

HENDERSON WATER UTILITY

**INVITATION FOR BIDS
and TECHNICAL SPECIFICATIONS**

***Advanced Metering Infrastructure
(AMI Project)
Phase C – Equipment Installation***

HENDERSON, KENTUCKY

September 2021



ADVERTISEMENT FOR BIDS

Advanced Metering Infrastructure (AMI) Project – Phase C Installation of Owner-Supplied Data Collectors and Repeaters

Description of Work: The Henderson Water Utility (Owner) hereby gives notice that separate, sealed bids will be received for installation of Advanced Metering Infrastructure (AMI) at various locations in Henderson, KY, Bid Reference 2021-19. Some equipment (data collectors, repeaters, and mounting hardware) is being acquired and furnished to the installation contractor by the Henderson Water Utility.

BID OPENING: Sealed Bids will be received until 1:30 p.m., Local Time on 16 September 2021, in the offices of the Henderson Water Utility (HWU), 111 Fifth Street, Henderson, Kentucky, 42420.

Bidders should submit their sealed bids by customary means, prior to the bid opening time. At the specified time, a video teleconference will be broadcast to the public as allowed under KRS 61.826 and KRS 45A.080(4). No primary location will be set for public attendance as per Kentucky Attorney General Opinion 20-05, and no public attendance will be permitted at this meeting due to the highly contagious nature of COVID-19. The Bid Opening will be broadcast on Zoom: Please check our web site (hkywater.org) for details on how to view the broadcast.

BIDDING DOCUMENTS: Bidding Documents are on file for inspection and may be obtained at the offices of HWU, at the address listed above, during regular business hours, or access the HWU Bids Page at this link: tinyurl.com/hwu-bids

Questions regarding the Bid Documents and Plans should be directed to Tom Williams, General Manager, at the address listed above, during regular business hours. Telephone: 270.826.2421.

LEGAL PROVISIONS: Bids shall include all required submittals as identified in the Bid Documents.

BID REJECTION/ACCEPTANCE/WITHDRAWAL: The Owner reserves the right to reject any and all Bids, waive informalities in bidding, or to accept the Bid or Bids which best serve the interests of the Owner.

Tom Williams, P.E.
General Manager
Henderson Water Utility

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- Invitation to Bid, Solicitation Instructions and Conditions, **Bid Form and List of Required Attachments** and **Non-Collusive Bid Statement**.
- **Required Affidavit for Bidders, Offerors and Contractors Claiming Qualified Bidder Status**
- **Required Affidavit for Bidders, Offerors and Contractors Claiming Resident Bidder Status**
- **Statement Required Pursuant to KRS 45A.395.**
- Technical Specifications

Note: Items shown with **Bold Underline** in this Table of Contents must be completed in their entirety in the bid submittal.

INVITATION FOR BID

The Henderson Water and Sewer Commission of the City of Henderson, Kentucky will receive sealed competitive bids at its office at 111 Fifth Street, Henderson, Kentucky 42420, until 1:30 p.m. (CDT), on the 16th day of September 2021, at which time the bids will be opened and considered for the purchase of the following:

**ADVANCED METERING INFRASTRUCTURE (AMI) PROJECT
PHASE C – INSTALLATION OF OWNER-SUPPLIED
DATA COLLECTORS AND REPEATERS
FOR THE
HENDERSON WATER UTILITY**

REF# 2021-19 AMI – Phase C Equipment Installation

Specifications and Instructions to Bidders, and copies of plan sheets for this project may be obtained from:

HWU website: <http://tinyurl.com/hwu-bids>

HWU Administration Building: 111 Fifth Street, Henderson, KY 42420

The Water and Sewer Commission reserves the right to accept or reject any or all bids in whole or in part and to waive informalities and/or technicalities in the bids. Conflicts of interest, gratuities, and kickbacks as defined and provided for in K.R.S. 45A.455 are absolutely prohibited.

Clarifications and Addenda will be posted on the HWU procurement web site as listed above.

