

The Procurement Division of Knox County Tennessee will receive sealed bids for the provision of **Structural Stabilization Services** as specified herein. Bids must be received by 2:00 p.m. on **September 9, 2020**. Late bids will be neither considered nor returned.

Deliver Bids To:

Bid Number 2981
Knox County Procurement Division
1000 North Central Street, Suite 100
Knoxville, Tennessee 37917

The Bid Envelope Must Show the Bid Number, Bid Name & Bid Opening Date.

SECTION I GENERAL TERMS AND CONDITIONS

- 1.1 ADDITIONAL INFORMATION:** Knox County wants requests for additional information routed to Jay Garrison, CPPO, CPPB, Procurement Coordinator, at 865.215.5767. Questions may be faxed to 865.215.5778 or emailed to jay.garrison@knoxcounty.org. Information about the Knox County Procurement Division may be obtained on the Internet at www.knoxcounty.org/procurement.
- 1.2 ACCEPTANCE:** Vendors shall hold their price firm and subject to acceptance by Knox County for a period of sixty (60) business days from the date of the bid opening, unless otherwise indicated in their bid.
- 1.3 ALTERNATIVE BIDS:** Knox County will not accept alternate bids (those not equal to specifications) unless authorized by the Invitation for Bid.
- 1.4 AUDIT HOTLINE:** Knox County has established an Audit Hotline to report potential fraud and waste. To report potential fraud, waste or abuse, please call 1.866.858.4443 (toll-free). You can also file a report online by accessing <http://www.knoxcounty.org/hotline/index.php>.

Vendors are hereby cautioned that this Audit Hotline does not replace the Award Protest Procedures found in Section VI, Item M of the Knox County Procurement Regulations.

- 1.5 AWARD:** Award will be made to the most responsive, responsible bidder(s) meeting specifications, who presents the product or service that is in the best interest of Knox County. Knox County reserves the right to award this bid on, an "all or none" basis, or by a multiple award, whichever is in the best interest of the County. Knox County reserves the right to not make an award.
- 1.6 BID DELIVERY:** Knox County requires bidders, when hand delivering bids, to time date and stamp the envelope before depositing it in the bid box. The time clock in the Procurement Division shall become the official record of time. Knox County shall not be responsible for technical difficulties experienced by vendors trying to register or submit their bid electronically less than twenty-four (24) hours prior to the bid opening time.

Solicitations must be in a sealed envelope/box prior to entering the Procurement Division office. Procurement Division personnel are not allowed to see the submittal nor assist in placing documents in an envelope/box. Additionally, the Procurement Division is not responsible for providing materials (e.g. envelopes, boxes, tape) for submittals.

- 1.7 BID EXPENSES:** Expenses for developing the bids are entirely the responsibility of the bidder and shall not be chargeable in any manner to Knox County.
- 1.8 BUSINESS OUTREACH PROGRAM:** Knox County has established a Business Outreach Program, which has the responsibility of increasing opportunity for small, minority and women owned businesses. This is being accomplished through community education programs, policy edification, active recruitment of interested businesses and process re-engineering. Knox County is committed to ensuring full and equitable participation for all disadvantaged businesses. Knox County welcomes submittals from those disadvantaged businesses that have an interest in providing goods and/or services listed herein. In addition, Knox County strongly encourages the inclusion of disadvantaged businesses by non-disadvantaged Contractors who may wish to partner or subcontract portions of this agreement in order to accomplish the successful delivery of goods and/or services.

If you are a small, minority or woman owned business and would like additional information about our Business Outreach Program please contact:

Diane Woods, Business Outreach Administrator
Knox County Procurement
Telephone: 865.215.5760
Fax: 865.215.5778
Email: diane.woods@knoxcounty.org

- 1.9 CLOSURES:** During periods of closure due to unforeseen circumstances in Knox County or closures at the direction of the Knox County Mayor, the Procurement Division will enact the following procedures in regards to solicitations and weather delays:
- If the Mayor closes the Administrative offices prior to the time set for solicitation opening of any business day, all solicitations due that same day will be moved to the next operational business day.
 - Other unforeseen circumstances shall be at the sole discretion of the Procurement Director.
 - Knox County shall not be liable for any commercial carrier's decision regarding deliveries during any unforeseen circumstances.
- 1.10 CONFLICT OF INTEREST:** Vendors must have read and complied with the "Non-Conflict of Interest" statement provided in the vendor registration process prior to the opening of this solicitation.
- 1.11 COOPERATIVE PROCUREMENT:** Vendors are to indicate whether it is permissible for other governments in Tennessee to purchase these items or services at the same price. Freight charges can be adjusted to reflect differences in delivery costs. Indicate any additional delivery charges or minimum orders for purchases by other entities.
- 1.12 DECLARATIVE STATEMENTS:** Any statement or words (e.g.: must, shall, will) are declarative statements and the vendor must comply with the condition. Failure to comply with any such condition may result in the bid being non-responsive and disqualified.
- 1.13 DUPLICATE COPIES:** Knox County **requires** that bids being submitted by hand be one (1) marked original and one (1) exact copy.
- 1.14 ELECTRONIC TRANSMISSION OF BIDS:** Knox County's Procurement Division **will** accept, and strongly encourages, electronically transmitted bids through the County's On-Line Procurement System. Facsimile and email submission is strictly prohibited.
- 1.15 HOW TO DO BUSINESS:** Knox County utilizes a web-based Procurement software system, "Knox Procurement On-Line." The system provides our clients (vendors, county departments and the citizens of Knox County) with a more enhanced and end-user friendly means of accessing our services. The system allows for on-line vendor registration and maintenance, electronic receipt of purchase orders, on-line retrieval and submittal of quotes, bids and proposals for our vendor-clients and on-line requisitioning and receiving for our county departments. For the County to maximize its investment and minimize the cost associated with office operations we need your help. When doing business with Knox County we are urging you to please go to our website at www.knoxcounty.org/Procurement, register as a vendor in our on-line Procurement system, "Knox Procurement On-Line," if you have not done so and whenever possible to conduct your business with the County through this site. If you have any questions please contact the Procurement Division Representative listed in Section 1.1 of this document.
- 1.16 MULTIPLE BIDS:** Knox County will consider multiple bids that meet specifications.
- 1.17 NON-COLLUSION:** Vendors, by submitting a signed bid or proposal, certify that the accompanying bid or proposal is not the result of, or affected by, any unlawful act of collusion with any other person or company engaged in the same line of business or commerce, or any other fraudulent act punishable under Tennessee or United States law.
- 1.18 PAYMENT METHOD:** Knox County utilizes two (2) methods of placing orders for products. The first is the use of Purchase Orders. These Purchase Orders will be issued from Knox County Procurement Division via the method selected by the vendor during registration. The Purchase Order will detail the quantity, specific items(s) and the contracted price for each item.

The second method is the use of the Knox County Credit Card (VISA). Orders placed with the credit card will list the same information as the Purchase Order. Vendors will be given the card information and approval to process the transactions by the requesting department. Vendors must indicate in their bid response if the vendor will accept the Knox County Credit Card (VISA) as a form of payment. Bidders are prohibited to charge Knox County any type of merchant fee from their financial institution to accept this type of payment.

- 1.19 POSSESSION OF WEAPONS:** All vendors and their employees and their agents are prohibited from possessing any weapons on Knox County property without prior written consent from the County. In the case of a vendor whose Contract requires possession of firearms or other weapons to successfully complete their Contract, vendor must provide personnel who are bonded to bear said weaponry.
- 1.20 PROCESSING TIME FOR PAYMENT:** Vendors are advised that a minimum of thirty (30) days is required to process invoices for payment.
- 1.21 PROOF OF FINANCIAL AND BUSINESS CAPABILITY:** Bidders must, upon request, furnish satisfactory evidence of their ability to furnish products or services in accordance with the terms and conditions of these specifications. Knox County will make the final determination as to the bidder's ability.
- 1.22 RECYCLING:** Knox County, in its continuing efforts to lessen the amount of landfill waste and to further recycling efforts, requests that bids submitted on paper shall:
- 1.22.1** Be submitted on recycled paper;
 - 1.2.2** Not include pages of unnecessary advertising;
 - 1.22.3** Be made on both sides of each sheet of paper.
- 1.23 RESTRICTIVE OR AMBIGUOUS SPECIFICATIONS:** It is the responsibility of the prospective bidder to review the entire Invitation for Bid packet and to notify the Procurement Division if the specifications are formulated in a manner that would unnecessarily restrict competition. Any such protest or question regarding the specifications or bidding procedures must be received in the Procurement Division by **August 20, 2020 by 4:30 p.m.** These requirements also apply to specifications that are ambiguous.
- 1.24 SIGNING OF BIDS:** When submitting your bid, in order to be considered all bids must be signed. Please sign the original in blue ink. When submitting electronically, the submission of the bid constitutes the acceptance of all terms and conditions and will legally bind the Vendor to the County's request for goods and/or services and the Vendors subsequent response.
- 1.25 TAXES:** Knox County purchases are not subject to taxation. Tax exemption certificates will be provided upon request.
- 1.26 TERM BID AGREEMENTS:** If this bid results in a term bid Contract with the vendor, Knox County must receive all general price decreases that other similar customers receive.
- 1.27 TITLE VI OF THE 1964 CIVIL RIGHTS ACT AND TITLE IX OF THE EDUCATIONAL AMENDMENT OF 1972:** "Nondiscrimination on Federally Assisted Programs" — "No person in the United States shall, on the ground 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." 42 U.S.C. section 2000d. It is the policy of Knox County Government that all its services and activities be administered in conformance with the requirements of Title VI and Title IX.
- 1.28 USE OF BID FORMS:** Vendors must complete the bid forms contained in the bid package. Failure to complete the bid forms may result in bid rejection.
- 1.29 VENDOR DEFAULT:** Knox County reserves the right, in case of vendor default, to procure the articles or services from other sources and hold the defaulting vendor responsible for any excess costs occasioned thereby. Should vendor default be due to a failure to perform or because of a request for a price increase, Knox County reserves the right to remove the vendor from the County's bidders' list for twenty-four (24) months.
- 1.30 VENDOR REGISTRATION:** Prior to the opening of this bid, **ALL BIDDERS** must be registered with the Procurement Division. A vendor application may be submitted online at www.knoxcounty.org/Procurement. Select the Vendor Registration link and complete the forms.

