have been completed.
- H. The Public Works Department shall review and approve payment based on the Contractor having satisfactorily completed a lining free from significant defects. The finished lining shall be continuous between structures and shall be free from visual defects such as foreign inclusions, reverse curvatures, splits, flats, cracks, lifts, kinks, wrinkles, flats, dry spots, pinholes, shrinkage, crazing, leaks, and delamination. The maximum allowable size for wrinkle or bulge as shown in the inspection shall not exceed 3 percent of equivalent pipe diameter or 1-inch by visual measurement, whichever is smaller. No wrinkles will be allowed in the invert of pipe between 4:00 and 8:00 o'clock positions.
- I. Contractor will be responsible to remove and repair, at Contractor's expense, all such defects in a manner that is satisfactory to the Public Works Department.
- J. Shrinkage of the liner's length, of more than one (1) inch from the face of the structure shall be repaired at no cost to the City.
- K. The cured lining and all pipe-to-structure connections shall be watertight and free from infiltration.

3.05 CLEANUP

- A. Upon the installation work and testing acceptance, restore the project area affected by the operations to a condition at least equal to what existed prior to the work.

END OF SECTION

Project Location Map



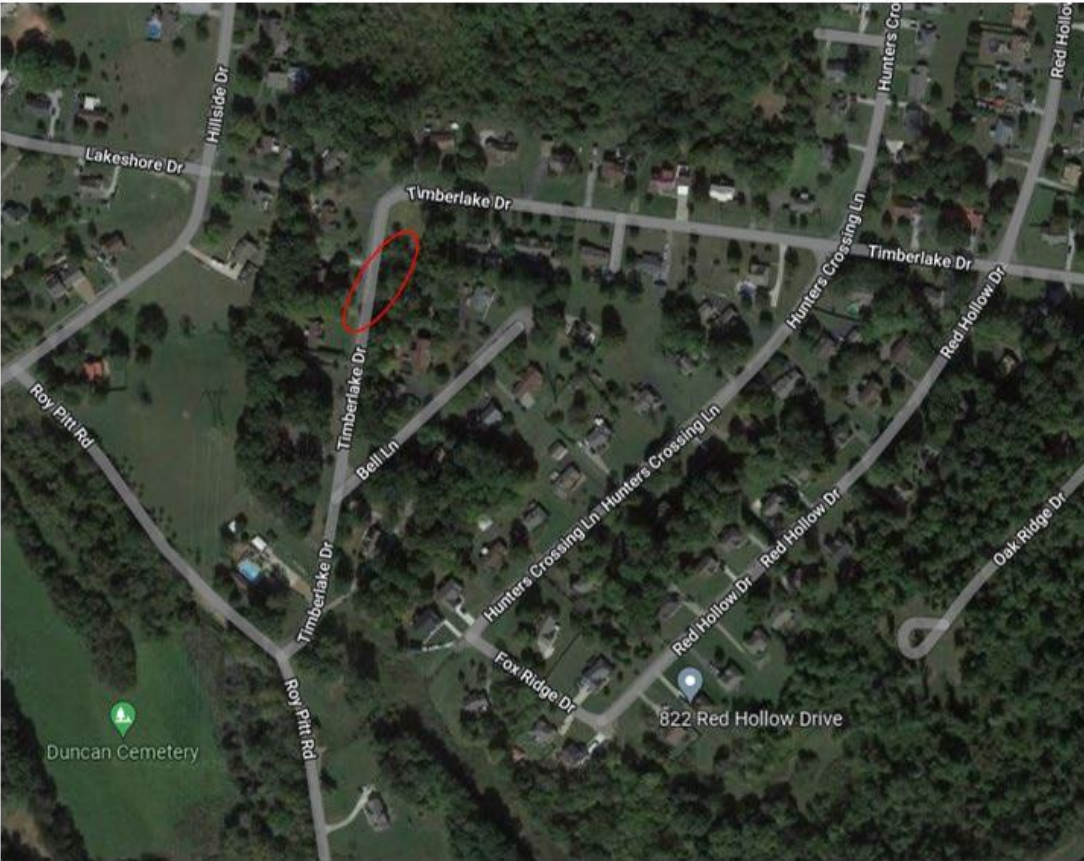
 South Main Street Project Location

 Timberlake Drive Project Location

2509 S. Main St. 18" CMP @ 40'



205 Timberlake Dr. 18" CMP @ 41'



BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned,

_____ as **PRINCIPAL**,

and _____ as **SURETY**,

are hereby and firmly bound unto **CITY OF SPRINGFIELD, TENNESSEE** as **OWNER** in the penal sum of _____ for the payment which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

Signed, this _____ day of _____, 20_____.