SOLICITATION INSTRUCTIONS AND CONDITIONS

1. DEFINITIONS:

As used herein:

- a. The term "solicitation" includes the Invitation for Bid, Solicitation Instructions and Conditions, Bid Form and Technical Specifications, and any Clarifications or Addenda issued by the Owner.
- b. The term "offer" means "bid" or "proposal".
- c. The term "Vendor" shall mean the party responsible for furnishing submittals, equipment, accessories, controls, operation and maintenance manuals and training, startup services and warranting the equipment as required in this Request for Proposals. Prior to award of contract, a potential Vendor may be referred to by the terms "Bidder" or "Offeror".
- d. The term "Owner" shall mean the Henderson Water Utility (HWU), 111 Fifth Street, Henderson, Kentucky, 42420.
- e. The term "Engineer" refers to an individual employee of the Owner, acting as design engineer or inspector for this project or procurement.
- f. The term "Purchase Order" shall mean the document executed by the Vendor and the Owner of which each of the following form a part: the Invitation for Bids; the Vendor's Proposal; and the attached technical specifications for the Advanced Metering Infrastructure Project, prepared by Henderson Water Utility, dated 5 August 2021.
- g. The term "Nonresident bidder" is defined by KRS 45A.494(3).
- h. The term "Resident bidder" is defined by KRS 45A.494(2).
- i. The term "Qualified bidder" means Kentucky Industries for the Blind, Incorporated; any nonprofit corporation that furthers the purposes of KRS Chapter 163; or a qualified nonprofit agency for individuals with severe disabilities as described in KRS 45A.465(3).

2. PREPARATION OF OFFERS

- a. Offerors shall examine the drawings, specifications, schedule, and all instructions. Failure to do so shall be at the offeror's risk.
- b. Offers shall set forth full, accurate, and complete information as required by the solicitation. Offers that contain an offeror's own specific terms and conditions in conflict with the terms of the solicitation or state statutes and regulations may be rejected.
- c. Each offeror shall furnish the information required by the solicitation on the bid forms included herein. The offeror shall sign the solicitation in ink and type or print in ink his name, firm, address, telephone number, and date. Erasures or other changes shall be initialed in ink by the person signing the offer. Approved electronic format may also be accepted.
- d. Any explanation or statement which the offeror wishes to make concerning the bid shall be written separately and independently of the proposal or bid, attached to the bid form, and placed in the envelope with the bid. Any such statement or explanation must refer to the bid submitted and shall also be signed by the offeror.
- e. Unit price for each unit offered shall be shown and such price shall include packing and delivery to HWU unless otherwise specified within the Bid Form and shall include startup and training services where specified in the Technical Specifications. Fuel Surcharges and any other miscellaneous charges should be included in the unit price. A total shall be entered in

the amount column of the schedule for each item offered. In case of discrepancy between a unit price and extended price, the unit price shall govern.

- f. Cash discounts shall not be considered in making the award of the contract.
- g. Trade discounts shall be deducted by the vendor in calculating the unit price quoted, unless otherwise stated.
- h. Offers for supplies or services other than those specified shall not be considered unless authorized by the solicitation.
- i. Proposal shall include guaranteed time schedules for submission of shop drawings after award of the Purchase Order, and for shipment of equipment after receipt of approved shop drawings. The award of the Purchase Order will be based on the quoted price and an acceptable shop drawing and equipment delivery schedule.
- j. Time, if stated as a number of days, shall include Saturdays, Sundays, and Holidays. One day is 24 hours; one week is 7 days; one month is 28 days.

3. OFFEROR CLARIFICATION – REQUEST AND RESPONSE

Any explanation desired by an offeror regarding the meaning or interpretation of the solicitation drawings, specifications, etc., **shall be requested in writing to the HWU Purchasing Manager, not less than three (3) calendar days prior to the bid opening date.** Oral explanations or instructions given before the award of the contract shall not be binding. Any information given to a prospective vendor concerning a solicitation shall be furnished to all prospective vendors as an amendment or clarification of the solicitation, if such information is necessary to vendors in submitting offers on the solicitation, or if the lack of such information would be prejudicial to uninformed vendors.