Vendors must be registered with the Procurement Division **prior** to submitting their bid. Knox County shall not be responsible for technical difficulties experienced by vendors trying to register or submit their bid less than twenty-four (24) hours prior to the bid opening time.

- 1.31 WAIVING OF INFORMALITIES:** Knox County reserves the right to waive minor informalities or technicalities when it is in the best interest of Knox County.

SECTION II OBLIGATIONS, RIGHTS AND REMEDIES

These terms and conditions shall be part of the Contract. Knox County reserves the right to negotiate other terms and conditions it deems appropriate and necessary under the circumstances to protect the public's trust.

- 2.1 ALTERATIONS OR AMENDMENTS:** No alterations, amendments, changes, modifications or additions to this Contract shall be binding on Knox County without the prior written approval of the County.
- 2.2 APPROPRIATION:** In the event no funds are appropriated by Knox County for the goods or services in any fiscal year or insufficient funds exist to purchase the goods or services, then the Contract shall expire upon the expenditure of previously appropriated funds or the end of the current fiscal year, whichever occurs first, with no further obligations owed to or by either party.
- 2.3 ASSIGNMENT:** Contractor shall not assign or sub-contract this agreement, its obligations or rights hereunder to any party, company, partnership, incorporation or person without the prior written specific consent of Knox County.
- 2.4 BOOKS AND RECORDS:** Contractor shall maintain all books, documents, accounting records and other evidence pertaining to the goods and services provided under this Contract and make such materials available at its offices at all reasonable times during the Contract period and for three (3) years from the date of the final payment under this agreement for inspection by Knox County or by any other governmental entity or agency participating in the funding of this agreement, or any authorized agents thereof; copies of said records to be furnished if requested. Such records shall include those books, documents and accounting records that represent the Contractor's costs of manufacturing, acquiring or delivering the products and services governed by this agreement.
- 2.5 CHILD LABOR:** Contractor agrees that no products or services will be provided or performed under this Contract which have been manufactured or assembled by child labor.
- 2.6 COMPLIANCE WITH ALL LAWS:** Contractor is assumed to be familiar with and agrees to observe and comply with all federal, state, and local laws, statutes, ordinances, and regulations in any manner affecting the provision of goods and/or services, and all instructions and prohibitive orders issued regarding this work and shall obtain all necessary permits. All Contractors must be properly licensed by the State of Tennessee and all other authorities having jurisdiction. **COPIES OF ALL SUCH LICENSES AND/OR PERMITS ARE TO BE SUBMITTED WITH THE BID. FAILURE TO SUBMIT COPIES OF SUCH MAY LEAD TO BID REJECTION.**
- 2.7 CRIMINAL HISTORY CHECK:** Any and all contractors, sub-contractors, successful vendors, vendor employees and school employees agree to comply with Tennessee Code Annotated Section 49-5-413. Tennessee Code Annotated Section 49-5-413 requires that all parties providing services at Knox County Schools must submit to a criminal history records check at their expense. The criminal history check is to be conducted by the Tennessee Bureau of Investigation and the Federal Bureau of Investigation prior to permitting the party to have contact with students or enter school grounds when students are present.
- 2.8 DEFAULT:** If Contractor fails to perform or comply with any provision of this Contract or the terms or conditions of any documents referenced and made a part hereof, Knox County may terminate this Contract, in whole or in part, and may consider such failure or noncompliance a breach of Contract. Knox County expressly retains all rights and remedies provided by law in case of such breach, and no action by Knox County shall constitute a waiver of any such rights or remedies. In the event of termination for default, Knox County reserves the right to purchase its requirements elsewhere, with or without competitive bidding.
- 2.9 GOVERNING LAW:** This Contract shall be governed by the laws of the State of Tennessee, and all obligations of the parties are performable in Knox County, Tennessee. The Chancery Court and/or the Circuit Court of Knox County, Tennessee, shall have exclusive and concurrent jurisdiction of any disputes which arise hereunder.

- 2.10 INCORPORATION:** All specifications, drawings, technical information, Invitation for Bid, Bid, Award and similar items referred to or attached or which are the basis for this Contract are deemed incorporated by reference as if set out fully herein.
- 2.11 INDEMNIFICATION/HOLD HARMLESS:** Contractor shall indemnify, defend, save and hold harmless Knox County, its officers, agents and employees from all suits, claims, actions or damages of any nature brought because of, arising out of, or due to breach of the agreement by Contractor, its subcontractors, suppliers, agents, or employees or due to any negligent act or occurrence or any omission or commission of Contractor, its subcontractors, suppliers, agents or employees.
- 2.12 INDEPENDENT CONTRACTOR:** Contractor shall acknowledge that it and its employees serve as independent Contractors and that Knox County shall not be responsible for any payment, insurance or incurred liability.
- 2.13 INSPECTION AND ACCEPTANCE:** Warranty periods shall not commence until Knox County inspects and formally accepts the goods and/or services. The terms, conditions and timing of acceptance shall be determined by Knox County. Knox County reserves the right to reject any or all items or services not in conformance with applicable specifications, and Contractor assumes the costs associated with such nonconformance. Acceptance of goods or services does not constitute a waiver of latent or hidden defects or defects not readily detectable by a reasonable person under the circumstances.
- 2.14 IRAN DIVESTMENT ACT:** By 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 party 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 on the list created pursuant to Tennessee Code Annotated § 12-12-106.
- 2.15 LIMITATION OF LIABILITY:** In no event shall Knox County be liable for any indirect, incidental, consequential, special or exemplary damages or lost profits, even if Knox County has been advised of the possibility of such damages.
- 2.16 NON-DISCRIMINATION AND NON-CONFLICT STATEMENT:** Contractor agrees that no person on the grounds of handicap, age, race, color, religion, sex, national origin, or any individual trait or characteristic found to be an illegal consideration shall be excluded from participation in, or be denied benefits of, or be otherwise subjected to discrimination in the performance of this agreement or in the employment practices of Vendor. Contractor shall upon request show proof of such non-discrimination and shall post in conspicuous places available to all employees and applicants notices of non-discrimination. Contractor covenants that it complies with the Fair Wage and Hour Laws, the National Labor Relations Act, and other federal and state employment laws as applicable. Contractor covenants that it does not engage in any illegal employment practices.
- Contractor covenants that it has no public or private interest and shall not acquire directly or indirectly any interest, which would conflict in any manner with the provision of its goods or performance of its services. Contractor warrants that no part of the total contract amount provided herein shall be paid directly or indirectly to any officer or employee of Knox County as wages, compensation, or gifts in exchange for acting as officer, agent, employee, sub-contractor or consultant to Contractor in connection with any goods provided or work contemplated or performed relative to the agreement.
- 2.17 ORDER OF PRECEDENCE:** In the event of inconsistent or conflicting provision of this Contract and referenced documents, the following descending order of precedence shall prevail: (1) Written Contract, (2) Invitation for Bid, (3) Bid Response, (4) Award, (5) Special Terms and Conditions, (6) General Terms and Conditions, (7) Specifications, (8) Drawings.
- 2.18 REMEDIES:** Knox County shall have all rights and remedies afforded under the U.C.C. and Tennessee law in Contract and in tort, including but not limited to rejection of goods, rescission, right of set-off, refund, incidental, consequential and compensatory damages and reasonable attorney's fees.
- 2.19 RIGHT TO INSPECT:** Knox County reserves the right to make periodic inspections of the manner and means the service is performed or the goods are supplied.
- 2.20 SEVERABILITY:** If any provision of this Contract is declared illegal, void or unenforceable, the remaining provisions shall not be affected but shall remain in force and in effect.

