

CITY OF KNOXVILLE

INVITATION TO BID

Project: On-Call Inductive Loop Detection Installation for Traffic Signals

Sealed bids will be received by the City of Knoxville, in Room 667-674, City County Building, 400 Main St., Knoxville, Tennessee, until 11:00:00 a.m., on November 25, 2019 for the On-Call Inductive Loop Detection Installation for Traffic Signals. The work consists of installation of inductive loop detection facilities for traffic signals under City of Knoxville Traffic Systems and any other work needed to complete the individual work orders as directed by the City.

Specifications, contract documents, and bid packages may be obtained from the City of Knoxville's procurement website @ www.knoxvilletn.gov/bids.

All bidders must be licensed contractors as required by the Contractors Licensing Act of 1994 and all Acts amendatory thereof, and must have an HRA – Highway, Railroad and Airport Construction classification or a CE-K – Roadway Lighting, Attenuators, and Signalization classification.

A Pre-Bid Conference will be held at the City of Knoxville, Engineering Department, Room 301, 3131 Morris Avenue at 10:00 a.m. on November 11, 2019.

All interested potential bidders are strongly encouraged to view the “Invitation to Bid and Information for Bidders” on the City of Knoxville’s procurement website @ www.knoxvilletn.gov/bids.

INFORMATION FOR BIDDERS

Bids will be received by the City of Knoxville, Tennessee (Herein called the "Owner") by the Purchasing Division of the City of Knoxville, acting for the Mayor, in Room 667-674, City County Building, 400 Main Avenue, Knoxville, Tennessee, 37902 until 11:00:00 A.M. on November 25, 2019, and then at said office publicly opened and read aloud.

Each Bid must be submitted in a sealed envelope, addressed to the Purchasing Division for the City of Knoxville; Room 667-674, City County Building; 400 Main Street; Knoxville, Tennessee 37902. If forwarded by mail, the sealed envelope containing the Bid must be enclosed in another envelope addressed to the Owner.

No bid will be received or accepted after the above-specified time for the opening of bids. Bids that arrive late due to the fault of U.S. Postal Service, United Parcel Services, DHL, FEDEX, any delivery/courier service, or any other carrier of any sort are still considered late and shall not be accepted by the City. Such bids shall remain unopened and will be returned to the submitting entity upon request.

All Bids must be made on the required bid form supplied with the Contract documents. All blank spaces for bid prices must be filled in, in ink or typewritten, and the bid form must be fully completed and executed when submitted. Only one copy of the bid form is required.

All Bidders must be licensed contractors as required by the Contractors Licensing Act of 1994, and all Acts amendatory thereof and must have an HRA - Highway, Railroad and Airport Construction classification or a CE-K – Roadway Lighting, Attenuators, and Signalization classification. **Bidder's name, address, license number, date of expiration of license, and that part of the license classification applying to the Bid must be placed on the sealed envelope containing the bid.** Prior to submitting their bids, bidders are to be registered with the Purchasing Division through the City of Knoxville's online Vendor Registration system. Instructions for registering on-line are available at www.knoxvilletn.gov/purchasing. **Bid submissions from un-registered bidders may be rejected.**

If applicable, sub-contractors for electrical work, plumbing work, and HVAC must be shown on the outside of the envelope along with their respective license numbers, expiration date, and classification; where the total cost of the masonry portion of the project exceeds \$100,000 in materials and labor, the license number, expiration date, and classification must be listed on the outside of the envelope for the masonry sub-contractor. The envelope must be plainly marked, "Bid on (project) to be opened on (date) at (time)," otherwise the bid cannot be opened or considered. Any bid envelope which contains the listing of more than one contractor in each classification shall be considered in violation and the bid shall not be opened or considered. These requirements are detailed in Tennessee Code Annotated § 62-6-119 (B), the State of Tennessee, Department of Commerce and Insurance Board for licensing contractors can provide additional information if required.

Attention is called to Chapter 2, Article VIII (Procurement Code) of the Knoxville City Code, which requires that prevailing wages shall be paid workmen on all buildings and construction projects wherein any City funds are expended for such purposes. The Contractor agrees to comply with and to post the prevailing wage laws as provided in the "Prevailing Wage Act of 1975," Tennessee Code Annotated § 12-4-401 et seq. For the purpose of this contract the prevailing wage rates shall be the wage rate incorporated in these documents. The City reserves the right to demand the payroll records of Contractor at any time to monitor compliance with the wage rate/discrimination clause(s). Failure by Contractor to provide City with said records within ten working days of the written notice shall constitute a breach of this agreement.

Any Bid may be withdrawn prior to the above scheduled time for the opening of the Bids or authorized postponement thereof. Any Bid received after the time and date specified shall not be considered. No Bidder may withdraw a Bid within ninety (90) days after the actual date of the opening thereof. Should there be reasons why the Contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the Owner and the Bidder.

Bidders must satisfy themselves of the accuracy of the estimated quantities in the Bid Schedule by examination of the site and a review of the drawings and Specifications including addenda. After Bids have been submitted, the Bidder shall not assert that there was a misunderstanding concerning the quantities of work or of the nature of the work to be done. When discrepancies occur between unit prices and total prices on the Bid Schedule, the total price submitted for each pay item will be maintained and corrections will be made to the unit prices.

The Contract documents contain the provisions required for the construction of the project. Information obtained from an officer, agent, or employee of the Owner or any other person shall not affect the risks or obligations assumed by the Contractor or relieve him from fulfilling any of the conditions of the Contract.

Inquiries pertaining to this ITB shall be made in writing and be in the hands of the Purchasing Division by the close of the business day on November 11, 2019. Questions can be submitted by letter, fax (865-215-2277), or email to the Assistant Purchasing Agent of the City of Knoxville (powens@knoxvilletn.gov) or City County Building; 400 Main Street; Room 667-674; P.O. Box 1631; Knoxville, TN 37901. The City is not responsible for oral interpretations given by any City employee, representative, or others; and no interpretation of the meaning of the plans, specifications, or other pre-bid documents will be made to any bidder orally. The issuance of written addenda is the only official method whereby interpretation, clarification, or additional information can be given. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, if issued, will be posted to the City's website at www.knoxvilletn.gov/bids. Submitting organizations are strongly encouraged to view this website often to see if addenda are posted. Failure of any bidder to receive any such addendum or interpretation shall not relieve such Bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the Contract Documents.

All Bids must be signed in full by the Bidder or Bidders in their business name or style and must show his or their complete address. If the Bidder be a firm or a corporation, the signature shall be a duly authorized member of the firm or officer of the corporation stating his official title or position with such firm or corporation, with the corporate seal attached, attested to by the proper officer. If the Bidder be a firm, the full names and addresses of all members of the firm must be shown. If the Bidder be a corporation, the name of the state under the laws of which it is incorporated must be shown. If the Bid is signed in the name of an agent, legal evidence of his authority to bind his principals must accompany the papers.

The Owner may make such investigations as he deems necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish to the Owner all such information and data for this purpose as the owner may request. The Owner reserves the right to reject any Bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations of the Agreement and to complete the work contemplated therein.

Award will be made as a whole to one Bidder. By execution and delivery of a bid submission, the bidder agrees that any additional terms and conditions, whether submitted to the City purposely or inadvertently, shall have no force or effect.

All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the Contract throughout. Attention is called to Section 2-1016 et seq. of the Knoxville City Code, which requires that prevailing wages shall be paid workmen on all buildings and construction projects wherein any City funds are expended for such purposes. The Contractor agrees to comply with and to post the prevailing wage laws as provided in the "Prevailing Wage Act of 1975," Tennessee Code Annotated 12-4-401 et seq.

Each Bidder is responsible for inspecting the site and for reading and being thoroughly familiar with the Contract documents. The failure or omission of any Bidder to do any of the foregoing shall in no way relieve any Bidder from any obligation in respect to his Bid.

Further, the Bidder agrees to abide by the requirements under Executive Order No. 11246, as amended, including specifically the provisions of the equal opportunity clause set forth in the General Conditions. Attention is also called to Section 15-26 of the Knoxville City Code, requiring and defining a non-discrimination clause which shall be contained in all Contracts with the City of Knoxville wherein City funds are expended for the purpose of construction, alteration, repair or demolition of any building, street, alley or sewer, or for the providing of any services, and all leases, franchises or concession through which property of the City of Knoxville is to be used.

All bidders must comply with Title VI of the Civil Rights Act of 1964, as codified in 42 U.S.C. 2000 (d). The successful bidder must follow Title VI guidelines in all areas including hiring practices, operating facilities, insurance, and wages. The City of Knoxville reserves the right to review all compliance records by a contract compliance officer designated by the City. The Drug Free Workplace Affidavit form must be submitted with the bid.

The Drug Free Workplace Affidavit, the Non-Collusion Affidavit, the Iran Divestment Act Form, and the Subcontractor/Consultant Statement from the Diversity Business Enterprise Program packet, fully executed, must be submitted with the bid.

The Contractor shall maintain such insurance as detailed in the General Conditions section of this ITB as will protect him and/or the City from all claims including Workman's Compensation and will save harmless the City from all claims and damages which may arise out of or result from the Contractor's operations under the Contract, whether such operations be by himself or by any subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. Certificates of insurance acceptable to the City shall be filed with the City prior to commencement of the work.

The Contract will be awarded with reasonable promptness by written notice to the responsive and responsible Bidder whose Bid is determined to contain the lowest bid price or lowest evaluated bid price in accordance with Section 2-862 of the Knoxville City Code.

The City may waive technicalities concerning bid documents and may follow up with individual organizations after the bid opening to obtain such documents when it is in the best interests of the City. The City of Knoxville reserves the right to waive any informalities or to reject any or all bids, to evaluate bids, and to accept any bid which, in its opinion, may be in the best interest of the City.

BID SCHEDULE

Complete the schedule below with bid pricing for a complete loop installation of each type

ITEM	Description	Units	Price Per Unit
Type 1	6' X 45' loops	EA	
Type 2	6' x 20' loops	EA	

In submitting this bid it is understood that the right is reserved by the City of Knoxville to reject any and all bids. If written notice of the acceptance of this bid is mailed, telegraphed or delivered to the undersigned within ninety (90) days after the opening thereof, or at any time thereafter before this bid is withdrawn, the undersigned agrees to execute and deliver a contract in the prescribed form within fifteen (15) days after the contract is presented to him for signature.