The condition of the above obligation is such that whereas the **PRINCIPAL** has submitted to

_____ a certain BID,
attached hereto and hereby made a part hereof to enter into a contract in writing, for the

_____.

NOW, THEREFORE,

- (a) If said BID shall be rejected, or in the alternate.

- (b) If said BID shall be accepted and the **PRINCIPAL** shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said BID) and shall furnish a BOND for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said BID, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the **SURETY** for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The **SURETY**, for value received, hereby stipulates the agrees that the obligation of said **SURETY** and its BOND shall be in no way impaired or affected by an extension of the time within which the **OWNER** may accept such BID; and said **SURETY** does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the **PRINCIPAL** and the **SURETY** have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Principal

(SEAL)

Surety

BID PROPOSAL FOR UNIT PRICE CONTRACT

Proposal of _____ hereinafter called

“**CONTRACTOR**” to the CITY OF SPRINGFIELD, TENNESSEE hereinafter called "**OWNER**".

The **CONTRACTOR** in compliance with invitation for bids for the construction of Miscellaneous concrete projects and having examined the plans and specifications with the related documents and the site of the proposed work, and being familiar with all the conditions surrounding the construction of the proposed project including the availability of materials and labor, hereby proposes to furnish all labor, materials, and supplies, and to construct the project in accordance with the contract documents, within the time set forth therein, and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the contract documents, of which this proposal is a part.

CONTRACTOR hereby agrees to commence work under this contract on or before a date to be specified in written "Notice To Proceed" of the **OWNER** and to fully complete the project by April 30, 2023, thereafter as stipulated in the specifications. **CONTRACTOR** further agrees to pay as liquidated damages the sum \$200.00 for each Calendar Day thereafter as hereinafter provided.

The **CONTRACTOR** hereby declares that he holds Contractor's License No. _____ as issued by the State Authority in which this work is to be done and that this license is in effect until _____, _____, and that he/she will maintain his/her license in force and effect during the life of the contract, including and the guarantee period.

Upon receipt of written notice of acceptance of this bid, the **CONTRACTOR** will execute and deliver to the **OWNER** within ten (10) days the formal construction contract. The bid security attached in the sum of

_____ (\$ _____)

is to become the property of the **OWNER** in the event the contract is not executed within the time above set forth, as liquidated damages for the delay and additional expense to the **OWNER** caused thereby.

Signature of Owner or Corporate Officer

Date

**BID for UNIT PRICE CONTRACT
CONCRETE CONSTRUCTION**

Item	Description	Qty	Unit	Unit Price	Amount
100	18" CMP Culvert at 2509 S Main St approximately 40'	1	EA		
101	18" CMP Culvert at 205 Timberlake Dr approximately 41'	1	EA		
GRAND TOTAL					

The City of Springfield reserves the right to reject any and/or all bids.

NOTE: Quantities are for bid purposes only and may be increased, decreased or deleted without any additional compensation to the contractor.

Respectfully submitted by:

Signature of Owner or Corporate Officer

Print Name

Title

Date

Company

Phone

Address

Email

BID CONTRACT AGREEMENT

This **CONTRACT**, made this _____ day of _____, 2022 and between THE CITY OF SPRINGFIELD, TENNESSEE, herein called the "**OWNER**", and

_____ a _____ of _____,

County of _____ and State of _____, hereinafter called "**CONTRACTOR**".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the **OWNER**, the **CONTRACTOR** hereby agrees with the **OWNER** to commence and complete the construction described as follows:

CONTRACT for the rehabilitative lining of existing corrugated metal pipe (CMP) storm drains approximately 40 linear feet in length and any other construction necessary for completion of this project per the construction plans and specifications and/or as directed by the Public Works Director. Any traffic control per the MUTCD and any other construction necessary to complete this project as indicated on the construction plan and having examined the plans and specifications with the related documents and the site of the proposed work, or any work that may be directed by the Public Works Director.