- 2.21 TAX COMPLIANCE:** Pursuant to Resolution R-07-1-903 passed by the Commission of Knox County, Tennessee, Contractor hereby acknowledges, by submission of its bid and signature that it is current in its respective Federal, State, County, and City taxes of whatever kind or nature and is not delinquent in any way. Delinquent status must be disclosed or risk debarment by the Knox County Procurement Division.
- 2.22 TERMINATION:** Knox County may terminate this agreement with or without cause at any time. In the event of termination by either party, fees due for services satisfactorily performed or goods accepted prior to the termination date shall be paid.
- 2.23 WARRANTY:** Contractor warrants to Knox County that all items delivered and all services rendered shall conform to the specifications, drawings, bid and/or other descriptions furnished and/or incorporated by reference, and will be fit for the particular purpose purchased, of merchantable quality, good workmanship, and free from defects. Contractor extends to Knox County all warranties allowed under the U.C.C. Contractor shall provide copies of warranties to the County. Return of merchandise not meeting warranties shall be at Contractor's expense.

SECTION III SPECIAL TERMS AND CONDITIONS

- 3.1 INTENT:** The intent of this Invitation for Bids is to convey to prospective vendors the nature of Structural Stabilization Services as desired by the Knox County School Maintenance and Operations Department (KCSMO). Award will be based on Best Value. Best Value means more than low cost. It includes cost, service quality and other factors detailed herein.
- 3.2 ACCEPTANCE:** Vendors are advised that the payment of an invoice does not necessarily constitute an acceptance of goods or services that are provided. Acceptance requires a specific written action by Knox County so stating.
- 3.3 ADDITION OR DELETION OF SERVICES:** Knox County may, but shall not be required, to request the vendor to add other Structural Stabilization Services as needed by Knox County. The successful vendor agrees that upon written designation by Knox County, it will perform such services under this Contract. Pricing for any additional services will be negotiated with the vendor. Knox County may delete from the Contract, services that are no longer needed without terminating the entire Contract.
- 3.4 AWARD STATUS:** Knox County intends to issue a one-year (1) award. Upon the mutual agreement of the successful vendor and Knox County, the award may be extended for four (4) one-year (1) renewals, one (1) year at a time. This may result in a total of five (5) years. Knox County reserves the right to purchase these items/services from other sources if the need arises.
- 3.5 BID EXPENSES:** Expenses for developing the bids are entirely the responsibility of the bidder and shall not be chargeable in any manner to Knox County.
- 3.6 BIDS REQUESTED ON BRANDS OR EQUAL:** Unit price bids are requested on products that equal or exceed the quality and performance of the brands and model numbers listed. References to brand names, trade names, model numbers or other descriptions peculiar to specific brand products are made to establish a required level of quality and functional capabilities, and are not intended to exclude other products of that level. Comparable products of other manufacturers will be considered if proof of comparability is contained in the bid. It shall be the responsibility of the bidders, including bidders whose product is referenced, to furnish with the bid such specifications, catalog pages, brochures or other data as will provide an adequate basis for determining the quality and functional capabilities of the product offered. Failure to provide this data may be considered valid justification for rejection of a bid.
- 3.7 CHANGES AFTER AWARD:** It is possible that after award, Knox County might change its needs or requirements. Knox County reserves the right to make such changes after consultation with the Contractor. Should additional costs arise, Knox County reserves the right to consider accepting these charges provided the Contractor can document the increased costs. Knox County also reserves the right to accept proposed service changes from the Contractor if they will lower the cost to Knox County and/or provide improved service.
- 3.8 COMPLIANCE WITH INSTRUCTIONS FROM SITE BASED ADMINISTRATORS:** Should a site-based administrator (typically a principal or assistant principal) request a cessation of work, work shall immediately stop. Vendor is to immediately call the Knox County Schools contract administrator in charge of the project for further instruction. Should a site based administrator request a change of scope, function, design, et cetera of the project, such request is to be reported to the Knox County Schools contract administrator prior to any changes being accepted.

- 3.9 COMPLIANCE WITH ALL APPLICABLE REGULATIONS:** Bidder agrees and covenants that the company, its agents and employees will comply with all City, County, State and Federal codes, laws, rules and regulations applicable to the business to be conducted under this contract. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, the Contractor shall bear all costs arising from them.
- 3.10 CONTRACT EXECUTION:** The award of this bid will result in a Contract between Knox County and the successful bidder(s). The Knox County Procurement Division will draft this Contract and no vendor forms, (i.e. Terms and Conditions, Service Agreements, or other standard Company forms, etc.) will be accepted as contract documents or as contract attachments.
- 3.11 ENTRANCE TO KNOX COUNTY SCHOOL SITES:** Only authorized employees of the successful Contractor(s) are allowed on the premises of KCS buildings. Contractor(s) employees are not to be accompanied in their work area by acquaintances, family members, assistants or any person unless said person is an authorized employee of the Contractor(s). All employees must wear a company uniform, or name badges identified with the Company name at all times. Contractor and/or employees of contractors must contact KCSMO's Environmental Department prior to reporting to a site for work.
- 3.12 ENVELOPE COVER:** Vendors must attach the bid envelope cover sheet to their submittal envelope. Complete all blanks on the cover. Insert "not applicable" if category does not apply. Bids received without the envelope cover sheet information will not be considered.
- 3.13 EVALUATION CRITERIA:** This bid will be evaluated using the following criteria:
- | | |
|--------------------------------------|-----------|
| Pricing | 85 Points |
| Experience and business capabilities | 10 Points |
| References | 5 Points |
- (To substantiate quality as well as volume and nature of work)
- 3.14 EVALUATION REVIEW:** Knox County reserves the right to use all pertinent information that might affect the County's judgment as to the appropriateness of an award to the best evaluated bidder. This information may be appended to the bid evaluation process results. Information on a service provider from reliable sources, and not within the service provider's bid, may also be noted and made part of the evaluation file. Knox County shall have sole responsibility for determining a reliable source. Knox County reserves the right to conduct written and/or oral discussions/interviews after the bid opening. The purpose of such discussions/interviews is to provide clarification and/or additional information to make an award that is in the best interest of Knox County.
- 3.15 IDENTIFICATION AND UNIFORMS:** Employees of the vendor shall have proper photo identification displayed, at all times, while on School property. If appropriate the Knox County Schools Maintenance & Operations Department can provide temporary photo identification for a fee of \$10.00 per badge. Additionally, as appropriate, vendor is encouraged to have its employees in a standard uniform. This is a preference but not a requirement.
- 3.16 INSURANCE:** The successful Contractor(s) must carry the insurance as indicated on the Insurance Attachment hereto. As proof of the Contractor's willingness to obtain and maintain the insurance, the Contractor must complete, sign and have its insurance agent sign the attachment and submit it with the bid. Upon the Notification of Intent to Award, the successful Contractor(s) will be required to submit a Certificate of Insurance with the appropriate coverage's and naming Knox County as additional insured.
- 3.17 INTERPRETATION:** No oral interpretation will be made to any Bidder regarding the meaning of specifications. All questions are to be submitted in writing or electronically (email) and will be answered in the form of an amendment to the solicitation by the Knox County Procurement Division.
- 3.18 INVOICING REQUIREMENTS:** As several different departments may use this contract, please adhere to the following guidelines:

FOR KCSMO MAIL ALL INVOICES TO:

Knox County Schools Maintenance & Operations
Procurement Supervisor
900 East Fifth Avenue
Knoxville, Tennessee 37917

FOR KNOX COUNTY MAIL ALL INVOICES TO:

The address listed on the Purchase Order.

THE FOLLOWING GENERAL GUIDELINES APPLY TO ALL DEPARTMENTS. HOWEVER, EACH DEPARTMENT MAY HAVE ADDITIONAL OR SLIGHTLY DIFFERENT NEEDS, WHICH THEY WILL COMMUNICATE TO YOU.