The bidder certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The bidder certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The bidder agrees that a breach of this certification will be a violation of the Equal Opportunity clause in any contract resulting from acceptance of this bid. As used in this certification, the term "segregated facilities" means any waiting room, work areas, rest rooms and wash rooms, restaurants and other eating areas, time-clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment area, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin, because of habit, local custom, or otherwise. The bidder agrees that (except where he has obtained identical certifications from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause, and that he will retain such certifications in his files.

Bidder hereby agrees to commence work under this contract on or before a date to be specified in each Work Order Request.

Bidder acknowledges receipt of the following addendum:

The Bidder is prepared to submit a financial and experience statement upon request.

Attached hereto is an affidavit in proof that the undersigned has not entered into any collusion with any person in respect to this proposal or any other proposal. Also attached is a Statement of Bidder's Qualifications.

Date: _____, 20____

Name of Bidder

State License No:_____

By

Tax ID Number: _____

Title

Official Address (including Zip Code):

Incorporated under the laws of the State of

State of)
)ss.
 County of.....)

(1) He is (owner, partner, officer, representative, or agent) of _____, the Bidder that has submitted the attached Bid;

(3) Such Bid is genuine and is not a collusive or sham bid;

(5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

Title

Subscribed and sworn to before me
this _____ day of _____, 20____

Title _____
My commission expires: _____

STATEMENT OF BIDDER'S QUALIFICATIONS

(To be submitted by the Bidder only upon the specific request of the Local Public Agency.)

All questions must be answered and the data given must be clear and comprehensive. This statement must be notarized. If necessary, questions may be answered on separate attached sheets. The Bidder may submit any additional information he desires.

1. Name of Bidder.
2. Permanent main office address, including City, State, and Zip Code.
3. When organized.
4. If a corporation, where incorporated.
5. Contracts on hand: (Schedule these, showing gross amount of each contract and the appropriate anticipated dates of completion.)
6. General character of work performed by your company.
7. Have you ever failed to complete any work awarded to you? If so, where and why?
8. Have you ever defaulted on a contract? If so, where and why?
9. List the more important contracts recently completed by you, stating approximate gross cost for each, and the month and year completed.
10. List your major equipment available for this contract.
11. Experience in reinforced concrete and masonry retaining walls, grading, paving, and other work similar in importance to this project.
12. Background and experience of the principal members of your organization including the officers.
13. Credit available: \$ _____.
14. Give bank reference.
15. Will you upon request, fill out a detailed financial statement and furnish any other information that may be required by the City of Knoxville?
16. (a) Have you ever been a party to or otherwise involved in any action or legal proceeding involving matters related to race, creed, nationality, sex, religion or nationality? If so, give full details.

- (b) Have you ever been accused of discrimination based upon race, color, sex, nationality, or religion in any action or legal proceeding, including any proceeding related to any Federal Agency? If so, give full details.

17. The undersigned hereby authorizes and requests any person, firms, or corporation to furnish any information requested by the City of Knoxville in verification of the recitals comprising this Statement of Bidder's Qualifications.

Dated at _____ this _____ day of _____, 20____.

By

Title

State of _____)

)ss

County of _____)

_____ being duly sworn, deposed and

says that he is the _____ of

and that the answers to the foregoing questions and all statements therein contained are true and correct.

Subscribed and sworn to before me this _____ day _____, 20_____.

Notary Public

My commission expires

DRUG-FREE WORKPLACE AFFIDAVIT

State of

County of

_____, being duly sworn, deposes, and says that:

- (1) He/She is a principal officer of _____, the firm that has submitted the attached Proposal, his or her title being _____ of the firm; and
- (2) He/She has personal knowledge of the policies of the above-named firm with respect to the maintenance of a drug-free workplace; and
- (3) He/She certifies that all provisions and requirements of the Tennessee Drug-Free Workplace Program, as established by Tenn. Code Ann. §§ 50-9-100 et. seq., have been met and implemented.

(Signed)

(Title)

Subscribed and sworn to before me this ____ day of _____, _____.

Title

My Commission expires

IRAN DIVESTMENT ACT

Certification of Noninclusion

NOTICE: Pursuant to the Iran Divestment Act of 2014, Tenn. Code Ann. § 12-12-106 requires the State of Tennessee Chief Procurement Officer to publish, using creditable information freely available to the public, a list of persons it determines engage in investment activities in Iran, as described in § 12-12-105. Inclusion on this list makes 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. A list of entities ineligible to contract in the State of Tennessee Department of General Services or any political subdivision of the State may be found here:

[https://www.tn.gov/content/dam/tn/generalservices/documents/cpo/cpo-library/public-information-library/List_of_persons_pursuant_to Tenn. Code Ann. 12-12-106 Iran Divestment Act updated 7.7.17.pdf](https://www.tn.gov/content/dam/tn/generalservices/documents/cpo/cpo-library/public-information-library/List_of_persons_pursuant_to_Tenn._Code_Ann._12-12-106_Iran_Divestment_Act_updated_7.7.17.pdf)

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 T.C.A. § 12-12-106.

Vendor Name (Printed)	Address
By (Authorized Signature)	Date Executed
Printed Name and Title of Person Signing	

NOTARY PUBLIC:

Subscribed and sworn to before me this _____ day of _____,
2_____.

My commission expires: _____

GENERAL CONDITIONS

GENERAL CONDITIONS

1. Definitions
2. Additional Instructions and Detail Drawings
3. Schedules, Reports, and Records
4. Drawings and Specifications
5. Shop Drawings
6. Materials, Services and Facilities
7. Inspection and Testing
8. Substitutions
9. Patents
10. Surveys, Permits, Regulations
11. Protection of Work, Property, Persons
12. Supervision by Contractor
13. Changes in the Work
14. Changes in Contract Price
15. Time for Completion and Liquidated Damages
16. Correction of Work
17. Subsurface Conditions
18. Suspension of Work, Termination and Delay
19. Payments to Contractor
20. Acceptance of Final Payment as Release
21. Insurance Requirements for Contractors
22. (Blank)
23. Assignments
24. Indemnification
25. Separate Contracts
26. Subcontracting
27. Engineer's Authority
28. Land and Rights-of-Way
29. Guaranty
30. Taxes
31. Traffic Control
32. Job Offices and Other Temporary Buildings
33. Work by Utilities
34. Maintenance
35. Estimate of Quantities
36. Air Pollution and Dust Control
37. Care of Work
38. Tennessee One Call
39. Notice of City Procurement Code Prohibitions
40. ADA Compliance
41. Prevailing Wages

1. Definitions - Wherever used in the Contract Documents, the following terms shall have the meanings indicated which shall be applicable to both the singular and plural thereof:
 - 1.1 Abbreviations -

AASHTO	American Association of State Highway and Transportation Officials
ASTM	American Society for Testing and Materials
KUB	Knoxville Utilities Board
TDOTSS	Tennessee Department of Transportation Standard Specifications for Road and Bridge Construction, 2015
 - 1.2 Approved (also "directed," "required," "permitted") shall mean as approved, directed, required or permitted by the Engineer, unless specified otherwise.
 - 1.3 Addenda - Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the Contract Documents, Drawing, and Specifications, by additions, deletions, clarifications or corrections.
 - 1.4 Bid - The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed. Included in the Bid Schedule which shall list all items to bid upon, and the total bid price for the Work.
 - 1.5 Bidder - Any person, firm, or corporation submitting a Bid for the Work.
 - 1.6 Bonds - Bid, Performance, and Payment Bonds and other instruments of security, furnished by the Contractor and his surety in accordance with the Contract Documents.
 - 1.7 Change Order - A written order to the Contractor authorizing an addition, deletion or revision in the Work within the general scope of the Contract Documents, or authorizing an adjustment in the Contract Price or Contract Time.
 - 1.8 Contract Documents - The Contract including Advertisement for bids, Information for Bidders, Bid, Bid Bond, Agreement, Payment Bond, Performance Bond, Notice of Award, Notice to Proceed, Change Order, Drawings, Specifications, Addenda, General Conditions, Supplemental General Conditions, and Certificate of Owner's Attorney.
 - 1.9 Contract Price - The total monies payable to the Contractor under the terms and conditions of the Contract Documents.
 - 1.10 Contract Time - The number of calendar days stated in the Contract Documents for the completion of the Work.
 - 1.11 Contractor - The person, firm, or corporation with whom the Owner has executed the Agreement.

- 1.12 Drawings - The part of the Contract Documents which show the characteristics and scope of the Work to be performed and which have been prepared or approved by the Engineer.
- 1.13 Engineer - The Director of Engineering or his duly authorized assistant or representative.
- 1.14 Field Order - A written order effecting a change in the Work not involving an adjustment in the Contract Price or an extension of the Contract Time, issued by the Engineer to the Contractor during construction.
- 1.15 Notice of Award - The written notice of the acceptance of the Bid from the Owner to the successful Bidder.
- 1.16 Notice to Proceed - Written communication issued by the Owner to the Contractor authorizing him to proceed with the work and establishing the date of commencement of the Work.
- 1.17 Owner - City of Knoxville, Tennessee
- 1.18 Plans - The approved Plans, profiles, cross-sections, working drawings and supplemental drawings which show the location, character, dimensions, and details of the construction to be performed.
- 1.19 Project - The undertaking to be performed as provided in the Contract Documents.
- 1.20 Resident Project Representative - The authorized representative of the Director of Engineering who is assigned to the Project site or any part thereof.
- 1.21 Shop Drawings - All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the Contractor, a Subcontractor, manufacturer, supplier or distributor, which illustrate how specific portions of the Work shall be fabricated or installed.
- 1.22 Specifications - A part of the Contract Documents consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship.
- 1.23 Subcontractor - An individual, firm, or corporation having a direct contract with the Contractor or with any other Subcontractor for the performance of a part of the Work at the site.
- 1.24 Substantial Completion - That date as certified by the Engineer when the construction of the Project or a specified part thereof is sufficiently completed, in accordance with the Contract Documents, so that the Project or specified part can be utilized for the purposes for which it is intended.
- 1.25 Supplemental General Conditions - Modifications and Additions to General Conditions as deemed necessary by the Owner or Engineer prior to inclusion in the Contract Documents.