4. ACKNOWLEDGEMENT OF ADDENDA TO SOLICITATIONS

Receipt of an addendum to a solicitation shall be acknowledged by the offeror. Acknowledgement shall be received prior to the hour and date specified for receipt of offers or shall be shown in the appropriate place on the Bid Form. Verbal acknowledgement shall not be accepted. Failure to acknowledge addenda may cause the bid to be considered non-responsive.

5. PROTEST PROCEDURES

a. Protests prior to bid opening

Any protests, prior to bid opening must be submitted in writing and received by HWU at least ten (10) calendar days prior to bid opening. This ten (10) calendar day deadline may be waived by the HWU Purchasing Manager for good cause shown. The HWU Purchasing Manager will issue a response to the protest no later than five (5) calendar days after receipt of the protest. The response shall be in writing and set forth the reasons for the response. Upon receipt of a protest, the HWU Purchasing Manager will immediately determine if the bid opening should be postponed. If the bid opening is postponed, HWU will notify all prospective bidders who have been furnished a copy of the specifications that a request for review has been received and that the bid opening is postponed. Upon issuance of its response to the protest, HWU will issue an appropriate addendum rescheduling the bid opening.

b. Protests after bid opening

Protests after bid opening will be considered only as to issues which were not apparent before bid opening. After bid opening no protests of specifications will be considered. Any protest after bid opening, including a protest of contract award, must be submitted in writing, and received by HWU within five (5) calendar days of the action being protested. No other form of protest will be considered. After the time for protest of contract award has expired, these protest procedures will be inapplicable, and any disputes will be resolved by HWU under contract provisions or other remedies, if available.

Protests submitted to HWU shall:

- (a) Include the name and address of the protestor.
- (b) Clearly identify the procurement under which the protest is being submitted.
- (c) Identify the action being protested and provide sufficient detailed documentation to support the protest action.
- (d) Indicate the action, ruling or relief desired from HWU.

The HWU Purchasing Manager will review the protest and render his or her decision in writing within five (5) calendar days of receipt of the protest, setting forth reasons for his or her decision. HWU is responsible, in accordance with good administrative practice and sound business judgment, for the settlement of all contractual and administrative issues arising out of the procurement, including protests, contract defaults, disputes or breaches. The decision of the HWU Purchasing Manager as to protests shall be final and conclusive, unless, within five (5) calendar days of the date a decision was rendered by the HWU Purchasing Manager, a written appeal of the same is submitted by the bidder to the City of Henderson Water and Sewer Commissioners. Any appeal to the Commissioners shall include:

- (a) A statement of the grounds for review and any supporting documentation.
- (b) A copy of the protest filed with HWU and a copy of the HWU Purchasing Manager's decision.

If the appeal is submitted prior to award of a contract, HWU will not award until the matter is resolved. If the contract has been awarded prior to the appeal, the contractor shall proceed diligently with the performance of the contract.

6. SUBMISSION OF OFFERS

- a. Offers and modifications thereof shall be enclosed in sealed envelopes and addressed to the office specified in the solicitation. The offeror shall show the opening hour and date specified in the solicitation, the solicitation number, and the name and address of the offeror on the face of the envelope(s).
- b. Telegraphic or facsimile offers shall not be considered unless authorized by the solicitation; however, offers may be modified by telegraphic or facsimile notice, if such notice is received prior to the hour and date specified for receipt. Telegraphic or facsimile modifications shall not mention unit prices or total price; but shall only refer to percentage change or numerical change (i.e., "*reduce unit price of item 1 by \$1.00*").
- c. Samples of items, if required, shall be submitted within the time specified, and not unless otherwise specified, at no expense to HWU. If not destroyed by testing, samples shall be

returned at the offeror's request and expense, unless otherwise specified by the solicitation. Unless a request for their return is made within thirty (30) days of award of contract, all samples shall become property of HWU.

7. MODIFICATION OR WITHDRAWAL OF OFFERS

Offers may be modified or withdrawn by written notice received prior to the exact hour and date specified for receipt of offers. An offer may also be withdrawn in person by an offeror or his authorized representative, if his identity is made known and he signs a receipt for the offer, but only if the withdrawal is made prior to the exact hour and date set for receipt of offers.