- 3.18.1 TRACKING NUMBER:** All invoices must have one of our tracking numbers on them or they will be returned. You will only have one number per invoice.
- 3.18.2 INVOICE DETAIL:** At a minimum, these items must be shown on the invoice:
The grand total amount
An itemized list detailing the description, quantity and cost of each item or service provided (not if the job was a "Not to Exceed" project)
The location delivered to (Such as XYZ School or Maintenance 5th Avenue)
The date the work/materials were delivered
A statement that the price invoiced is per the bid/quote
The tracking number (purchase order, field purchase order or encumbrance number)
- 3.18.3 SUBMIT ONE (1) ORIGINAL INVOICE AND ONE (1) COPY OF IT.**
- 3.18.4 INVOICES ARE TO BE ORIGINAL, WITH A UNIQUE REFERENCE NUMBER. PREFERABLY INVOICES WILL BE WHITE.**
- 3.18.5 REVIEW OF INVOICES:** Invoices will be reviewed for adherence to bid terms and/or the quotation.
- 3.18.6 VARIATION:** Variation from the terms of our bids is strictly prohibited. It will help speed your payment if your invoice notes the bid number or name. It will be even more helpful if your invoice clearly states that the charges are in accordance with the bid or quotation terms. While failure to follow these guidelines may slow down the payment process, following these steps will help you receive payment faster.
- 3.18.7 JOB/SERVICE TICKETS:** Job/service tickets that substantiate the invoice must accompany the invoice. The original job/service tickets will be given to the requesting department. Copies must accompany the invoice.
- 3.18.8 UNPAID INVOICES:** If invoices are unpaid after thirty (30) days, please contact Allison Shepherd (KCSMO) at 865.594.3633 to ascertain their status. For the Knox County Schools Facilities Department, contact William Anderson III at 865.594.1384.
- 3.19 LICENSING:** All bidders must be properly licensed by the State of Tennessee and all other authorities having jurisdiction. Copies of all such licenses and/or permits must be submitted with your bid. Failure to submit copies of such may lead to rejection of your bid.
- 3.20 MATERIAL/LABOR QUALITY:** Unless otherwise specified, all materials must be of a commercial grade or better.
- 3.21 NEW MATERIAL:** Unless specified otherwise in the bid package, Contractor(s) must provide new supplies. New, as used in this clause, means previously unused materials. Material includes but is not limited to, raw material, parts, items, components, and end products. Bidder submission of other than new materials may be cause for the rejection of the bid. Refurbished or remanufactured materials **will not** be accepted.
- 3.22 NEWS RELEASES BY CONTRACTORS:** As a matter of policy, Knox County does not endorse the services of a Contractor. A Contractor will not make news releases concerning any resultant contract from this solicitation without the prior written approval of Knox County.
- 3.23 NO CONTACT POLICY:** After the date and time that the vendor receives this solicitation, any contact initiated by any bidder with any Knox County representative, other than the Procurement Division representative listed herein, concerning this Invitation for Bid is strictly prohibited. Any such unauthorized contact may cause the disqualification of the bidder from this procurement transaction.
- 3.24 OPEN BID INTENDED:** It is the intent and purpose of Knox County that this Invitation for Bid promote competitive bidding. It shall be the bidder's responsibility to advise the Procurement Division if any language, requirements, et cetera or any combination thereof, inadvertently restricts or limits this Invitation for Bid. Such notification must be submitted in writing and must be received by the Procurement Division no later than **August 20, 2020 by 4:30 pm.**
- 3.25 PERFORMANCE AND PAYMENT BOND:** The awarded vendor(s), if applicable shall provide performance and payment bonds, each equal to one hundred percent of the total sum of the any work related to this contract.

Bonds must be issued by a company authorized to do business in Tennessee and the bonding company must be listed in: The Federal Register Part II, department of the Treasury, Fiscal Service; Companies Holding certificates of Authority as Acceptable Reinsuring Companies.

3.26 PERMITS: Contractor will be responsible for obtaining any and all required permits. Knox County shall not be responsible for the cost of any and all permits.

3.27 PRICING: Bidders must quote a firm fixed price for the items noted herein. The price may not change during the term of the Contract. However the Contractor may request a price increase at each renewal period. A request for a price increase must be accompanied by proof of increased price to the Contractor. Knox County reserves the right to accept or reject the requested price increase. If the price increase is rejected the Contractor may:

3.27.1 Continue with existing prices

3.27.2 Not accept the renewal offer

3.27.3 Request a lower price increase

If a price increase is approved by Knox County and Knox County Schools Maintenance & Operations (KCSMO), the approval notification will be done in writing and the vendor will be notified of the new price schedule. This documentation will become part of the bid file. No approvals will be authorized verbally. Any price increase shall not exceed the Consumer Price Index (CPI) for all Urban Consumers. However, vendor must submit proof of price increase.

3.28 PUBLIC RECORDS ACT: Knox County is subject to the Tennessee Open Records Act 10-7-503 et seq. Bidders are cautioned that all documents submitted on behalf of this Invitation for Bid shall be open to the public for viewing and inspection and Knox County will comply with all legitimate requests.

3.29 QUANTITIES: Knox County does not guarantee any set amounts of advertising to be purchased from this Contract.

3.30 REFERENCES: Proposers **must** submit a list of three (3) references with which you have performed this type of service within the past three years. Show the name of the agency or institution, person to contact, their **current** telephone number, **current** e-mail address and the nature and size of the contract. Do not list any Knox County Government department as a reference.

3.31 RIGHT TO SEPARATELY BID PROJECTS: KCSMO reserves the right to separately bid any project when it is in their best interest.

3.32 SAFETY TRAINING: The Contractor is responsible for training their employees in Safety and Health Regulations for the job, assuring compliance with Tennessee Occupational Safety and Health regulations and any other Regulatory Agency.

3.33 SAFETY AND PROTECTION: The Contractor shall be solely and completely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work. The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent injury to, all employees on the work site and other persons including but not limited to, the general public who may be affected thereby.

The Contractor shall be responsible for providing and for the placement of barricades, tarps, plastic, flag tape and other safety/traffic control equipment required to protect the public, surrounding areas, equipment and vehicles. The flow of vehicular traffic shall not be impeded at any time during the project. The safety of the public is of prime concern to Knox County School Maintenance & Operations and all costs associated are the responsibility of the contractor.

KCSMO does not assume any responsibility for the protection of or for loss of materials, from the time that the Contract operations have commenced until the final acceptance of the work by the project manager. The Contractor is responsible for training their employees in safety and health regulations for the job. This is to assure compliance with Tennessee Occupational Safety and Health regulations and the regulations of any other regulatory agency.

3.34 SIGN-IN: Workers must individually sign the Vendor Check-In Log at each site where work is to be performed. Failure to sign-in will negate Knox County Schools' responsibility to pay the resulting invoice.

- 3.35 SUB-CONTRACTING:** Any sub-contracting must be approved, in advance, by both Knox County and KCSMO. Knox County and KCSMO may terminate the Contract if subcontracting is done without approval.
- 3.36 SUB-CONTRACTORS:** Bidders are strongly encouraged to solicit minority owned and operated sub-contractors for this bid and during the duration of the award.
- 3.37 SUBMIT QUESTIONS:** Prospective bidders may submit questions concerning this solicitation by **August 20, 2020 by 4:30 pm**. Submit questions as noted in Section 1.1.
- 3.38 USE OF TRASH CONTAINERS:** Vendors are advised that the Knox County Schools policy does not allow vendors to utilize on-site trash bins paid for by Knox County Schools. Vendors are responsible for removing and disposing of debris.
- 3.39 VALUE ADDED RELATIONSHIP:** Knox County and KCSMO intend for this bid to result in a relationship with a vendor. Knox County and KCSMO desire a long-term relationship with a Contractor in which common goals are shared. Among those goals are:
- 3.39.1** Fair and equitable treatment of Contractor and County.
 - 3.39.2** Contractor expertise in methods of cost reduction. Contractors are encouraged to suggest ways in which costs can be reduced by product substitution or process modification.
 - 3.39.3** Contractor involvement in the School system or a specific school on a non-business basis. One example is involvement with the Knox County Schools Teacher Depot. The Teacher Depot accepts the donation of equipment and supplies for distribution to teachers.
- 3.40 WORKMANSHIP:** Where not more specifically described in any of the various sections of these specifications, workmanship shall conform to all of the methods and operations of best standards and accepted practices of the trade or trades involved, and shall include all items of fabrication, construction or installation regularly furnished or required for completion of the services. All work shall be executed by personnel skilled in their respective lines of work.

SECTION IV SPECIFICATIONS FOR COMPACTION GROUTING

4.1 INTRODUCTION:

- 4.1.1** Compaction grouting involves the injection under high pressure of a low-slump, mortar-like grout to compact and displace the adjacent soils. The grout does not penetrate soil pores but displaces the subsurface soils by forming a homogeneous grout bulb near the grout pipe tip.
- 4.1.2** In situ soil types: Compaction grouting is typically very effective in porous soil with permeability greater than 10^{-4} and in situ vertical stresses greater than 15 psi (100 kPa).
- 4.1.3** Applications: Loose fill stabilization; remediation of settling structures and utilities; sinkhole remediation; improvement of soil in Karstic regions; building/utility protection during tunneling; soil densification for site improvement; liquefaction mitigation. In certain cases, procedures can be designed to intentionally lift structures and/or utilities.

4.2 INTENT:

The intent of the compaction grouting specified herein is to provide soil improvement within the limits indicated on drawings to achieve the required degree of improvement detailed in section 4.12 of these specifications.

4.3 STANDARDS AND REFERENCES:

- 4.3.1** The most recent version of the following testing methods or standards may be employed:

- 1. ASTM D1586 Standard Penetration Testing (SPT)
- 2. ASTM D344 Static Cone Penetration Testing (CPT)
- 3. ASTM C150 Compliance Standard for Portland Cement
- 4. ASTM C143 Test Method for Slump of Portland Cement Concrete

- 4.3.2** Reference documents as provided to the grouting contractor shall include:

- 1. This specification.
- 2. Project drawings:
 - a. Engineer's foundation plan.
 - b. Engineer's existing underground utilities plan in the work area.