- 1.26 Suppliers - Any person, supplier, or organization who supplies materials or equipment for the Work, including that fabricated to a special design, but who does not perform labor at the site.
- 1.27 Work - All labor necessary to produce the construction required by the Contract Documents, and all materials and equipment incorporated or to be incorporated in the Project.
- 1.28 Written Notice - Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at his last given address, or delivered in person to said party or his authorized representative on the Work.
- 2. Additional Instructions and Detail Drawings
 - 2.1 The Contractor may be furnished additional instructions and detail drawings, by the Engineer, as necessary to carry out the Work required by the Contract Documents.
 - 2.2 The additional drawings and instruction thus supplied will become a part of the Contract Documents. The Contractor shall carry out the Work in accordance with the additional detail drawings and instructions.
- 3. Schedules, Reports, and Records
 - 3.1 The Contractor shall submit to the Owner such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records, and other data as the Owner may request concerning Work performed or to be performed.
 - 3.2 Prior to the first partial payment estimate, the Contractor shall submit schedules showing the order in which he proposes to carry on the Work, including dates at which we will start the various parts of the Work, estimated date of completion of each part and, as applicable:
 - 3.2.1 The dates at which special detail drawings will be required; and
 - 3.2.2 Respective dates for submission of Shop Drawings, the beginning of manufacture, the testing and the installation of materials, supplies and equipment. Each such schedule to be subject to change from time to time in accordance with the progress of the Work.
- 4. Drawings and Specifications
 - 4.1 The intent of the Drawings and Specifications is that the Contractor shall furnish all labor, materials, tools, equipment, and transportation necessary for the proper execution of the Work in accordance with the Contract Documents and all incidental work necessary to complete the Project in an acceptable manner, ready for use, occupancy or operation by the Owner.
 - 4.2 In case of conflict between the Drawings and Specifications, the Specifications shall govern. Figure dimensions on Drawings shall govern over scale dimensions, and detailed drawings shall govern over general drawings. Anything mentioned in the Specifications and not

shown on the Drawings or shown on the Drawings and not mentioned in the Specifications shall be of like effect as if shown or mentioned in both.

- 4.3 Any discrepancies found between the Drawings and Specifications and site conditions or any inconsistencies or ambiguities in the Drawings or Specifications shall be immediately reported to the Engineer, in writing, who shall promptly correct such inconsistencies or ambiguities in writing. Work done by the Contractor after his discovery of such discrepancies, inconsistencies or ambiguities shall be done at the Contractor's risk.

5. Shop Drawings

- 5.1 The Contractor shall provide Shop Drawings as may be necessary for the prosecution of the Work as required by the Contract Documents. The Engineer shall promptly review all Shop Drawings. The Engineer's approval of any Shop Drawing shall not release the Contractor from responsibility for deviations from the Contract Documents. The approval of any Shop Drawing which substantially deviates from the Requirement of the Contract Documents shall be evidenced by a Change Order.
- 5.2 When submitted for the Engineer's review, Shop Drawings shall bear the Contractor's certification that he has reviewed, checked and approved the Shop Drawings and that they conform to the requirements of the Contract Documents.
- 5.3 Portions of the Work requiring a Shop Drawing or sample submission shall not begin until the Shop Drawing or submission has been approved by the Engineer.

6. Materials, Services and Facilities

- 6.1 It is understood that, except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete and deliver the Work within the specified time.
- 6.2 Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the Work. Stored materials and equipment to be incorporated in the Work shall be located so as to facilitate prompt inspection.
- 6.3 Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer.
- 6.4 Materials, supplies and equipment shall be in accordance with samples submitted by the Contractor and approved by the Engineer.
- 6.5 The Contractor warrants that he has good title to all materials, supplies, and equipment used by him in the work. Materials, supplies or equipment to be incorporated into the Work shall not be purchased by the Contractor or the Subcontractor subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.

- 6.6 All materials required in the Work may be stored on the site subject to approval by the Engineer, but all such materials and machinery shall be neatly and compactly stored in such a manner as to cause the least inconvenience to property owners and traffic. All fire hydrants, water and gas shut-off boxes, and other underground utility accesses must be kept free and unobstructed at all times. Proper lighting and signing must be provided to warn the traffic of any obstructions caused by the storage of materials or equipment upon public thoroughfares.
- 6.7 The Contractor shall make his own arrangements for delivery and handling of equipment and materials as he may require for the prosecution of the Work. The location of all temporary lines, roadways and similar facilities shall be subject to the approval of the Engineer and these shall be located and operated so as not to interfere with other work carried on by the Owner or by other Contractors. These temporary power lines, roadways or other facilities which the Contractor furnishes, installs, maintains, and removes may be used by the Owner or other Contractors at such reasonable times as may be directed by the Engineer.
- 6.8 Adequate sanitary facilities shall be provided by the Contractor. All such sanitary facilities shall conform to the requirements of the Tennessee Department of Public Health and the Knoxville-Knox County Health Department.
7. Inspection and Testing
- 7.1 All materials and equipment used in the construction of the Project shall be subject to adequate inspection and testing in accordance with accepted standards.
- 7.2 The Contractor shall provide at his expense the necessary testing and inspection services required by the Contract Documents, unless otherwise provided.
- 7.3 Where mill tests of materials are found necessary by the Engineer to be used for acceptance, the Contractor shall furnish certified copies of such mill tests.
- 7.4 Where shop equipment performance tests are specified, the Engineer shall be permitted to witness such tests. In the absence of a witnessed test, certified copies of shop tests shall be submitted at the discretion of the Engineer.
- 7.5 The Owner shall provide all other inspection and testing services not required by the Contract Documents. No payment will be made to the Contractor for samples taken for tests, such as concrete cylinders, etc.
- 7.6 If the Contract Documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any Work to specifically be inspected, tested, or approved by someone other than the Contractor, the Contractor will give the Engineer timely notice of readiness. The Contractor will then furnish the Engineer the required certificates of inspection, testing or approval.
- 7.7 Neither observations by the Engineer nor inspections, tests or approvals by persons other than the Contractor shall relieve the Contractor from his obligations to perform the Work in accordance with the requirements of the Contract Documents.

- 7.8 The Engineer and his representatives will at all times have access to the Work. In addition, authorized representatives and agents of any participating Federal or state agency shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records. The Contractor will provide proper facilities for such access and observation of the Work and also for any inspection, or testing thereof.
- 7.9 If any Work is covered contrary to the written request of the Engineer, it must if requested by the Engineer, be uncovered for his observation and replaced at the Contractor's expense.
- 7.10 If any Work has been covered which the Engineer has not specifically requested to observe prior to its being covered, or if the Engineer considers it necessary or advisable that covered Work be inspected or tested by others, the Contractor at the Engineer's request, will uncover, expose or otherwise make available for observation, inspection or testing as the Engineer may require, that portion of the Work in question, furnishing all necessary labor, materials, tools and equipment. If it is found that such Work is defective, the Contractor will bear all the expenses of such uncovering, exposure, observation, inspection, testing and reconstruction and an appropriate Change Order shall be issued.
8. Substitutions
- 8.1 Whenever a material, article or piece of equipment is identified on the Drawings or Specifications by reference to brand name or catalogue number, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements and that other products of equal capacities, quality and function shall be considered. The Contractor may recommend the substitution of a material, article, or piece of equipment of equal substance and functions for those referred to in the Contract Documents by reference to brand name or catalogue number and if, in the opinion of the Engineer, such material, article, or piece of equipment is of equal substance and function to that specified, the Engineer may approve its substitution and use by the Contractor. Any cost differential shall be deductible from the Contract Price and the Contract Documents shall be appropriately modified by Change Order. The Contractor warrants that if substitutes are approved, no major changes in the function or general design of the Project will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the Contractor without a change in the Contract Price or Contract Time.
9. Patents
- 9.1 The Contractor shall pay all applicable royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and save the Owner harmless from loss on account thereof except that the Owner shall be responsible for any such loss when a particular process, design, or the product of a particular manufacturer or manufacturers is specified, but if the Contractor has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the Engineer.
10. Survey, Permits, Regulations
- 10.1 The Owner shall furnish all land surveys and establish all base lines for locating the principal

component parts of the Work together with a suitable number of bench marks adjacent to the Work as shown in the Contract Documents. Unless otherwise specified in the Contract Documents, the Engineer shall furnish the Contractor all lines, profiles, grades and measurements necessary for proper construction of the project. The Contractor's attention is called to the fact that the Engineer will determine what surveying and construction layout is necessary for the Project and that minor measurements incidental to the construction process will be made by the Contractor. Items normally determined as necessary include such things as staking grades and alignment of the roadway, "Blue top stakes", slope stakes, grades and alignments of storm sewers, and staking 50' centerline stations. The Contractor shall notify the Engineer 48 hours in advance of needed construction staking.

- 10.2 The Contractor shall carefully preserve bench marks, reference points and stakes and, in case of willful or negligent destruction by the Contractor, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance.
- 10.3 Permits and licenses of a temporary nature necessary for the prosecution of the Work shall be secured and paid for by the Contractor. Permits, licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the Owner, unless otherwise specified. The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the Work as drawn and specified. If the Contractor observes that the Contract Documents are at variance therewith, he shall promptly notify the Engineer in writing, and any necessary changes shall be adjusted as provided in Section 13, Changes in the Work.
- 10.4 Construction and demolition debris must be disposed of in a state permitted and approved construction and demolition landfill (TDEC Class I, III, or IV).
- 10.5 Debris shall be removed and transported in such a manner that prevents spillage on streets or adjacent areas. Federal, State and local regulations regarding hauling and disposal of waste shall apply.
- 11. Protection of Work, Property and Persons
 - 11.1 The Contractor will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. He will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss to all employees on the Work and other persons who may be affected thereby, all the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of Construction.
 - 11.2 The Contractor will comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction. He will erect and maintain, as required by the conditions and progress of the Work, all necessary safeguards for safety and protection. He will notify owners of adjacent utilities when prosecution of the Work may affect them. The Contractor will remedy all damage, injury or loss to any property caused, directly or

indirectly, in whole or in part, by the Contractor, any Subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, and not attributable directly or indirectly in whole or in part to the fault or negligence of the Contractor.