Hereinafter called the PROJECT, for the sum of _____ Dollars (\$ _____)

and all extra work in connection therewith, under the terms as stated in the General Provisions, Special Conditions, Specifications and any Addenda or Modifications of the Contract; and at this (it's or their) own property cost and expense to furnish all the materials, supplies, machinery, equipment, tools, supervision, labor, insurance, and other accessories and services necessary to complete the said project in accordance with the conditions and unit prices stated in the Proposal, the General Provisions, Supplemental General Conditions, Special Conditions, Special Specifications of the Contract, Addenda and Modifications, the plans, which may include maps, details, plats, blue prints, and other drawings and printed or written explanatory matter thereof, the specifications and contract documents therefore as prepared by Clayton Moore, P.E. herein entitled the DIRECTOR, and as encumbered in Part 1 of the General Provisions, all of which are made a part hereof and collectively evidence and constitute the contract.

CONTRACTOR hereby agrees to commence work under this contract on or before a date to be specified in written "Notice to Proceed" of the **OWNER** and fully completed and approved by the **DIRECTOR** by April 30, 2023 thereafter as stipulated in the specifications. **CONTRACTOR** further agrees to pay as liquidated damages the sum \$200.00 for each Calendar Day thereafter as hereinafter provided.

CONTRACTOR further agrees to pay as liquidated damages the sum \$200.00 for each Calendar Day thereafter, for either of the above, as hereinafter provided. If liquidated damages are assessed for this closure, they shall be cumulative to any other liquidated damages assessed for the completion of the entire project.

The **OWNER** agrees to pay the **CONTRACTOR** in current funds for the performance of the contract, subject to additions and deductions, as follows: pay request shall be submitted at the end of each month, the **CONTRACTOR** shall prepare and submit to the **DIRECTOR** for approval a duly certified estimate of the work performed and a copy of all test results and quality assurance records during the preceding period. Upon **DIRECTOR** approval of the estimate, and no later than the fifteen (15) days after submittal by the **CONTRACTOR**.

The **OWNER** within shall make final payment to the **CONTRACTOR** forty-five (45) days after:

- a. The completion of the **PROJECT**;
- b. The approval by the **DIRECTOR** of all work performed under the contract;
- c. The acceptance of the work by the **OWNER**;
- d. An affidavit by the **CONTRACTOR** to the effect that payment has been made for all labor, materials and subcontractors for the construction of the project.
- e. Submitting of all test results to the Director for approval.
- f. The preparation by the **CONTRACTOR** and approval by the **DIRECTOR** of a final estimate of the cost of the completed work.

The **CONTRACTOR** shall protect, indemnify and save harmless the **OWNER** from any and all damage, loss, claims, judgments or expenses, including but not limited to reasonable attorney's fees, which the **OWNER** may suffer or be subjected to by the performance of the Work, including but not without limitation to injury or death of any person whomever and destruction or damage to any property whatever.

This CONTRACT shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

Final payment to the **CONTRACTOR** shall equal the approved final estimate of cost less the aggregate of all previous payments to the **CONTRACTOR**, and less all liquidated damages assessed in accordance with the terms of this CONTRACT.

IN WITNESS WHEREOF, the parties to these presents have executed this CONTRACT in two (2) counterparts, each of which shall be deemed an original, in the year and day first above mentioned.