- c. Grout injection point layout, as detailed in the Submittals section 4.6 of these specifications.
3. Project geotechnical report.
4. Form of contract between Owner and General Contractor, Owner and Compaction Grouting Contractor, and General Contractor and Compaction Grouting Contractor as appropriate.

4.4 **DEFINITIONS:**

4.4.1 Compaction Grout: A material blend of fine aggregate, fines and water to achieve a pumpable, thixotropic, viscous grout of a low slump to enable pumping at high pressure and remain intact after injection. Material components can include sand, silt, clay, cement, ground slag, fly ash, water and other admixtures. Strength of grout is intended only to be greater than existing strengthened soil conditions.

4.4.2 Field Quality Control Representative: The individual given specific inspection tasks identified in this specification.

4.5 EXPERIENCE: Bidders must list all projects completed within the last three (3) years. Bidders must also furnish a list of at least three (3) previously completed projects of similar scope and purpose. Bidders must complete the attached Reference Check form. Do not list Knox County, Knox County Schools or any other Knox County department as references.

Bidders must also include the number of years in business, number of employees to be assigned to the Contract and a list of equipment owned in Section VI.

4.6 **SCOPE OF WORK:**

4.6.1 The work shall consist of installation, monitoring and testing of compaction grouting within the limits indicated on drawings to meet the acceptance criteria presented in Section 4.12 of these specifications.

4.6.2 In connection with the compaction grouting program, as shown on the drawings, the grouting contractor shall provide all labor, materials and equipment to accomplish the following items of work:

1. Implement ground/structure movement monitoring system.
2. Install and remove grout pipes.
3. Furnish and inject compaction grout.
4. Monitor surface ground/ structure movements during compaction grouting operations.
5. Follow compaction grouting sequence of operations.

4.6.3 It shall be the grouting contractor's responsibility to determine and implement the systems and criteria to ensure that specified improvement is achieved.

4.7 **SUBMITTALS:**

4.7.1 The following shall be submitted to the Owner's representative by the grouting contractor two (2) weeks prior to the start of the work:

1. Resumes of the management, supervisory, and key personnel, for approval by the Owner's representative.
2. A ground movement monitoring plan, as detailed in section 4.13 of these specifications.
3. A mix design for the project indicating sources and types of grout materials, with volumetric proportions, and field test data from previous projects indicating compressive strength and slump of 1 to 3 inches (50 to 100 mm) or less achieved. If the grouting contractor intends to deviate from the gradation provided in Section 4.10 of this specification, it shall submit, with the bid, evidence of satisfactory use of the proposed material from past projects with similar soil conditions.
4. Work procedures and control criteria (including volumes and pressure for each stage).
5. A general Work Procedures Plan outlining the spacing, location, depth and estimated quantity of grout to achieve the specified criteria detailed in Section 4.12 of this specification. Grout hole locations shall be dimensionally referenced to the structural foundation shown on the contract drawings.

4.7.2 The following shall be submitted to the Owner's representative by the grouting contractor during the work:

1. Accurate daily records of all grout pipe installation, compaction grouting quantities, including stage data, volume, pressure and depth for each grout pipe location.
2. Any change in the predetermined grouting program necessitated by a change in the subsurface conditions.

4.8 QUALITY ASSURANCE:

- 4.8.1** The compaction grouting program, including installation of grout pipes, shall be performed by a specialist grouting contractor with at least ten continuous years of documented experience in compaction grouting.
- 4.8.2** The grouting contractor shall provide experienced management, supervisory and key personnel as required to implement the compaction grouting program, as follows:
1. The project manager shall have at least five years of continuous experience in compaction grouting, with at least the last two years in the full-time employ of the grouting contractor.
 2. The superintendent shall have at least five years of experience in compaction grouting.
 3. As detailed in Section 4.6 of these specifications, the grouting contractor shall provide:
 - a. Evidence of previous compaction grouting project experience.
 - b. Evidence of management, supervisory and key personnel experience.
- 4.8.3** The Owner's representative will ensure that procedures and documentation conform to these specifications.

4.9 GROUTING EQUIPMENT:

- 4.9.1** The grouting contractor shall supply equipment capable of advancing the grout pipe through overburden, soils and other natural obstructions to the specified depth or as is required to meet the project objectives.
- 4.9.2** The grouting contractor shall supply all equipment required to operate a compaction grouting system capable of supplying the specified grout at variable flow rates and pressures, measured at the pump, up to 700 psi and at rates of 0.5 to 12 cubic feet per minute, as required to suit the application.
- 4.9.3** The mixer shall be a continuous auger type to ensure complete uniform mixing of the materials used and shall be of sufficient capacity to continuously provide the pumping unit with mixed grout at its normal pumping range. The mixer must be capable of volumetrically proportioning the grout materials. Ready mixed grout is also acceptable with an approved mix design.
- 4.9.4** The grouting contractor shall provide gauges or other instrumentation (measuring devices) to measure:
1. Continuous grout pressure close to the top of the injection casing
 2. Flow rate of grout.
 3. Volume of grout injected.
- 4.9.5** The grouting contractor shall supply and install structural monitoring equipment in accordance with Section 4.13 of these specifications.
- 4.9.6** An adequate communication system shall be maintained between the pumping and batching plant and the injection location. As an alternate, the contractor may furnish a remote control system to allow full control (start, stop, flow rate, reversing) of the pump directly by the grouting technician from the injection point.

4.10 GROUT PIPES:

- 4.10.1** Grout pipes and connections shall be steel casing of adequate strength to maintain the hole and to withstand the required jacking and pumping pressures. The pipes shall be at least 2.0 inches inside diameter in order to adequately handle the specified low slump material without plugging. All casing shall be flush joint threaded or a single piece tubing to provide a smooth inner wall and unobstructed inside diameter. It shall be the contractor's responsibility to install casing that does not detrimentally impact the grouting procedure.
- 4.10.2** Pipes shall be installed such that grout material will not travel in the annular space between the pipe and adjacent ground and escape at the surface when pumped.

4.11 GROUT MATERIALS:

- 4.11.1** Portland Cement (ASTM C150).
- 4.11.2** Fine aggregate shall be sand with fines content (percent passing No. 200 sieve) of not less than 10 percent and not more than 30 percent. Natural fines may be supplemented with Fly/ash, a minimal amount of bentonite, or aggregate washings.
- 4.11.3** Proportions of the mixture shall be as required to achieve a pumpable mix with not more than a 3 inch slump.
- 4.11.4** Upon discharge into the pump hopper or holding tank, the grout must be continuously agitated. Mixed grout may not be held in the agitator for more than 1.5 hours unless a set retarder, approved by the Owner's representative, is used.

4.12 SITE EXAMINATION:

- 4.12.1** Prior to submitting a bid price for the compaction grouting, the grouting contractor shall conduct a site inspection.
- 4.12.2** If a building in distress is involved, a relevant building survey may be in order prior to initiating work.

4.13 COMPACTION GROUTING:

- 4.13.1** Compaction grouting shall be sequenced so that grouting does not take place within 10 feet of locations grouted within the previous 12 hours.
- 4.13.2** As compaction grouting is completed at each location, the grouting contractor shall completely fill the grout hole to the ground surface.

4.14 FIELD QUALITY CONTROL:

- 4.14.1** All compaction grouting shall be performed under the inspection of the FQCR.
- 4.14.2** Monitoring and logging of compaction grouting operations for both test areas and production work shall be done by the FQCR.
- 4.14.3** The FQCR will perform slump tests of grout and take measurements of grout mix quantities to verify the grouting contractor's grout mix, as follows:
1. Slump tests will be performed:
 - a. once for every day of grout injected, or
 - b. at any change in mix design, or
 - c. at least twice during each grout shift.
 2. Grout mix proportions will be checked at least once daily.
- 4.14.4** The FQCR will require the grouting contractor to cast minimum size 3 inch by 6 inch grout test cylinders *or* 2 inch by 2 inch cube molds for strength testing. One set of four cylinders or molds will be cast during each slump test.
- 4.14.5** Layout of grout injection points shall be by the grouting contractor and checked by the FQCR with sufficient control points provided by the Owner.
- 4.14.6** As detailed in Section 4.7, daily records shall be maintained by the grouting contractor and submitted to the Owner's representative.
- 4.14.7** The grouting contractor shall monitor nearby structures as follows:
1. A level control system will be installed by the contractor for each structure within 50 feet of the grouting operations.
 2. Monitoring shall be carried out on a continuing basis whenever compaction grouting is occurring within a horizontal distance equal to the depth of treatment.
 3. After completion of the compaction grouting program, the monitoring system and grout pipes will be removed and all holes will be filled and patched.