- 11.3 In emergencies affecting the safety of persons or the Work or property at the side or adjacent thereto, the Contractor, without special instruction or authorization from the Engineer or Owner, shall act to prevent threatened damage, injury or loss. He will give the Engineer prompt Written Notice of any significant changes in the Work or deviations from the Contract Documents caused thereby, and a Change Order shall thereupon be issued covering the changes and deviations involved.
- 11.4 In order to protect the lives and health of his employees under the Contract, the Contractor shall comply with all pertinent provisions of the "Manual of Accident Prevention in Construction" issued by the Associated General Contractors of America, Inc., and shall maintain an accurate record of all cases of death, occupational disease and injury requiring medical attention or causing loss of time from work, arising out of and in course of employment on work under the Contract.
- 11.5 The Contractor alone shall be responsible for the safety, efficiency and adequacy of his plant, appliances and methods, and for any damage which may result from their failure or their improper construction, maintenance or operation.
- 11.6 The Contractor shall, at his own expense, shore up and protect any buildings, bridges, or other public or private structures which may be encountered or endangered in the prosecution of the Work, and that may not be otherwise provided for, and he shall repair and make good any damages to such property by reason of his operations. All existing fences which due to prosecution of the Work that were removed shall be replaced by the Contractor. No extra payment will be made for said work or materials unless specified.
- 11.7 Contractor shall repair or replace at his own expense any property pins, bench marks, existing water pipes, sewers, drainage ditches and all plantings including grass that are damaged during construction. The site shall be left in its present condition after all clean up work has been done. Any damage to drainage or water pipes, local sewers, planting including grass, utilities, roads, parking space or other structures, shall be repaired and replaced immediately in the condition found. Such repairs and replacements shall be at the expense of the Contractor.
- 11.8 Contractor will be required, at his own expense, to do everything necessary to support, protect and sustain all sewer, water or gas pipes; service pipes; electric lights; power, telephone or telegraph poles; conduits; and other fixtures laid across or along the site of the Work. The Engineer, as well as the company or corporation owning said poles, pipes or conduits must be notified by the Contractor before any such fixtures are removed or molested. In case any of the said sewer, gas, or water pipes; service pipes; electric lights; power; telephone or telegraph poles; conduits; or other fixtures be damaged, they shall be repaired by the authorities having control of the same, and the expense of said repairs shall be deducted from the monies due or to become due the Contractor under this Contract.

- 11.9 Should it become necessary to temporarily change the position or remove poles, electric conduits, water pipes, gas pipes, or other pipes or wires, the Contractor shall notify the Engineer and company or the corporation owning the said poles, pipes or conduits of the location and circumstances, and shall cease work if necessary until satisfactory arrangements have been made by the owners of the said poles, pipes, conduits or wires to properly care for the same. No claims for damages will be allowed on account of any delay occasioned thereby. The entire cost of such temporary changes or removal must be included in the unit or lump sum prices bid for the various items under this Contract.
- 11.10 Before, during and after installation, the Contractor shall furnish and maintain satisfactory protection to all equipment against injury by weather, flood or breakage, thereby permitting the Work to be left in a perfect condition at the completion of the Contract. No extra payment will be made for this work but the entire cost of the same shall be included in the price bid for the construction of the work done under this contract.
12. Supervision by Contractor
- 12.1 The Contractor will supervise and direct the Work. He will be solely responsible for the means, methods, techniques, sequences and procedures of construction. The Contractor will employ and maintain on the Work a qualified supervisor or superintendent who shall have been designated in writing by the Contractor as the Contractor's representative at the site. The supervisor shall have full authority to act on behalf of the Contractor and all communications given to the supervisor shall be as binding as if given to the Contractor. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the Work.
13. Changes in the Work
- 13.1 The Owner may at any time, as the need arises, order changes within the scope of the Work without invalidating the Agreement. If such changes increase or decrease the amount due under the Contract Documents, or in the time required for performance of the Work, an equitable adjustment shall be authorized by Change Order. All Change Orders must be approved by the Owner and the Engineer.
- 13.2 The Engineer, also, may at any time, by issuing a Field Order make changes in the details of the Work. The Contractor shall proceed with the performance of any changes in the Work so ordered by the Engineer unless the Contractor believes that such Field Order entitles him to a change in Contract Price or Time, or both, in which event he shall give the Engineer Written Notice thereof within fifteen (15) days after the receipt of the ordered change, and the Contractor shall not execute such changes pending the receipt of an executed Change Order or further instruction from the Owner.
- 13.3 No claim for extra work or cost shall be allowed unless the same was done in pursuance of a written order of the Engineer approved by the Owner, and the claim presented with the first estimate after the change or extra work is done. When the Work is performed under the terms of Article 14 of the General Conditions, the Contractor shall furnish satisfactory bills, payrolls and vouchers covering all items of cost and when requested by the Owner, give the

- Owner access to accounts relating thereto.
14. Changes in Contract Price
- 14.1 The Contract Price may be changed only by a Change Order. The value of any Work covered by a Change Order or of any claim for increase or decrease in the Contract Price shall be determined by one or more of the following methods in the order of precedence listed below:
- (a) Unit prices previously approved.
 - (b) An agreed lump sum.
 - (c) The actual cost for labor, direct overhead, materials supplies, equipment, and other services necessary to complete the work. In addition there shall be added an amount to be agreed upon but not to exceed fifteen (15) percent of the actual cost of the Work to cover the cost of general overhead and profit.
15. Time for Completion and Liquidated Damages
- 15.1 The date of beginning and the time for completion of the Work are essential conditions of the Contract Documents and the Work embraced shall be commenced on a date specified in the Notice to Proceed.
- 15.2 The Contractor will proceed with the Work at such rate of progress to insure full completion within the Contract Time. It is expressly understood and agreed, by and between the Contractor and the Owner, that the Contract Time for the completion of the Work described herein is a reasonable time, taking into consideration average climatic and economic conditions and other factors prevailing in the locality of the Work.
- 15.3 If a Contractor shall fail to complete the Work within the Contract Time, or extension of time granted by the Owner, then the Contractor will pay to the Owner the amount for liquidated damages as specified in the Bid for each calendar day that the Contractor shall be in default after the time stipulated in the Contract Documents.
- 15.4 The Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the Work is due to the following, and Contractor has promptly given Written Notice as such delay to the Owner or Engineer.
- 15.4.1 To any preference, priority or allocation order duly issued by the Owner.
 - 15.4.2 To unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted to, acts of God, or of the public enemy, acts of the Owner, acts of another Contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather; and
 - 15.4.3 To any delays of Subcontractors occasioned by any of the causes specified in paragraphs 15.4.1 and 15.4.2 of this article.

16. Correction of Work

- 16.1 The Contractor shall promptly remove from the premises all Work rejected by the Engineer for failure to comply with the Contract Documents, whether incorporated in the construction or not, and the Contractor shall promptly replace and re-execute the Work in accordance with the Contract Documents and without expense to the Owner and shall bear the expense of making good all Work of other Contractors destroyed or damaged by such removal or replacement.
- 16.2 All removal and replacement Work shall be done at the Contractor's expense. If the Contractor does not take action to remove such rejected Work within ten (10) days after receipt of Written Notice, the Owner may remove such Work and store the materials at the expense of the Contractor.
- 16.3 If, in the opinion of the Engineer, it is undesirable to replace any defective or damaged materials or to reconstruct or correct any portion of the Work injured or not performed in accordance with the Contract Documents, the compensation to be paid to the Contractor hereunder shall be reduced by such amount as in the judgement of the Engineer shall be equitable.

17. Subsurface Conditions

- 17.1 The Contractor shall promptly, and before such conditions are disturbed, except in the event of an emergency, notify the Owner by Written Notice of:
- 17.1.1 Subsurface or latent physical conditions at the site, differing materially from those indicated in the Contract Documents; or
- 17.1.2 Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inhering in Work of the character provided for in the Contract Documents.
- 17.2 The Owner shall promptly investigate the conditions, and if he finds that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for, performance of the Work, and equitable adjustment shall be made and the Contract Documents shall be modified by a Charge Order. Any claim of the Contractor for adjustment hereunder shall not be allowed unless he has given the required Written Notice; provided that the Owner may, if he determines the facts justify, consider and adjust any such claims asserted before the date of final payment.
- 17.3 If the Bidder wishes to make borings for his own use, the Owner will make the site of the Work available to the Bidder to do this exploratory work. Written permission must be obtained from the Engineer before the Bidder begins Work on the site. Cost of such borings shall be at the expense of the Bidder.

18. Suspension of Work, Termination and Delay

- 18.1 The Owner may, at any time and without cause, suspend the Work or any portion thereof for a period of not more than ninety days or such further time as agreed upon by the Contractor, by Written Notice to the Contractor and the Engineer on which Notice shall fix the date on which Work shall be resumed. The Contractor will resume that Work on the date so fixed. The Contractor will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension.
- 18.2 If the Contractor is adjudged a bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors, or if a trustee or receiver is appointed for the Contractor or for any of his property, or if he files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or if he repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment, or if he repeatedly fails to make prompt payments to Subcontractors or for labor, materials or equipment or if he disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the Work or if he disregards the authority of the Engineer, or if he otherwise violates any provision of the Contract Documents, then the Owner may, without prejudice to any other right or remedy and after giving the Contractor and his surety a minimum of ten (10) days from delivery of a Written Notice, terminate the services of the Contractor and take possession of the Project and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor, and finish the Work by whatever method he may deem expedient. In such case the Contractor shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct and indirect costs of completing the Project, including compensation for additional professional services, such excess shall be paid to the Contractor. If such costs exceed such unpaid balance, the Contractor will pay the difference to the Owner. Such costs incurred by the Owner will be determined by the Engineer and incorporated in a Change Order.
- 18.3 Where the Contractor's services have been so terminated by the Owner, said termination shall not affect any right of the Owner against the Contractor then existing or which may thereafter accrue. Any retention or payment of monies by the Owner due the Contractor will not release the Contractor from compliance with the Contract Documents.
- 18.4 After ten (10) days from delivery of a Written Notice to the Contractor and the Engineer, the Owner may, without cause and without prejudice to any other right or remedy, elect to abandon the Project and terminate the Contract. In such case, the Contractor shall be paid for all Work executed and any expense sustained plus reasonable profit.
- 18.5 If, through no act or fault of the Contractor, the Work is suspended for a period of more than ninety (90) days by the Owner or under an order of court or other public authority, or the Engineer fails to act on any request for payment within thirty (30) days after it is submitted, or the Owner fails to pay the Contractor substantially the sum approved by the Engineer or awarded by arbitrators within thirty (30) days of its approval and presentation, then the Contractor may, after ten (10) days from delivery of a Written Notice to the Owner and the Engineer, terminate the Contract and recover from the Owner payment for all Work executed and all expenses sustained. In addition and in lieu of terminating the Contract, if the Engineer has failed to act on a request for payment or if the Owner has failed to make any payment as aforesaid, the Contractor may upon ten (10) days notice to the Owner and the Engineer stop the Work until he has been paid all amounts then due, in which event and upon

resumption of the Work, Change Orders shall be issued for adjusting the Contract Price or extending the Contract Time or both to compensate for the costs and delays attributable to the stoppage of the Work.