8. LATE OFFERS AND MODIFICATIONS

Offers and modifications of offers received at the office designated in the solicitation after the exact hour and date specified for receipt shall not be considered for an award of contract, UNLESS:

- a. No bids are received other than the late bid; and
- b. The needs of HWU are determined to preclude the re-solicitation of bids.

9. MULTIPLE AND ALTERNATE BIDS

Bidders shall submit one response only to the solicitation and shall not propose more than one price, model, and brand for each bid item. Multiple or alternate bids offering more than one bid price in total (or by line-item) shall be cause for rejection unless specifically called for in special provisions provided elsewhere in the solicitation.

10. AWARD OF CONTRACT

- a. It is the intent of HWU to award this contract to the vendor or vendors offering the lowest evaluated bid price for products which meet the specifications set forth in this document. All anticipated costs for HWU to implement the project will be taken into consideration.
- b. HWU reserves the right to reject any offers and to waive informalities and minor irregularities in offers received. The award of this contract will be contingent upon funds being appropriated for this purchase.
- c. The bidder, if awarded an order or contract, agrees to protect, defend, and save harmless the Henderson Water and Sewer Commission and the Henderson Water Utility against any demand for the use of any patented materials, process, article, or device, that may enter into the manufacture, construction, or form a part of the work covered by either order or contract and he further agrees to indemnify and save harmless the Henderson Water and Sewer Commission and the Henderson Water Utility from suits or actions of every nature and description brought against it, for on account of any injuries or damages received or sustained by any party or parties, by or form any of the acts of the contractor, his servants, or agents.
- d. The awarded contract shall agree to offer the prices and the terms and conditions offered herein to any municipality, county or state government; public utility; non-profit hospital; educational institute; special governmental agency; and non-profit corporation performing governmental functions in Western Kentucky area who wish to participate in a cooperative purchase program with Henderson Water Utility. Other agencies will be responsible for entering into separate agreements with the Contract and for all payments thereunder.
- e. The bidder agrees to hold the proposed pricing for up to 90 days after bid proposal is opened, or for such time as specified on the Bid Form, if different.

- f. A written award mailed (or otherwise furnished) to the successful offeror within the time for acceptance specified in the offer shall be deemed to result in a contract without further actions by either party.

11. Method of Award: Best Value - Ranking Approach

The Owner intends to award a Contract to the Contractor whose bid, conforming to the BID FORM, is the most advantageous based on "best value" for all products, services, and requirements contained herein. An evaluation committee or a designated individual will evaluate the information provided by the Contractor in response to the established measurable criteria contained herein.

Measurable Criteria: Price 100 Points
TOTAL POINTS 100 Points

Each Contractor is responsible for submitting all relevant, factual and correct information with their Bid to enable the evaluator(s) to afford each Contractor the maximum score based on the available data submitted by the Contractor. The Contractor shall explicitly adhere to the BID FORM which contains adequate space for the Contractor's pricing.

Bid Price (100 Points)

The bidder with the lowest Bid Price receives the maximum score. The bidder with the next lowest Price receives points by dividing the lowest Price by the next lowest Price and multiplying that percentage by the available points. For Example, 100 points is allocated to the lowest Price criteria for this procurement, Bidder "A" bids \$3.00 as the lowest bidder and receives the maximum 100 points ($\$3.00 / \$3.00 = 1.00 \times 100 = 100$). Assume Bidder "B" is next lowest bidder at \$4.00, then "B" receives 75 points ($\$3.00 / \$4.00 = .75 \times 100 = 75$).

Best Value scoring is subject to Reciprocal preference for Kentucky resident bidders and Preferences for a Qualified Bidder or the Department of Corrections, Division of Prison Industries (KAR 200 5:410).

The Contractor is required to submit a complete copy of the "Required Affidavit for Bidders, Offerors, and Contractors Claiming Resident Bidder Status" attached to the BID FORM.

12. KENTUCKY / INDIANA SALES AND USE TAXES

Sales of tangible personal property or services to HWU are not subject to state sales or use taxes. Henderson Water Utility's Kentucky/Indiana sales tax exemption number will be provided to the successful bidder(s).

Henderson Water Utilities sales tax exemption status may not be used by the Proposer to acquire materials or supplies on a sales-tax-exempt basis. Any sales taxes or other taxes incurred by the Proposer remain the responsibility of the Proposer. It is assumed that all such costs incurred by any Proposer are included in his price.