4.15 TESTING AND INSPECTION:

- 4.15.1** The effectiveness of the proposed grouting layout scheme shall be verified as follows:
1. The Owner may retain a soil testing firm to perform the in situ testing as directed by the Owner's engineer. Test sections will be performed before and during production work, as follows:
 - a. Test section locations will be agreed upon by the (FQCR/grouting contractor) within the treatment area. A test section shall consist of a single module comprised of at least three grout injection points for isolated footings and sixteen grout injection points for area applications. Tests will be performed at the center of the module prior to and after grouting.
 - b. All testing to determine specification compliance will be provided by an independent testing agency retained by the Owner. Regardless of the method selected, the same test method shall be utilized both before and after the soil improvement work in order to provide the most accurate assessment of the degree of improvement obtained.
 - c. The method of installation of the test section shall comply with Section 4.12 of this specification and shall be performed using the same grout line sizes, grout mix drilling and grouting equipment and procedures as that to be used for production work.
- 4.15.2** Monitoring and logging of compaction grouting operations in the test areas and for production work shall be done by the grouting contractor.

4.16 RESTRICTIONS:

- 4.16.1** The Owner or General Contractor or Specialty Contractor shall be responsible for obtaining any State and municipal permits (if required) and conforming to all State and local regulations.
- 4.16.2** The owner will be responsible for the precise delineation of all above and below ground utilities and obstructions.
- 4.16.3** The following shall also be listed within this section when applicable:
1. Environmental restrictions
 2. Work boundaries
 3. Hours for construction

SECTION V SPECIFICATIONS FOR POLYURETHANE GROUTING WITH LOW MOBILITY GROUTING (LMG)

5.1 SCOPE OF WORK:

- 5.1.1** The work shall consist of lifting, realigning and void filling of selected structures and or slabs. LMG shall be utilized for initial slab lifting. Polyurethane foam shall be utilized to under seal and void fill work areas.
- 5.1.2** This work shall include but not be limited to, drilling injection holes, placing of selected material, monitoring of structures and or slabs, clean up and filling of injection holes with non-shrink grout.
- 5.1.3** Grout utilized for initial slab lifting shall be a low mobility material that will compact and displace adjacent soils, but not penetrate the soil pores.
- 5.1.4** The polyurethane foam shall be a two-component solvent free 100% reactive MDI and Hydrolytic stabile polyether polyol resins capable of cure strength to accept traffic within thirty (30) minutes of injection between 40 degrees F and 110 degrees F. The foam manufacturer shall supply certifications with each container of polyurethane foam stating that it meets this specification.

5.2 SPECIFICATION FOR LOW MOBILITY GROUTING (LMG):

5.2.1 Description

This work shall consist of furnishing all labor, equipment, and materials necessary to inject a low-slump cement grout at high pressure to initiate initial slab lifting in accordance with these specifications and in reasonably close conformity with the lines and grades shown on the plans or established.

5.2.2 Materials

1. The cement grout shall consist of a combination of Portland cement, sand, soil and water. In addition, pea gravel may be added as approved by the engineer. No bentonite shall be used. The grout mix shall have a slump of less than 2 inches when tested in accordance with AASHTO T119 (ASTMC143). The unconfined compressive strength of the compaction grout shall be a minimum of 250 psi at 28 days when measured in accordance with ASSHTO T22 (ASTM C39).
2. The Portland cement shall conform to the requirements of ASTM C150 Type1- II. Cement shall be stored in weather-tight enclosures, or procured in weather-tight bags to protect against dampness and contamination. Material that has been subjected to hydration shall not be used. Soil shall be natural soil which meets the following gradation requirements:

Sieve Size Percent Passing By Weight

3/8"	100
No. 200	10-30

3. The soil fines shall have a liquid limit of 25 or less and a plasticity index of 10 or less when tested according to ASSHTO T 89 and T 90, respectively. Natural fines may be supplemented by fly ash to achieve the specified percent passing the No. 200 sieve. Fly ash shall conform to the requirements of Subsection 701.02 except that the pozzolanic activity index shall be 75 as given in Table 2 of ASTM C 618.
4. Site conditions shall determine the exact proportions of cement, water, and soil. The grout mix shall generally consist of sandy soil with up to 12% cement by weight, and water to form a very stiff mortar-like mixture. No admixtures shall be used without the Engineer's approval, and previous testing.
5. Mix design and test results of grout mixture must be submitted and approved by the Engineer 1 week prior to the commencement of the work.
6. The Contractor shall determine the source, kind and quality of the water, cement, and soil to be used in the work. The Contractor shall perform this well in advance of the time scheduled for starting the work and shall submit such information for approval before starting grouting operations.

5.2.3 Construction Requirements

1. The work includes LMG and cleanup of the site. The Contractor shall furnish all supervision, labor, materials, transportation and plant; grouting materials and others supplies; all operations and equipment to supply, transport, store, mix and pump grout materials for the purpose of achieving the grouting plan as presented in the plans and specifications or as amended by the Engineer during construction. The Contractor shall monitor his work to insure that damage will not occur to any existing structure due to his processes. The Contractor shall also keep his own complete grouting records for review by the Engineer. Records shall include record of volumes, pressure, time and refusal condition for each grout injection and be available to the Engineer at the end of the day.
2. The Contractor who does this LMG work shall have had at least 5 years of experience in soil-cement grouting involving pressures above 200 psi. With the bid documents, the Contractor shall submit the name of the firm that will do the LMG. No work shall be done unless and until the firm is approved by the Engineer or Owner.

5.2.4 Grout Pipe Installation

1. The drilling equipment shall be capable of drilling through the reinforced slab, and subsurface materials.
2. Flush joint steel casing with minimum inside diameter of 2 inches shall be used. The steel casing shall have adequate strength to maintain the hole and to withstand the required jacking pumping pressures. The drilling equipment shall be capable of installing the casing to be used.
3. The drilling method to be used shall be capable of simultaneously drilling the hole and advancing the casing to prevent collapsing of the hole. The casing shall be installed such that there is intimate contact with the drilled hole in order to prevent grout leakage and/ or premature upward movement of the casing during injection of LMG. External packing or other means of assuring grout delivery to the bottom of the hole may be used as approved by the Engineer.
4. No drilling fluids other than air or air injected foam shall be employed to install grout pipes, unless approved by the engineer. All grout pipes shall be installed to within five degrees of vertical, or as directed by the engineer.
5. The riser elbow shall have a minimum 1 foot radius curve to minimize the potential for grout blockage.

5.2.5 Grout Injection Procedure

1. LMG having a slump of less than 2 inches shall be injected into the casing.
2. Grouting pressure and flow rate shall be continuously monitored at the grout head and at the pump by pressure gauges and flow meters, suitably protected to prevent grout clogging or damage from handling vibration and shock.
3. LMG shall be injected in increments of 1 foot under continuous pressure by the bottom up method.
4. Controlled compaction grout pump rates of 0.5 to 4.5 cubic foot per minute will be required, but not to exceed 2.0 cubic feet per minute.
5. The criteria for raising the grout pipe to the next increment shall be when one of the following occurs:
 - The grout pressure at the grout pipe head exceeds 200 psi
 - More than 4 cubic feet of grout has been injected.
 - Excessive movement or ground heave is detected
6. When utilizing Low Mobility Grout for lifting, the criteria shall be adjusted accordingly in the field based on elevation recovery rate and subsurface condition.

5.2.6 Equipment

1. The LMG mixer shall be of the pug mill type to ensure complete mixing of the stiff grout or as approved by the engineer.
2. The LMG mixer shall be of sufficient capacity to continuously deliver grout having a slump of less than 2 inches at a pressure up to 1000 psi, at a flow rate ranging from 0.25 to 5.0 cubic feet per minute.
3. Gauges shall be provided at the pump and the grout pipe head to measure pressure. Type and location of gauges shall be as approved by the engineer. A pressure gauge shall be graduated in 10 psi increments or less and used to measure the applied pressure. All gauges shall be a certified accuracy to within +/- 2 %. Certifications shall be submitted to the engineer for review.
4. Flow rate shall be monitored by timing the pump and a mechanical counter.
5. LMG hose shall have a minimum inside diameter of 2 inches with non-restrictive full flow couplers. The hose shall be of sufficient strength for the pressure anticipated and shall be in good repair.

5.2.7 Testing and Quality Control

1. The Contractor shall prepare drilling reports which shall contain at least the following information: Name of driller, type of drill, and method being used, date started, date completed, type of flushing, location of hole, depth of hole and type and depth of material encountered.
2. The Contractor shall prepare grouting reports which contain at least the following information: Name of grouting technician, amount of grout pumped, log of quantity injected per foot of hole, date, rate of pumping, grouting pressure at the hole, type of pump and depth of hole. Drilling reports and grouting reports shall be made available to the engineer at the end of each working day.