- 18.6 If the performance of all or any portion of the Work is suspended, delayed, or interrupted as a result of a failure of the Owner or Engineer to act within the time specified in the Contract Documents, or if no time is specified, within a reasonable time, an adjustment in the Contract Price or an extension of the Contract Time, or both, shall be made by Change Order to compensate the Contractor for the costs and delays necessarily caused by the failure of the Owner or Engineer.
- 18.7 The Owner may terminate this Agreement at any time, with or without cause, by written notice of termination to the Contractor. If the Owner terminates this Agreement, and such termination is not a result of a default by the Contractor, the Contractor shall be entitled to receive as its sole and exclusive remedy the following amount from the Owner, and the Owner shall have no further or other obligations to the Contractor: The amount due to the Contractor for work executed through the date of termination, not including any future costs, profits, or other compensation or payments which the Contractor would have been entitled to receive if the Agreement had not been terminated.
19. Payments to Contractor
- 19.1 Payment by the Owner to the contractor will be made on a monthly basis. Work performed during the month will be submitted by the Engineer for payment on or before the 10th day of the following month. Payment will then be made by the City of Knoxville Finance Department to the Contractor. The Owner shall retain five (5%) percent of all work covered by the Contract Documents.
- 19.2 The Contractor may request partial payment for materials and equipment not incorporated in the Work but delivered and suitably stored at or near the site. Such a request shall be accompanied by supporting data, satisfactory to the Owner, as will establish the Owner's title to the material and equipment and protect his interest therein, including applicable insurance.
- 19.3 All Work covered by payments made shall thereupon become the sole property of the Owner, but this provision shall not be construed as relieving the Contractor of the sole responsibility for the care and protection of the Work upon which payments have been made or the restoration of any damage Work, or as a waiver of the right of the Owner to require the fulfillment of all terms of the Contract Documents.
- 19.4 Upon completion and acceptance of the Work, the Engineer shall issue a certificate attached to the final payment request that the Work has been accepted by him under conditions of the Contract Documents. The entire balance found to be due the Contractor, including the retained percentages, but except such sums as may be lawfully retained by the Owner, shall be paid to the Contractor within thirty (30) days of completion and acceptance of the Work.
- 19.5 The Contractor will indemnify and save the Owner or the Owner's agents harmless from all claims growing out of the lawful demands of Subcontractors, laborers, workmen, mechanics, materialmen, and furnishers of machinery and parts thereof, equipment, tools, and all

supplies, incurred in the furtherance of the performance of the Work. The Contractor shall, at the Owner's request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged, or waived. If the Contractor fails to do so the Owner may, after having notified the Contractor, either pay unpaid bills or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the Contractor shall be resumed, in accordance with the terms of the Contract Documents, but in no event shall the provisions of this sentence be construed to impose any obligations upon the Owner to either the Contractor, his Surety, or any third party. In paying any unpaid bills of the contractor, any payment so made by the Owner shall be considered as a payment made under the Contract Documents by the Owner to the Contractor and the Owner shall not be liable to the Contractor for any such payments made in good faith.

19.6 No separate payment will be made for any items specified in the General Conditions, Supplementary General Conditions or the General Provision, Payments for such items shall be included in the unit price and lump sum prices bid by the Contractor for items listed in the Bid Schedule.

20. Acceptance of Final Payment as Release

20.1 The acceptance by the Contractor of final payment shall be and shall operate as a release to the Owner of all claims and all liability to the Contractor other than claims in state amounts as may be specifically excepted by the Contractor for all things done or furnished in connection with this Work and for every act and neglect of the Owner and others relating to or arising out of this Work. Any payment, however, final or otherwise, shall not release the Contractor or his sureties from any obligations under the Contract Documents or the Performance Bond and Payment Bonds.

21. Insurance Requirements for Contractors

21.1 Contractor shall at its sole expense obtain and maintain in full force and effect for the duration of the Agreement and any extension hereof at least the following types and amounts of insurance for claims which may arise from or in connection with this Agreement. All insurance must be underwritten by insurers with an A.M. Best rating of A-VIII or better.

21.2 *Commercial General and Umbrella Liability Insurance:* occurrence version commercial general liability insurance, and if necessary umbrella liability insurance, with a limit of not less than \$2,000,000 each occurrence for bodily injury, personal injury, property damage, and products and completed operations. If such insurance contains a general aggregate limit, it shall apply separately to the work/location in this Agreement or be no less than \$3,000,000.

Such insurance shall:

- a. Contain or be endorsed to contain a provision that includes the City, its officials, officers, employees, and volunteers as additional insureds with respect to liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts, or equipment furnished in connection with such work or

operations. The coverage shall contain no special limitations on the scope of its protection afforded to the above-listed insureds. Proof of additional insured status up to and including copies of endorsements and/or policy wording will be required.

- b. For any claims related to this project, Contractor's insurance coverage shall be primary insurance as respects the City, its officers, officials, employees, and volunteers. Any insurance or self-insurance programs covering the City, its officials, officers, employees, and volunteers shall be excess of Contractor's insurance and shall not contribute with it.
- c. At the sole discretion of the City, dedicated limits of liability for this specific project may be required.

21.3 *Automobile Liability Insurance:* including vehicles owned, hired, and non-owned, with a combined single limit of not less than \$1,000,000 each accident. Such insurance shall include coverage for loading and unloading hazards. Insurance shall contain or be endorsed to contain a provision that includes the City, its officials, officers, employees, and volunteers as additional insureds with respect to liability arising out of automobiles owned, leased, hired, or borrowed by or on behalf of Contractor.

21.4 *Workers' Compensation Insurance.* Contractor shall maintain workers' compensation insurance with statutory limits as required by the State of Tennessee or other applicable laws and employers' liability insurance with limits of not less than \$500,000. Contractor shall require each of its subcontractors to provide Workers' Compensation for all of the latter's employees to be engaged in such work unless such employees are covered by Contractor's workers' compensation insurance coverage. Such insurance shall include a waiver of subrogation in favor of the City. Proof of waiver of subrogation up to and including copies of endorsements and/or policy wording will be required.

21.5 *Other Insurance Requirements.* Contractor shall:

- a. Prior to commencement of services, furnish the City with original certificates and amendatory endorsements effecting coverage required by this section and provide that such insurance shall not be cancelled, allowed to expire, or be materially reduced in coverage except on 30 days' prior written notice to the City Attorney of Knoxville, P.O. Box 1631, Knoxville, Tennessee 37901. Proof of policy provisions regarding notice of cancellation will be required.
- b. Upon the City's request, provide certified copies of endorsements and policies in lieu of or in addition to certificates of insurance. Copies of policies will only be requested when contracts are deemed to be extremely or uniquely hazardous, include a dollar amount that is significant to the overall budget of the City or a City Department, or the coverage(s) may not follow standard insurance forms. A policy will only be requested after the City's Risk Manager has reviewed the contract and proof of coverage has been provided. Should the certificate of insurance refer to specific coverage wording or endorsement(s), proof of such policy wording or endorsement(s) will be required.

- c. Replace certificates, policies, and endorsements for any such insurance expiring prior to completion of services.
- d. Maintain such insurance from the time services commence until services are completed. Failure to maintain or renew coverage or to provide evidence of renewal may be treated by the City as a material breach of contract.
- e. If Contractor cannot procure insurance through an insurer having an A.M. Best rating of A-VIII, Contractor may, in the alternative, place such insurance with insurer licensed to do business in Tennessee and having A.M. Best Company ratings of no less than A. Modification of this standard may be considered upon appeal to the City Law Director.
- f. Require all subcontractors to maintain during the term of the Agreement Commercial General Liability insurance, Business Automobile Liability insurance, and Workers' Compensation/Employer's Liability insurance (unless subcontractor's employees are covered by Contractor's insurance) in the same manner as specified for Contractor. Contractor shall furnish subcontractors' certificates of insurance to the City without expense immediately upon request.

Any deductibles and/or self-insured retentions greater than \$50,000 must be disclosed to and approved by the City of Knoxville prior to the commencement of services. Use of large deductibles and/or self-insured retentions will require proof of financial ability as determined by the City.

The insurer shall agree to waive all rights of subrogation against the City, its officers, officials, and employees for losses arising from work performed by Contractor for the City. Proof of waiver of subrogation up to and including copies of endorsements and/or policy wording will be required.

All general liability policies must be written on an occurrence basis unless the Risk Manager determines that a claims made basis is reasonable in the specific circumstance. Use of policies written on a claims made basis must be approved by the Risk Manager and retroactive dates and/or continuation dates must be provided to the City prior to commencement of any work performed. Professional Liability and Environmental Liability (Pollution Coverage) are most commonly written on a claims made basis and are generally acceptable in that form.

22. (Blank)

23. Assignments

23.1 Neither the Contractor nor the Owner shall sell, transfer, assign or otherwise dispose of the Contract or any portion thereof, or of his right, title or interest therein, or his obligations thereunder, without written consent of the other party.