13. COMPLIANCE WITH FEDERAL, STATE, AND LOCAL LAWS

Any contracts or orders placed as a result of the offer shall be governed by the laws of the Commonwealth of Kentucky. The rights and obligations of the parties thereto shall be determined in accordance with these laws. Any offer conditioned upon governance by the laws of a state other than Kentucky shall not be considered.

Conflicts of interest, gratuities, and kickbacks as defined and provided for in KRS 45A.455 are absolutely prohibited. Bidder acknowledges and certifies by submission of his bid that all the provisions of KRS 45A.455 are complied with fully.

A City of Henderson business license is required for all vendors servicing accounts within the City of Henderson. A Henderson County business license is required for all vendors servicing accounts at HWU locations outside the City of Henderson but in Henderson County. Information regarding the business license can be obtained by calling the business license office at 270-831-1200. Vendors will be allowed ten (10) days after award of bid to submit a copy of their current business license(s) to the Purchasing Manager.

14. CONFLICTS OF INTEREST – Gratuities and kickbacks – Use of confidential information (KRS 45A.455)

- a. It shall be a breach of ethical standards for any employee with procurement authority to participate directly in any proceeding or application; request for ruling or other determination; claim or controversy; or other particular matter pertaining to any contract, or subcontract, and any solicitation or proposal therefore, in which to his knowledge:
 - i. He, or any member of his immediate family has a financial interest therein; or
 - ii. A business or organization in which he or any member of his immediate family has a financial interest as an officer, director, trustee, partner, or employee, is a party; or
 - iii. Any other person, business, or organization with whom he or any member of his immediate family is negotiating or has an arrangement concerning prospective employment is a party. Direct or indirect participation shall include but not be limited to involvement 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 in any other advisory capacity.
- b. It shall be a breach of ethical standards for any person to offer, give, or agree to give any employee or former employee, or for any employee or former employee to solicit, demand, accept, or agree to accept from another person, a gratuity or an offer of employment, in connection with any 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 in any other advisory capacity in any proceeding or application, request for ruling or other determination, claim or controversy, or other particular matter, pertaining to any contract or subcontract and any solicitation or proposal therefore.
- c. It is a breach of ethical standards for any payment, gratuity, or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor or any person associated therewith, as an inducement for the award of a subcontract or order.
- d. The prohibition against conflicts of interest and gratuities and kickbacks shall be conspicuously set forth in every local public agency written contract and solicitation therefore.
- e. It shall be a breach of ethical standards for any public employee or former employee knowingly to use confidential information for his actual or anticipated personal gain, or the actual or anticipated personal gain of any other person.

15. CONTRACT MODIFICATIONS

During the period of the contract, no modification shall be permitted in any of its conditions and specifications unless the contractor receives written approval from the Purchasing Manager. If the contractor finds at any time that existing conditions make modification in requirements necessary, he shall promptly report such matter to the Purchasing Manager for consideration and decision. All contract modifications shall be subject to the provisions of 200 KAR 5:311.

16. ADDITIONAL CHARGES/FEEES

The bid price of the product is the complete product price. There will be no fuel surcharges, delivery fees, handling fees, container return fees, or any other fees/charges associated with the purchase, installation, or delivery of products.

17. WARRANTY – CORRECTIVE WORK

The Contractor shall guarantee all work performed under this contract for a period of one (1) year after the date of Substantial Completion. This provision covers any work performed by the Contractor that is found to be defective, the repair of any damages to the site and adjacent areas that the contractor used during construction. Where defective work has been corrected or removed and replaced, the correction period with respect to that work will be extended for an additional period of one year after correction has been satisfactorily completed.

18. SELLER’S INVOICES

Invoices shall be prepared and transmitted via fax or USPS to HWU at the provided address. Invoices shall contain, at a minimum, the following information: Purchase Order number, Bill of Lading number, delivery location, and an appropriate weight ticket, where applicable.

HWU is a municipality and invoices are processed for payment not less than once per month. Terms are net 30 after receipt of invoice.