THE CITY OF SPRINGFIELD, TENNESSEE

Ann Schneider, Mayor

Lisa Crockett, City Recorder

(City Seal)

Witness

Contractor

Witness

Title

Title

Address

CONTRACT PAYMENT AND PERFORMANCE BOND

CONTRACT NO. _____

Be it known that _____, as Principal and _____, as Surety(ies) all authorized to do business in the State of Tennessee, hereby bind themselves to the City of Springfield, Tennessee, and other potential claimants, for all obligations incurred by the Principal under its contract with the City of Springfield, Tennessee, for the construction of the above identified contract; in the full contract amount of

_____ (\$ _____).

The obligations of the Principal and Surety(ies) under these payment and performance bonds shall continue in full force and effect until all materials, equipment and labor have been provided AND all requirements contained in the contract, plans and specifications have been completed in a timely, thorough and workmanlike manner. The parties agree that these bonds are statutory in nature and are governed by the provisions contained in Title 12, chapter 4 and Title 54, chapter 5 of the Tennessee Code Annotated relating to bonds required of contractors and that those provisions constitute a part of this bond.

By this instrument, the Principal and Surety(ies) specifically bind themselves, their heirs, successors, and assigns *in solido*, under the following bonds:

Payment Bond. To the City of Springfield, Tennessee and all "Claimants," as contemplated by T.C.A. Title 54, chapter 5, in the full contract amount of

_____ (\$ _____),

in order to secure the payment in full of all timely claims under the project.

Performance Bond. To the City of Springfield, Tennessee in the full contract amount of

_____ (\$ _____),

in order to secure the full and faithful performance and timely completion of the project according to its plans and specifications, inclusive of overpayments to the contractor and liquidated damages as assessed.

Upon receipt of notice that the Principal is in default under the contract, the Surety(ies) shall undertake to complete performance, without regard to cost. If the Surety(ies) fail or refuse to

complete performance of the contract, the City may then proceed with the work in any lawful manner that it may elect until it is finally completed. When the work is thus finally completed, the total cost of the same will be computed. All costs and charges incurred by the City in completing the Work will be deducted from any monies due or which may become due to the Principal. If the total costs of completion exceed the sum which would have been payable under the Contract, then the Principal and the Surety(ies), *in solido*, shall be liable for and shall pay to the City the amount of such excess.

In witness whereof we have signed this instrument as dated.

Principal/Contractor 1 _____

By: _____

Date _____

Printed Name and Title

(For Joint Venture)

Principal/Contractor 2 _____

By: _____

Date _____

Printed Name and Title

Surety 1

Surety 2

By: _____
Attorney-in -Fact

By: _____
Attorney-in -Fact

Print Name

Print Name

Agency Name

Agency Name

Street Address

Street Address

City, State, Zip

City, State, Zip

(Seal)

(Seal)

Subsequent correspondence/communication from City of Springfield, Tennessee with respect to monthly progress reports and/or the contract bonds should be directed to:

Name

Name

Address

Address

City, State, Zip

City, State, Zip

Phone Number

Phone Number

Email

Email

CERTIFICATE OF OWNER'S ATTORNEY

I, the undersigned, _____, the duly authorized and acting legal representative of City of Springfield, Springfield, Tennessee do hereby certify as follows:

I have examined the attached contract(s) and surety bonds and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements has been duly executed by the proper parties thereto acting through their duly authorized representative; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with terms, conditions and provisions thereof.

Signed: _____ Date: _____

CONTRACTOR'S LIABILITY INSURANCE

The limits of liability for the insurance shall provide coverage for not less than the following amounts or greater where required by law:

- a. State Statutory
- b. Applicable Federal Statutory
- c. Employer's Liability \$500,000

Comprehensive General Liability:

- (1) General Aggregate \$1,000,000
(Except Products-Completed Operations)
- (2) Products – Completed Operations Aggregate \$1,000,000
- (3) Personal and Advertising Injury \$1,000,000
(Per Person/Organization)
- (4) Each Occurrence \$1,000,000
(Bodily Injury and Property Damage)
- (5) Property Damage liability insurance will provide \$1,000,000
Explosion, Collapse and Underground coverage
where applicable
- (6) Excess Liability \$1,000,000
General Aggregate
- Each Occurrence \$1,000,000

Automobile Liability:

- (1) Combined Single Limit \$1,000,000 Each Accident
(Bodily Injury and Property Damage)

Contractual Liability Insurance

The Contractual Liability coverage shall provide coverage for not less than the following amounts:

(1) General Aggregate	\$1,000,000
(2) Each Occurrence (Bodily Injury and Property Damage)	\$1,000,000