23.2 In case the Contractor assigns all or any part of any monies due or to become due under this contract, the instrument of assignment shall contain a clause substantially to the effect that it

is agreed that the right of the assignee in and to any monies due or to become due to the Contractor shall be subject to prior claims of all persons, firms and corporations for services rendered or materials supplied for the performance of the Work call for in this contract.

24. Indemnification Clause

24.1 Contractor shall defend, indemnify and hold harmless the City, its officers, employees and agents from any and all liabilities which may accrue against the City, its officers, employees and agents or any third party for any and all lawsuits, claims, demands, losses or damages alleged to have arisen from an act or omission of Contractor in performance of this Agreement or from Contractor's failure to perform this Agreement using ordinary care and skill, except where such injury, damage, or loss was caused by the sole negligence of the City, its agents or employees.

24.2 Contractor shall save, indemnify and hold the City harmless from the cost of the defense of any claim, demand, suit or cause of action made or brought against the City alleging liability referenced above, including, but not limited to, costs, fees, attorney fees, and other expenses of any kind whatsoever arising in connection with the defense of the City; and Contractor shall assume and take over the defense of the City in any such claim, demand, suit, or cause of action upon written notice and demand for same by the City. Contractor will have the right to defend the City with counsel of its choice that is satisfactory to the City, and the City will provide reasonable cooperation in the defense as Contractor may request. Contractor will not consent to the entry of any judgment or enter into any settlement with respect to an indemnified claim without the prior written consent of the City, such consent not to be unreasonably withheld or delayed. The City shall have the right to participate in the defense against the indemnified claims with counsel of its choice at its own expense.

24.3 Contractor shall save, indemnify and hold City harmless and pay judgments that shall be rendered in any such actions, suits, claims or demands against City alleging liability referenced above.

24.4 The indemnification and hold harmless provisions of this Agreement shall survive termination of the Agreement.

25. Separate Contracts

25.1 The Owner reserves the right to let other contracts in connection with this Project. The Contractor shall afford other Contractors reasonable opportunity for the introduction and storage of their materials and the execution of their Work, and shall properly connect and coordinate his Work with theirs. If the proper execution or results of any part of the Contractor's Work depends upon the Work of any other Contractor, the Contractor shall inspect and promptly report to the Engineer any defects in such Work that render it unsuitable for such proper execution and results.

25.2 The Owner may perform additional Work related to the Project by himself, or he may let other contracts containing provisions similar to these. The Contractor will afford the other Contractors who are parties to such Contracts (Or the Owner, if he is performing the additional work himself), reasonable opportunity for the introduction and storage of materials

and equipment and the execution of Work, and shall properly connect and coordinate his Work with theirs.

- 25.3 If the performance of additional Work by other Contractors or the Owner is not noted in the Contract Documents prior to the execution of the Contract, written notice thereof shall be given to the Contractor prior to starting any such additional Work. If the Contractor believes that the performance of such additional Work by the Owner or others involves in additional expense or entitles him to an extension of the Contract Time, he may make claim therefore as provided in Sections 14 and 15.

26. Subcontracting

- 26.1 The Contractor may utilize the services of specialty Subcontractors on those parts of the Work which, under normal contracting practices, are performed by specialty Subcontractors. Work shall not be awarded to the Subcontractor without prior approval of the Owner.
- 26.2 The Contractor shall not award Work to Subcontractor(s), in excess of fifty (50%) percent of the Contract Price, without prior written approval of the Owner.
- 26.3 The Contractor shall be fully responsible to the Owner for the acts and omissions of his Subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.
- 26.4 The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the Work to bind Subcontractors to the Contractor by the terms of the Contract Documents insofar as applicable to the Work of Subcontractors and to give the Contractor the same power as regards terminating any subcontract that the Owner may exercise over the Contractor under any provision of the Contract Documents.
- 26.5 Nothing contained in this Contract shall create any contractual relation between any Subcontractor and the Owner.

27. Engineer's Authority

- 27.1 The Engineer shall act as the Owner's representative during the construction period. He shall decide questions which may arise as to quality and acceptability of materials furnished and Work performed. He shall interpret the intent of the Contract Documents in a fair and unbiased manner. The Engineer will make visits to the site and determine if the Work is proceeding in accordance with the Contract Documents.
- 27.2 The Contractor will be held strictly to the intent of the Contract Documents in regard to the quality of materials, workmanship and execution of the Work. Inspections may be made at the factory of fabrication plant of the source of material supply.
- 27.3 The Engineer will not be responsible for the construction means, controls, techniques, sequences, procedures, or construction safety.

- 27.4 The Engineer shall promptly make decisions relative to interpretation of the Contract Documents.
- 27.5 The Engineer may appoint inspectors as he desires. An inspector is placed on the Work to keep the Engineer informed as to the progress and manner in which construction is being done, and to assure adherence by the Contractor to the Drawings and Specifications. The inspector will have the authority to reject defective materials and to suspend any construction that is being improperly done, subject to final decision of the Engineer. The inspector will not have the authority to revoke, alter, enlarge or relax the provisions of these conditions, or to issue instructions contrary to Drawings and Specifications.
28. Land and Rights-of-Way
- 28.1 Prior to issuance of Notice to Proceed, the Owner shall obtain all land and rights-of-way necessary for carrying out and for the completion of the Work to be performed pursuant to the Contract Documents, unless otherwise mutually agreed.
- 28.2 The Owner shall provide to the Contractor information which delineates and describes the lands owned and rights-of-way acquired.
- 28.3 The Contractor shall provide at his own expense and without liability to the Owner any additional land and access thereto that the Contractor may desire for temporary construction facilities, or for storage of materials.
29. Guaranty
- 29.1 The Contractor shall guarantee all materials and equipment furnished and Work performed for a period of one (1) year from the date of Substantial Completion.
30. Taxes
- 30.1 The Contractor will pay all sales, consumer, use and other similar taxes required by the law of the place where the Work is performed.
31. Traffic Control
- 31.1 The Contractor shall submit to the City of Knoxville Traffic Engineer a traffic control plan for the roadways within the project area. The Contractor shall not begin construction until the traffic control plan has been approved by the Traffic Engineer. Flagmen, barricades, signs and traffic control furnished by the Contractor shall conform to the standards established in the latest edition of the "Manual on Uniform Traffic Control Devices," published by the U.S. Department of Transportation.
32. Job Offices and other Temporary Buildings
- 32.1 The Contractor shall furnish office space for the Resident Engineer. Space shall be at least 150 square feet in area and shall be located conveniently to the Work. Office shall be furnished with a desk, drafting table, applicable chairs, drawing rack, surveying instrument

storage, telephone service, lights, heat, air conditioning, windows and one door with cylinder lock.

- 32.2 No shanties, camps or buildings for the housing of men employed on the Work shall be erected on land owned or leased by the Owner unless a permit, in writing, is secured from the Engineer allowing their construction. Should permission be asked and granted, the Contractor must comply with all regulations regarding the construction and maintenance of such buildings.

33. Work by Utilities

- 33.1 During the life of the contract, the Knoxville Utility Board Bureau of Water, Bureau of Gas and Bureau of Electricity; BellSouth Telephone Company, Scripps-Howard Cable Television, Traffic Engineering Department, and Service Department may install or adjust their respective utilities in the project area and work shall be performed by the Contractor in cooperation with the Utilities. The Contractor shall be responsible for the coordination of his work with the respective Utility Owner.
- 33.2 Any costs for relocation of the Utility during construction such as power poles, etc. to facilitate the work of the Contractor for the convenience of the Contractor shall be borne by the Contractor.

34. Maintenance

- 34.1 The Contractor shall undertake to provide reasonable maintenance for those items listed below and cost of said work shall be included in the unit or lump sum prices bid for the various items of Work under this Contract, and the manner of providing for this work shall meet with the approval of the Engineer:
 - 34.1.1 The Contractor shall make ample provisions for both vehicular and pedestrian traffic on any public road. Effort must be made to minimize by-passing traffic during construction.
 - 34.1.2 The Contractor shall furnish all the necessary equipment, shall take all necessary precautions and shall assume the entire cost of handling any sewage, seepage, storm, surface and flood flows which may be encountered at any time during the construction of the Work.
 - 34.1.3 The Contractor shall lay and maintain temporary driveways, culverts, and crossings, such as in the opinion of the Engineer are necessary to reasonably accommodate the public.
 - 34.1.4 The Contractor will minimize siltation and bank erosion during construction.
- 34.2 The contractor will be required to restore all street surfaces and utilities damaged by his operations to as good condition as they were previous to the work. He will be required to maintain all improvements, constructed by him, in good condition until they are accepted by the Engineer.

35. Estimate of Quantities

- 35.1 Wherever the estimated quantities of work to be done and materials to be furnished under this Contract are shown in any of the Contract Documents including the proposal, they are given for use in comparing Bids and the right is especially reserved except as herein otherwise specifically limited, to increase or diminish them as may be deemed reasonably necessary or desirable by the Owner to complete the Work contemplated by this Contract, and such increase or diminution shall in no way vitiate this Contract, nor shall any such increase or diminution give cause for claims or liability for damages.
36. Air Pollution and Dust Control
- 36.1 The contractor shall comply with all air pollution control rules, regulations, ordinances, and statutes which apply to any work performed pursuant to the contract, including any air pollution control rules, regulations, ordinances and statutes, specified in the Tennessee Department of Public Health's, "Air Pollution Control Regulations" or any municipal regulations pertaining to air pollution.
- 36.2 All available precautions shall be taken to control dust. When the Engineer judges dust to be a problem, the Contractor shall control the dust by sprinkling, by applying calcium chloride, or by other methods as directed. Payment for dust control will be made at the applicable contract unit prices for the various items used and said contract unit prices will be full compensation for furnishing all materials, equipment, tools, labor and incidentals required to control dust. No additional compensation will be allowed for any costs incurred due to delays caused by necessary dust control operations.
37. Care of Work
- 37.1 The Contractor expressly undertakes at his own expense:
- a. To clean up frequently all refuse, rubbish, scrap materials and debris caused by his operations, to the end that at all times the site of the Work shall present a neat, orderly and workmanlike appearance;
 - b. Before final payment to remove all surplus material, false work, temporary structures, including foundations thereof, plant of any description and debris of every nature resulting from his operations, and to put the site in a neat, orderly condition;
- 37.2 The Owner expressly disclaims any responsibility for the accuracy or completeness of the information given on the Drawings with regard to existing structures and pipelines and the Contractor will not be entitled to any extra compensation on account of inaccuracy or incompleteness of such information, said structures and pipelines being shown only for the convenience of the Contractor who must verify the information to his own satisfaction. The giving of this information upon the Drawings will not relieve the Contractor of his obligations to support and protect all pipelines and other structures which may be encountered during the construction of the Work and to make good all damages done to such pipelines and structures.
38. Tennessee One Call

38.1 The Contractor shall notify Tennessee One Call (1-800-351-1111) 3 working days prior to any excavation in public street right-of-way. This is a requirement of Tennessee state law to protect facilities located within the right-of-way.