3. Protection and clean up. During work operations, the Contractor shall take such precautions as may be necessary to prevent drill cuttings, equipment exhaust, oil, wash water and grout from defacing or damaging the slab or landscape.
4. The Contractor shall furnish such pumps as may be necessary to handle waste water and grout from the operations and clean up all wastes resulting from the operations.
5. The Contractor shall submit the items listed below with regard to qualification of the Contractor or intended subcontractor to perform the grouting program subject to approval by the engineer. These items must be submitted no later than 10 working days prior to starting the work:
 - (1) The contractor shall provide a list of major components to be used, such as pumps, hoses, pipe fittings and drilling equipment and a list shall include manufacturers data on size, type, pressure rating, capacity and other critical characteristics for each item prior to the commencement of work.
 - (2) The Contractor shall provide a work schedule outlining mobilization, drilling sequence and location, grouting and demobilization.
 - (3) The Contractor shall provide a description of the program for monitoring the work, including means of pressure measurement and movement detection
 - (4) The Contractor shall provide a listing of personnel to perform the work. Personnel list should include experience and qualification of key personnel.
 - (5) The Contractor shall submit a list of similar work performed in the previous five years, using similar equipment and personnel. Include dates and project locations.
 - (6) The Contractor shall submit copies of drilling and grout report forms for approval by the engineer.
 - (7) Certification of gauges.

5.3 SPECIFICATIONS FOR TWO COMPONENT POLYURETHANE SUBSURFACE INJECTION:

5.3.1 Description

This work shall consist of furnishing and injecting a two component free rise, expansive, thermoset polyurethane material. The injection shall be performed to fill potential voids and to re-level the slabs to the elevations specified by the Engineer.

5.3.2 Scope of Work

The grouting Contractor shall provide project control, supervision, labor, materials, and equipment to accomplish the following items:

1. Ensure that the One-Call Utility Locating System has been contacted and the site utilities have been identified.
2. Probe all injection point areas using a pointed tip probe rod, with a maximum diameter of ½" (Preferably a hand cone penetrometer to measure relative densities) to determine the vertical extent of loose soils and/or voids relative to the site.
3. Install and if feasible, remove injection pipes, as necessary.
4. Inject polyurethane material at the required depths and volume under the supervision of the project engineer, or his representative.
5. Monitor for movement of the structure or ground surface during the injection process.
6. Site clean-up during and after injection.

5.3.3 Equipment Requirements

1. A mobile pumping unit capable of injecting the high-density polyurethane material into the soils and/or beneath the structure to the depths required shall be used. The pumping unit shall be capable of controlling the rate of flow of material as required to place the polyurethane, fill voids, and to raise foundation elements in a controlled manner. The unit shall be equipped with a manufacturer's certified flow meter to measure the amount of high-density polyurethane injected at each location. The certified flow meter shall have a digital output in both pounds and gallons.
2. Pressure and temperature control devices capable of maintaining proper temperature and proportionate mixing of the polyurethane component materials shall be used.
3. Pneumatic or electric drills capable of efficiently drilling 5/8" to 3/4" diameter injection holes through the concrete without damaging the structural integrity of the existing concrete element(s) and capable of installing ½" injection probes to the required depths without damage shall be used.
4. Laser levels or dial indicator devices capable of monitoring movement at the surface of the concrete shall be used.
5. A portable probe rod or hand cone penetrometer approved by the Engineer with relative density dial for on-site soils investigation to assist in location of weak sub-base soils and determination of the injection pattern.

6. All necessary equipment and materials, including but not limited to; electric generators, compressors, heaters, hoses, containers, valves and gauges to efficiently conduct and control the work and minimize the impact to the existing structure shall be used.

5.3.4 Injection Material Requirements

1. The material used for placement under the concrete or structure shall be a closed cell, hydroinsensitive, high-density polyurethane.
2. The material shall have a minimum free rise density of 3.0 lbs./cubic ft. and a minimum compressive strength of 38.0 psi.
3. The material shall have a maximum free rise density of 5.0 lbs./cubic ft.
4. The material used shall be a high-density polyurethane material as approved by the engineer. The material shall be a polyurethane-forming mixture that reacts in both dry and wet environments without dilution.

5.3.5 Injection Point Installation/Extraction

1. Contractor shall lay out the injection point locations for review by the Engineer, or his site representative.
2. Contractor shall provide a concrete profile from laser level measurements of each area where the concrete structures require attention. Each profile shall be accepted by the Engineer or his representative prior to performing the work at the project location.
3. Hand cone penetrometer testing should be conducted in the presence of the Engineer or his representative prior to injection, in order to confirm existing base soil conditions at representative locations within the treatment area.
4. Contractor shall install injection points through a series of 5/8" – 3/4" holes (as required for tube placement) drilled at approximately 4-6 foot spaced intervals through or adjacent to the concrete where indicated by the Engineer based on soil conditions.
5. Tubing shall be used for injection of the polyurethane material into the soil. The tubing should be pressed into place or installed with a pneumatic hammer to ensure immediate contact with the surrounding soils to minimize material travel along the annulus.
6. Tubing should be extracted via the method determined most suitable for the site by the Engineer and Contractor, based on site conditions.
 - (1) At uniform short intervals, progressing towards the ground surface, or
 - (2) At one or more pre-determined depth intervals
 - (3) As determined otherwise by the Engineer
7. If tubing becomes locked into the polyurethane material, it shall be cut off a minimum of six inches below the ground surface.

5.3.6 Polyurethane Injection

1. Void filling /Slab leveling – As necessary, polyurethane material shall first be injected through a series of 5/8" – 3/4" drilled holes until all known or encountered voids directly under the structural element are filled and the element has been leveled to the extent practical. The rate and of material injection shall be determined by the Contractor and the engineer based on site conditions.
2. Subsurface Injection – The polyurethane material shall then be injected.

5.3.7 Monitoring

1. Continuous laser level or dial indicator micrometer readings shall be in place and monitored by the Contractor during injection to determine sufficient material usage and soil treatment as indicated by any recordable movement in the ground surface or overlying structural element.
2. Contractor shall record the location and the quantity of material injected at each grout location.

BIDDERS NEED NOT RETURN PAGES 1-17 WITH THEIR BID

SECTION VI VENDOR INFORMATION AND PRICING FOR BID #2981, STRUCTURAL STABILIZATION SERVICES

The following pages should be attached as a portion of the bid response. Bidders are welcome to attach additional documentation to fully address any required responses. Please clearly reference any attachments to the appropriate subsection.

- 6.1 Vendor Name _____
- 6.2 Vendor Address _____
- City _____ State _____ Zip _____
- 6.3 Telephone Number _____ Fax Number _____
- 6.4 Vendor Number As Assigned By The Knox County Procurement Division _____
- 6.5 Contact Person _____
- 6.6 Contact Person's Email _____
- 6.7 Authorizing Signature _____
- 6.8 Vendor's Knox County Business License Number _____
(If Applicable) *Attach A Copy Of The License.*
- 6.9 I Acknowledge The Receipt Of: (Please Write "Yes" If You Received One)
- Addendum 1 _____ Addendum 2 _____ Addendum 3 _____ Addendum 4 _____
- 6.10 Do you accept the Terms and Conditions of the bid? Yes _____ No _____
- With Exceptions _____
- 6.11 Bidder Offers A Discount Of _____ % If Payment Is Made Within 30 Days.
- 6.12 May other Government Agencies in Tennessee purchase these products at the same prices as per section 1.11 of this bid? Yes _____ No _____
- 6.13 Will you accept credit card (VISA) payments as per section 1.18? Yes _____ No _____
- 6.14 Did you include the Criminal History Records Check as per section 2.7? Yes _____ No _____
- 6.15 Did you include the Insurance Checklist as per section 3.16? Yes _____ No _____
- 6.16 Did you include copies of your License as per section 3.19? Yes _____ No _____
- 6.17 Years in business: _____
- 6.18 Staff Size: _____
- 6.19 Major Equipment Owned (you may attach other pages if necessary): _____
- _____
- _____
- _____
- _____

6.20 Did you attach a list of all projects completed within the last three (3) years as per Section 4.5??

Yes _____ No _____

6.21 Did you attach the Reference Check as per Section 4.5? Yes _____ No _____

6.22 Pricing:

ITEM	COST PER	NOTE
Mobilization	\$ each	
De-mobilization	\$ each	
Compaction Grout Piles (up to twenty-five feet in depth)	\$ each	
Compaction piles beyond twenty-five feet	\$ per linear foot	
Slab Stabilization and leveling	\$ per square foot	
Grout pipe	\$ Per linear foot	
Injected grout	\$ Per cubic foot	
Other		
Other		

Name of the firm that will do the Low Mobility Grouting as per section 5.2.3.b: _____

ATTACHMENT A

INSURANCE CHECKLIST

Reference Check Bid #2981 Structural Stabilization Services

Vendor

Proposers shall submit a list of three (3) projects of similar size which have been in service for at least three (3) years. Each vendor is responsible for obtaining approval to submit and confirming the contact information provided for each reference. Knox County will not be responsible for gathering additional information for references that are incomplete or incorrect. References checks will be sent via email only. Reference Forms that cannot be delivered with the contact information listed, not returned prior to the deadline listed on the form, or not returned at all will be scored accordingly. **DO NOT USE ANY KNOX COUNTY DEPARTMENT AS A REFERENCE.**