39. Notice of City Procurement Code Prohibitions

39.1 It shall be unlawful for any employee of the City to participate, directly or indirectly, through decision, approval, disapproval, recommendation, preparation of any part of a purchase request, influencing the content of any specification or purchase standard, rendering of advice, investigation, auditing or otherwise, in any proceeding or application, request for ruling or other determination, claim or controversy or other matter pertaining to any contract or subcontract and any solicitation or proposal therefore, where to the employee's knowledge there is a financial interest possessed by:

- (1) The employee or the employee's immediate family;
- (2) A business other than a public agency in which the employee or a member of the employee's immediate family serves as an officer, director, trustee, partner or employee; or
- (3) Any other person or business with whom the employee or a member of the employee's immediate family is negotiating or has an arrangement concerning prospective employment.

39.2 It shall be unlawful for any member of council, member of the board of education, officer or employee of the city to have or hold any interest in the profits or emoluments of any contract, job, work or service, either by himself or by another, directly or indirectly. Any such contract for a job, work or service for the City in which any member of council, member of the board of education, officer or employee has or holds any such interest is void.

39.3 It is unlawful for any person to offer, give or agree to give to any person, while a city employee, or for any person, while a city employee, to solicit, demand, accept or agree to accept from other person, anything of a pecuniary value for or because of:


- (1) Any official action taken, or to be taken, or which could be taken;
- (2) A legal duty performed, or to be performed, or which could be performed; or
- (3) A legal duty violated, or to be violated, or which could be violated by such person while a City employee.

Anything of nominal value shall be presumed not to constitute a gratuity under this section. It is unlawful for any payment, gratuity or benefit to be made by or on behalf of a

subcontractor or any person associated therewith as an inducement for the award of a subcontract or order.

40. **ADA Compliance.** With regard to the services performed under this Agreement, Contractor will comply with all applicable requirements of the Americans with Disabilities Act, 42 U.S.C. § 12101, *et seq.* (“ADA”). Contractor agrees that it will defend, indemnify and hold the City harmless against any and all claims, demands, suits or causes of action which arise out of any negligent and/or intentional act or omission by Contractor, its employees, agents or representatives that violates the ADA. Contractor agrees that the City will not be responsible for any costs or expenses arising from Contractor’s failure to comply with the ADA.
41. **Prevailing Wages**
 - 41.1 Contractor shall at all times in performing the work under this contract comply with the City’s policy on payment of prevailing wages as set forth in the Knoxville Municipal Code sections 2-1016 et seq. More specifically, but without limiting the scope of these ordinances, Contractor shall pay not less than the State of Tennessee’s prevailing wage rates for all types and classifications of the Contractor's employees as determined by the City Purchasing Department under section 2-1018 of the Knoxville Municipal Code. Contractor shall furnish to the City any forms, papers, payroll copies or other information that may be required by the City and the City shall have the right to audit Contractor’s books to verify that the Contractor is in compliance with the provisions cited above. The Current State of Tennessee Prevailing Wage rates must be displayed at the job site, in accordance with the “Prevailing Wage Act of 1975,” Tennessee Code Annotated 12-4-401 et seq. Current State of Tennessee Highway Construction Crafts Prevailing Wages may be verified at <https://www.tn.gov/content/dam/tn/workforce/documents/Employees/SafetyHealth/2019StateHighwayPrevailingWageRates.pdf> and a copy of the current wages follows:

2019 HIGHWAY PREVAILING WAGE RATES

		
CLASSIFICATION	CRAFT NUMBER	2019
Bricklayer	1	16.15
Carpenter/Leadsperson	2	19.84
Class "A" Operators	3	21.68
Class "B" Operators	4	19.34
Class "C" Operators	5	20.10
Class "D" Operators	6	18.66
Concrete Finisher	7	17.40
Drill Operator (Cassion)	8	33.61
Electrician	9	30.11
Farm Tractor Operator (Power Broom)	10	15.29
Ironworkers Reinforcing	11	18.44
Ironworkers (Structural)	12	19.13
Mechanic (Class I) Heavy Duty	13	24.31
Mechanic (Class II) Light Duty	14	21.54
Painter/Sandblaster	15	29.85
Powder Person Blaster	16	22.40
Skilled Laborer	17	17.30
Survey Instrument Operator	18	23.68
Sweeping Machine (Vacuum) Operator	19	17.63
Truck Driver (2 axles)	20	17.39
Truck Driver (3/4 axles)	21	16.60
Truck Driver (5 or more axles)	22	18.61
Unskilled Laborer	23	14.84
Worksite Traffic Coordinator	24	19.12
Large Crane Operator	25	23.15

Effective 01/01/2019

DIVERSITY BUSINESS ENTERPRISE (DBE) PROGRAM

The City of Knoxville strongly encourages prime contractors to employ diverse businesses in the fulfillment of contracts/projects for the City of Knoxville.

The City of Knoxville's Fiscal Year 2020 goal is to conduct 4.82% of its business with minority-owned businesses, 10.73% of its business with women-owned businesses, and 33.94% with small businesses.

While the City cannot engage (pursuant to state law), in preferential bidding practices, the city does **strongly encourage** prime contractors to seek out and hire diverse businesses in order to help the city meet its goals as stated above. As such, the City encourages prime contractors to seek out and consider competitive sub-bids and quotations from diverse businesses.

For DBE tracking purposes, the City requests that prime contractors who are bidding, proposing, or submitting statements of qualifications record whether or not they plan to employ DBE's as sub-contractors or consultants. With that in mind, please fill out, sign and submit (with your bid/proposal) the following sub-contractor/consultant statement.

Subcontractor/Consultant Statement
(TO BE SUBMITTED IN THE BID/PROPOSAL ENVELOPE)

We _____ do certify that on the
(Bidder/Proposer Company Name)

(Project Name)
(\$ _____)
(Amount of Bid)

Please select one:

☐ **Option A: Intent to subcontract using Diverse Businesses**

A Diversity business will be employed as subcontractor(s), vendor(s), supplier(s), or professional service(s). The estimated **dollar value** of the amount that we plan to pay is:

\$ _____.
Estimated Amount of Subcontracted Service

Diversity Business Enterprise Utilization			
Description of Work/Project	Amount	Diverse Classification (MOB, WOB, SB, SDOV)	Name of Diverse Business

☐ **Option B: Intent to perform work “without” using Diverse Businesses**

We hereby certify that it is our intent to perform 100 % of the work required for the contract, work will be completed without subcontracting, or we plan to subcontract with non-Diverse companies.

DATE: _____ COMPANY NAME: _____

SUBMITTED BY: _____ TITLE: _____
(Authorized Representative)

ADDRESS: _____

CITY/STATE/ZIP CODE: _____

TELEPHONE NO: _____

CITY OF KNOXVILLE DIVERSITY BUSINESS DEFINITIONS

Diversity Business Enterprise (DBE's) are minority-owned (MOB), women-owned (WOB), service-disabled veteran-owned (SDVO), and small businesses (SB), who are impeded from normal entry into the economic mainstream because of past practices of discrimination based on race or ethnic background. These persons must own at least 51% of the entity and operate or control the business on a daily basis.

Minority: A person who is a citizen or lawful admitted permanent resident of the United States and who is a member of one (1) of the following groups:

- a. African American, persons having origins in any of the Black racial groups of Africa;
- b. Hispanic American, persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race;
- c. Native American, persons who have origin in any of the original peoples of North America;
- d. Asian American, person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands.

Minority-owned business (MOB) is a continuing, independent, for profit business that performs a commercially useful function, and is at least fifty-one percent (51%) owned and controlled by one (1) or more minority individuals.

Woman-owned business (WOB) is a continuing, independent, for profit business that performs a commercially useful function, and is at least fifty-one percent (51%) owned and controlled by one (1) or more women.

Service Disabled Veteran-owned business (SDOV) is a continuing, independent, for profit business that performs a commercially useful function, owned by any person who served honorably on active duty in the armed forces of the United States with at least a twenty percent (20%) disability that is service connected. Meaning such disability was incurred or aggravated in the line of duty in the active military, naval or air service, and is at least fifty-one percent (51%) owned and controlled by one (1) or more service disabled veteran.

Small Business (SB) is a continuing, independent, for profit business which performs a commercially useful function and has total gross receipts of not more than ten million dollars (\$10,000,000) average over a three-year period or employs no more than ninety-nine (99) persons on a full-time basis.

SPECIAL CONDITIONS

SPECIAL CONDITIONS

General

All bidders must submit with their bid a non-collusion affidavit as contained in these documents.

Where there appears to be a discrepancy between the Special Conditions and any other part of the Contract documents and Specifications these Special Conditions shall govern.

The Contractors attention is called to the fact that in some instances reference may be made in the Technical Specifications to the 2006 edition of the Tennessee Department of Highway Standard Specifications for Road and Bridge Construction. This reference, if made, is amended to refer to the Tennessee Department of Transportation Standard Specifications for Road and Bridge Construction (TDOTSS) dated January 1, 2015, and any current revisions and special provision thereto.

The City of Knoxville reserves the right to increase or decrease quantities for the items listed in the Bid Proposal and also add or delete from the proposed construction.

Tennessee One Call

Contractor shall notify Tennessee One Call prior to excavation on street right-of-way according to Tennessee State Law (1-800-351-1111).

Title VI Compliance

All bidders must comply with Title VI of the Civil Rights Act of 1964, as codified in 42 U.S.C. 2000d. The successful bidder must follow Title VI guidelines in all areas including hiring practices, open facilities, insurance, and wages. The City of Knoxville reserves the right to review all compliance records by a contract compliance officer designated by the City.

Certified Payrolls

The Contractor and subcontractors shall submit certified payrolls to the Project Manager each week in which any work is performed. During construction, if the work of the Contractor or subcontractor will be interrupted for a week or more, the following statement shall be placed on the signature sheet of the payroll for the last week in which work was performed: "No additional work will be performed until further notice."

In the event a work stoppage of a week or more occurs which is not anticipated, the Project Manager shall be furnished the following statement on the signature sheet of the payroll form for the week immediately after the week in which work was interrupted: "No work performed, and no work will be performed until further notice."

When work has ceased in either case as stipulated above, the Contractor or subcontractor shall note the following statement on the payroll for the week on which work is resumed: "Last previous work was performed the week ending _____."

TECHNICAL SPECIFICATIONS

Background

The City of Knoxville currently utilizes in-roadway traffic signal detector loops in the operation of the actuated traffic signals within the City of Knoxville. Traffic signal loops are subject to damage from pavement movement, pavement breakage, water infiltration, construction excavation and pavement milling, which can render the detector loop unrepairable and require that the detector loop be replaced. The maintenance of the traffic signal detection in working order provides the most efficient operation of the traffic signals locations. In an effort to provide the safest, most expedient, and highest quality installations, the City desires to establish an on-call term agreement for one year with the option to renew the agreement for two additional one-year terms. There is no guaranteed amount of work which be ordered under the resulting agreement.

The City requires installation services for inductive loop detection facilities for traffic signals under City of Knoxville Traffic Systems. The fixed price term agreement will be based on two typical loop installations: 1) one-hundred thirty (130') feet or 2) eighty (80') linear feet. The loop will be installed in accordance with the Federal Highway Administration (FHWA) Traffic Detector Handbook, Third Edition-Volume I Chapter 4, Traffic Detector Handbook Special Function Applications, Long loop with power head Figure 4-27 (see 12. Loop Design below) power head configuration. **The power head loop will have three (3) turns of wire for every one (1) turn in the main body. For Example; 2 turns in the main body will equal 6 turns in the power head.**

The linear footage will be based on 108' of loop and 22' of homerun saw slot for 6' X 45' loops. The typical wire linear footage will be based on approximately 332' for the loop and homerun with ample wire to make it to nearest point of termination. The typical linear footage of backer rod shall be approximately 156'. Each typical loop uses approximately 8-10 gallons of loop sealer with the proper amount of catalyst. This will be loop **Type 1**.

The linear footage will be based on 58' of loop and 22' of homerun saw slot for 6' X 20' loops. The typical wire linear footage will be based on approximately 188' for the loop and homerun with ample wire to make it to nearest point of termination. The typical linear footage of backer rod shall be approximately 96'. Each typical loop uses approximately 4-6 gallons of loop sealer with the proper amount of catalyst. This will be loop **Type 2**.

Please see the scope of service below;

Scope of Service

1. Licensing Requirements

1. All bidders must be licensed contractors as required by the Contractors Licensing Act of 1994, and all Acts amendatory thereof and must have an HRA - Highway, Railroad and Airport Construction classification, or a CE-K – Roadway Lighting, Attenuators, and Signalization classification.

2. All bidders at a minimum must have an active International Municipal Signal Association (IMSA) Work Zone Certification.
3. Preferred qualifications to include an IMSA Traffic Signal Technician Level 1 certification.

2. Installation Requirements

1. Wire Routing
 - a. Contractor shall install detector loops in accordance with TDOT Standard Drawing T-SG-3, Standard Notes and Details of Detector Loops and COK-SG-2 Loop Lead-ins Conduit and Pull boxes. All other loop configurations can be obtained from the Institute of Transportation Engineers, Traffic Detector Handbook and/or contacting the City of Knoxville.
2. Types of Loops
 - a. 6' x 45' vehicle power head detector loop
 - b. 6' x 20' vehicle power head detector loop
 - c. Type and Size to be detailed in the Notice to Proceed
3. Loop Termination Location
 - a. This is the location that loop homerun needs to be taken back to in order to reconnect to the detection system.
4. Termination Description
 - a. Type of wire connection
 - b. Pull box attachments location
 - c. Phase association for labeling
5. Saw Slot
 - a. Loop Layout. The general loop layout will be placed as per City of Knoxville requirements to meet the needs of the particular approach. For example, in sweeping right turn lanes, the loop layout will conform to the movement of the vehicle inside the lanes.
 - b. Roadway. Saw slot in the roadway will be 3 inches deep and 3/8 inches in width when completed prior to installing backer rod, wire and loop sealant. ***Loops installed in concrete shall be 2.5 inches deep by 3/8 inches wide***. The saw slot requirements will be confirmed by the City inspector on the inspection form for that particular loop prior to installing the loop elements. The homerun saw slot will take the shortest and most direct route to the location of terminations.
 - c. Curb / Sidewalk. Saw slot into the curb and across the sidewalk will utilize construction joints in an effort to provide the most esthetically pleasing appearance and avoid damaging individual sidewalk panels.
 - d. ***DO NOT*** go in or through and accessible landing ramps or pads when going across sidewalks.
 - e. Cleaning. All saw cuts must be thoroughly cleaned of dirt and saw cut tailings with high pressure compressed air and/or water until clean. The saw cut must be completely dry before installing wires.
6. Backer Rod
 - a. Backer rod will be installed the full length along bottom of saw slot to provide a smooth protective surface for the loop wire to rest.

- b. Short six-inch section of backer rod will be placed on top of the loop wire every two feet to insure that the wire does not become exposed at the surface of the saw slot prior to sealant placement.

3. Wire

1. All detector loop wire used shall be IMSA Specification No. 51-3 1997 XHHW detector wire, 14 AWG, single conductor stranded.
2. The detector loop wire home runs shall be installed with 3 turns per foot. This will be done from the point the wire exits the head of the loop until the homerun is terminated at controller cabinet or spliced to the existing homerun.
3. All loop head and homerun wire to be continuous with no splices within the roadway.
4. Special caution must be taken when placing the loop wire into the saw cut to avoid scraping, cutting, or breaking the insulation. Sharp objects that could damage the insulation should be removed from the saw slot. Wire should not be forced into the saw cut with a screw driver or other sharp instrument.
5. At all pavement joints or cracks, slack should be provided in the wiring to prevent future insulation breaks.

4. Wire Labeling

1. Pull box and Cabinet wiring shall be heat shrink labeled and meet all ANSI and TIA/EIA-606-B industry labeling standards.

5. Sealant

1. Once the wire has been placed in the slot with the backer rod, the slot will be filled with an acceptable detector loop sealant as outlined by the TDOT 730 and 730K Specifications, Section 730.19 and the qualified products list maintained by the Department's Material and Test Division for sealing saw cuts.

6. Traffic Control

1. The contractor will be responsible for providing the City of Knoxville with Traffic Control Work Plan which will illustrate a typical lane closure which will be used as part of the traffic signal detector loop installation. Any deviations need to be provided to the City of Knoxville Traffic Systems Engineer, for review and approval prior to beginning work on those locations.
2. All work zone traffic control used to install the detector loop will conform to the latest revision of the Manual on Uniform Traffic Control Devices (MUTCD). It is the responsibility of the contractor to provide flagmen and traffic control officers where needed. The work zone traffic control will not be a separate item and will be included in bid price.
3. All sidewalk work will require traffic control to warn pedestrians in the area that the sidewalk is closed during times work is being performed. All work zone traffic control used to install the detector loop will conform to the latest revision of the Manual on Uniform Traffic Control Devices (MUTCD).

7. Work Time Restrictions

1. All work within the roadway, or that requires lane closures, will be restricted on weekdays between the hours of 9:00 am – 3:00 pm and 7:00 pm – 6:00 am. These time restrictions include

all times the contractor needs to be in the roadway such as placing or removing traffic control measures.

2. All work within the roadway, or that requires lane closures, will be restricted on weekends between the hours of midnight – 10:00 am. These time restrictions include all times the contractor needs to be in the roadway such as placing or removing traffic control measures.

3. All personnel working for the contractor and his subcontractors are required to wear all the safety clothing required by the latest revision of Manual on Uniform Traffic Control Devices that comply with both roadway and lighting condition requirements.

4. All personnel working for the contractor and his subcontractors are required to utilize all the safety gear as outlined by both Federal and State Occupational Health and Safety Organization, e.g., eye protection, footwear, hearing protection, etc.

8. Curing Time

1. Contractor will insure that detector loop sealant is dry prior to opening to traffic. The contractor is responsible for resolving all problems arising from exterior damage due to not allowing the sealant to dry properly before opening roadway section to traffic.

9. Storm Water Considerations

1. The contractor is responsible for providing adequate erosion and sediment control BMPs to prevent sediment from reaching the storm drain system, drainage courses, or adjacent properties. In the event the prevention measures are not effective, the contractor shall remove, not wash down, any debris, silt, or mud and restore the Right of Way, or adjacent properties to original or better condition. All penalties for sediment discharges to the storm water system incurred by contractor from either the City or TDEC shall be the sole responsibility of the contractor.

2. The successful bidder representative will be required to attend a training session put on by the City of Knoxville Storm Water Division which will outline standard practices for preventing infiltration of the storm water system by run-off water and particulates from the traffic signal detector loop installation process. Also, they will provide a list of acceptable devices to be used for this purpose.

10. Inspection

1. The contractor is responsible for notifying City of Knoxville, Traffic System Supervisor via email 4 working days in advance of beginning work on the detector loop package to schedule an inspector to oversee the work.

2. An approved inspection sheet must be completed by the inspector for each traffic signal detector loop install before the loop work can be forwarded for final payment.

3. Approval will be based on the contractor providing work that meets the specifications outlined in this document as well as meeting the required operational specifications for the particular type of loop being installed.

11. Pay Items

1. 6' x 45' vehicle power head detector loop
2. 6' x 20' vehicle power head detector loop

12. Loop Design