Reference # 1

Name of Firm: _____

Address: _____

Contact Person: _____

Contact Person telephone and fax numbers: _____

Nature of contract: _____

Contract start date: _____ Contract end date: _____

Reference #2

Name of Firm: _____

Address: _____

Contact Person: _____

Contact Person telephone and fax numbers: _____

Nature of contract: _____

Contract start date: _____ Contract end date: _____

Reference #3

Name of Firm: _____

Address: _____

Contact Person: _____

Contact Person telephone and fax numbers: _____

Nature of contract: _____

Contract start date: _____ Contract end date: _____

ATTACHMENT B

INSURANCE CHECKLIST

KNOX COUNTY PROCUREMENT DIVISION
INSURANCE CHECKLIST
BID NUMBER 2981

THE CERTIFICATE OF INSURANCE MUST SHOW ALL COVERAGES & ENDORSEMENTS WITH "YES" AND ITEMS 20 TO 24

REQUIRED	NUMBER	TYPE OF COVERAGE	COVERAGE LIMITS
YES	1.	WORKERS COMPENSATION	STATUTORY LIMITS OF TENNESSEE
YES	2.	EMPLOYERS LIABILITY	\$100,000 PER ACCIDENT \$100,000 PER DISEASE \$500,000 DISEASE POLICY LIMIT
YES	3.	AUTOMOBILE LIABILITY <div style="border: 1px solid black; padding: 2px; margin-top: 5px;"> <input checked="" type="checkbox"/> ANY AUTO-SYMBOL (1) </div>	COMBINE SINGLE LIMIT (Per -Accident) \$ 1,000,000 BODY INJURY (Per -Person) BODY INJURY (Per-Accident) PROPERTY DAMAGE (Per-Accident)
YES	4.	COMMERCIAL GENERAL LIABILITY <div style="border: 1px solid black; padding: 2px; margin-top: 5px;"> CLAIM MADE <input checked="" type="checkbox"/> OCCUR </div>	LIMITS EACH OCCURRENCE \$1,000,000 FIRE LEGAL LIABILITY \$100,000 MED EXP (Per person) \$5,000 GEN'L AGGREGATE LIMITS APPLIES PER PERSONAL & ADV INJURY \$1,000,000 <div style="border: 1px solid black; padding: 2px; margin-top: 5px;"> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC <input type="checkbox"/> </div> GENERAL AGGREGATE \$2,000,000 PRODUCTS-COMPLETED OPERATIONS/AGGREGATE \$2,000,000
YES	5.	PREMISES/OPERATIONS	\$1,000,000 CSL BI/PD EACH OCCURRENCE \$2,000,000 ANNUAL AGGREGATE
YES	6.	INDEPENDENT CONTRACTOR	\$1,000,000 CSL BI/PD EACH OCCURRENCE \$1,000,000 ANNUAL AGGREGATE
YES	7.	CONTRACTUAL LIABILITY (MUST BE SHOWN ON CERTIFICATE)	\$1,000,000 CSL BI/PD EACH OCCURRENCE \$1,000,000 ANNUAL AGGREGATE
YES	8.	XCU COVERAGE	NOT TO BE EXCLUDED
YES	9.	UMBRELLA LIABILITY COVERAGE	\$1,000,000
		PROFESSIONAL LIABILITY	
NO	10.	<div style="border: 1px solid black; padding: 2px; margin-top: 5px;"> ARCHITECTS & ENGINEERS ASBESTOS & REMOVAL LIABILITY MEDICAL MALPRACTICE MEDICAL PROFESSIONAL LIABILITY </div>	\$1,000,000 PER OCCURRENCE/CLAIM \$2,000,000 PER OCCURRENCE/CLAIM \$1,000,000 PER OCCURRENCE/CLAIM \$1,000,000 PER OCCURRENCE/CLAIM
NO	11.	MISCELLANEOUS E & O	\$500,000 PER OCCURRENCE/CLAIM
NO	12.	MOTOR CARRIER ACT ENDORSEMENT	\$1,000,000 BI/PD EACH OCCURRENCE UNINSURED MOTORIST (MCS-90)
NO	13.	MOTOR CARGO INSURANCE	
NO	14.	GARAGE LIABILITY	\$1,000,000 BODILY INJURY, PROPERTY DAMAGE PER OCCURRENCE
NO	15.	GARAGEKEEPER'S LIABILITY	\$500,000 COMPREHENSIVE; \$500,000 COLLISION
NO	16.	INLAND MARINE BAILEE'S INSURANCE	\$
NO	17.	DISHONESTY BOND	\$
NO	18.	BUILDERS RISK	PROVIDE COVERAGE IN THE FULL AMOUNT OF THE CONTRACT UNLESS PROVIDED BY OWNER.
NO	19.	USL&H	FEDERAL STATUTORY LIMITS

20. CARRIER RATING SHALL BE BEST'S RATING OF A-V OR BETTER OR ITS EQUIVALENT.

21. NOTICE OF CANCELLATION, NON-RENEWABLE OR MATERIAL CHANGES IN COVERAGE SHALL BE PROVIDED TO COUNTY AT LEAST 30 DAYS PRIOR TO ACTION. THE WORDS "ENDEAVOR TO" AND "BUT FAILURE TO" (TO END OF SENTENCE) ARE TO BE ELIMINATED FROM THE NOTICE OF CANCELLATION PROVISION ON STANDARD ACCORD CERTIFICATES.

22. THE COUNTY SHALL BE NAMED AS AN ADDITIONAL NAMED INSURED ON ALL POLICIES EXCEPT WORKERS' COMPENSATION AND AUTO.

23. CERTIFICATE OF INSURANCE SHALL SHOW THE BID NUMBER AND TITLE.

24. OTHER INSURANCE REQUIRED _____

INSURANCE AGENT'S STATEMENT AND CERTIFICATION: I HAVE REVIEWED THE ABOVE REQUIREMENTS WITH THE BIDDER NAMED BELOW HAVE ADVISED THE BIDDER OF REQUIRED COVERAGE NOT PROVIDED THROUGH THIS AGENCY.

AGENCY NAME: _____ AUTHORIZING SIGNATURE: _____

BIDDER'S STATEMENT AND CERTIFICATION: IF AWARDED THE CONTRACT, I WILL COMPLY WITH THE CONTRACT INSURANCE REQUIREMENTS.

BIDDER NAME: _____ AUTHORIZING SIGNATURE: _____

ATTACHMENT C

DRUG FREE WORKPLACE AFFIDAVIT

AFFIDAVIT OF COMPLIANCE

WITH

DRUG-FREE WORKPLACE REQUIREMENTS OF

TENNESSEE CODE ANNOTATED, § 50-9-113

(To be submitted with bid by construction contractor with 5 or more employees)

I, _____, President or other Principal

Officer of _____, swear or affirm that the

Name of Company

Company has a drug-free workplace program that complies with Title 50, Chapter 9, Tennessee Code Annotated, in effect at the time of this bid submission at least to the extent required of governmental entities. I further swear or affirm that the company is in compliance with Tennessee Code Annotated, § 50-9-113.

President or Principal Officer

For: _____
Name of Company

STATE OF TENNESSEE }
COUNTY OF _____ }

Subscribed and sworn before me by _____,

President or Principal Officer of _____,

On this _____ day of _____ 2_____.

Notary Public

My Commission expires: _____

ATTACHMENT D BID ENVELOPE COVER

BID ENVELOPE COVER

NAME OF PROJECT: Structural Stabilization Services

Invitation for Bid #2981

SEALED BIDS WILL BE RECEIVED BY: Knox County Procurement Division
1000 N. Central Street, Suite 100
Knoxville, Tennessee 37917

UNTIL: 2:00 p.m. EST September 9, 2020
 TIME DATE

COMPLETE ALL BLANKS!

BIDDER _____

STREET ADDRESS _____

CITY/STATE/ZIPCODE _____

TENNESSEE CONTRACTORS LICENSE NUMBER _____

LICENSE CLASSIFICATION _____
(if applicable to this project) Dollar Limit

SUBCONTRACTORS TO BE USED ON THIS PROJECT
(If no subcontract work is required, write, "none required" in each blank.)

BIDDERS MUST COMPLETE ALL AREAS OF THIS FORM!

<p align="center">ATTACHMENT E CRIMINAL HISTORY RECORDS CHECK AFFIDAVIT</p>

AFFIDAVIT OF COMPLIANCE

WITH

TENNESSEE CRIMINAL HISTORY RECORDS CHECK

TENNESSEE CODE ANNOTATED, SECTION 49-5-413

(To be submitted with bid by contractor)

I, _____, President or other Principal

Officer of _____, swear or affirm that the

Name of Company

Company is in compliance with Public Chapter 587 of 2007, codified at Tennessee Code Annotated 49-5-413, in effect at the time of this bid submission at least to the extent required of governmental entities. I further swear or affirm that the company is in compliance with Tennessee Code Annotated, § 49-5-413.

President or Principal Officer

For: _____
Name of Company

STATE OF TENNESSEE}
COUNTY OF _____}

Subscribed and sworn before me by _____,

President or Principal Officer of _____,

On this _____ day of _____ 2_____.

Notary Public

My Commission expires: _____