19. PRECEDENCE OF PROVISIONS

In the event of an inconsistency between provisions of the solicitation, the inconsistency shall be resolved by giving precedence in the following order:

- a) Addenda and Clarifications issued prior to bidding;
- b) Solicitation Instructions and Conditions;
- c) General Conditions;
- d) Drawings;
- e) Other provisions of the contract, whether incorporated by reference or otherwise; and
- f) The detailed specifications.

20. INSURANCE

Contractors, including all Subcontractors, furnishing labor, and/or equipment under this requirement shall carry the following insurance in addition to all insurance required by law. Valid certificates of insurance shall be furnished to the Owner prior to the Contractor causing any work to begin.

A. Workman’s Compensation	Statutory
B. Broad Form Comprehensive General Liability including coverage for Bodily Injury, Personal Injury, Products, Completed Operations, and Broad Form Property Damage, (No deductible clauses are acceptable for these coverages), and Independent Contractors (Subcontractors)	Bodily Injury: \$1,000,000 each occurrence \$2,000,000 aggregate Property Damage: \$1,000,000 each occurrence
C. Comprehensive Automobile Liability, including Hired Car and Employer’s Non-Ownership Liability Coverage.	\$1,000,000 Combined Single Limit
D. Endorsement naming as additional insured “The Henderson Water and Sewer Commission, its elected and appointed officials, employees, agents, boards, consultants, assigns, volunteers and successors in interest.”	
E. Endorsement that Contractor’s insurance coverage shall be primary insurance as respects HWU. Any insurance or self-insurance maintained by HWU shall be separate from Contractor’s insurance and shall not contribute with it.	
F. Certificates of insurance, issued by companies authorized to do business in the state of Kentucky, satisfactory in form to the HWU and signed by the Bidder’s insurer shall be supplied by Bidder to HWU evidencing that the above insurance is in force and that not less than thirty (30) calendar days written notice will be given to the HWU prior to any cancellation or restrictive modification of the policies. Bidder shall replace any cancelled policy within the thirty (30) day notice period so that there is no lapse in coverage at any time during the period covered by this contract.	

The insurance shall:

- a) Include the interests of the Owner, Contractor, Subcontractor, Engineer, Engineer’s consultants and any other individuals, and the officers, directors, partners, employees, agents and other consultants and subcontractors of any of them each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.
- b) Be written on a Builder’s Risk “all-risk” or open peril or special causes of loss policy form that shall at least include insurance for physical loss and damage to the work, temporary buildings, falsework, and materials and equipment in transit and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, and such other perils or causes of loss.
- c) Remain in effect for the duration of the contract and warranty period.

21. INDEMNIFICATION & ASSIGNMENT:

The Contractor shall defend, indemnify, and hold harmless HWU, its officers, directors, agents and employees from and against all claims, damages, losses, and expenses, including attorneys’ fees, arising out of negligent acts, errors or omissions or willful misconduct in the performance of this

project and those of its agents or employees. The Contractor is not obligated to indemnify HWU in any manner whatsoever for HWU's own negligence.

Any attempt by Contractor to assign or otherwise transfer any interest in this agreement without the prior written consent of HWU shall be void.

22. NONDISCRIMINATION

Civil Rights Act of 1964: In accordance with the provisions of Title VI of the Civil Rights Act of 1964 and the regulations of the Federal Department of Transportation (49 CFR, part 21) issued pursuant to such Act, all bidders are hereby notified that HWU will affirmatively insure that the contract entered into pursuant to this advertisement will be awarded to the responsible bidder with the lowest evaluated bid without discrimination on the grounds of race, color, national origin, disability, gender, or age.

Americans with Disabilities Act: In accordance with the provisions of The Americans with Disabilities Act of 1990 (ADA) which specifically prohibits discrimination against persons with disabilities, all bidders are hereby notified that the contract entered pursuant to this advertisement shall include a clause that specifically requires compliance with the ADA and prohibits discrimination against persons with disabilities. The ADA further requires that all new construction, reconstruction, and alterations to existing pedestrian facilities be constructed in accordance with Federal accessibility standards.

23. GOVERNING LAW:

Should there be any contract/agreement acquired, bidder agrees that it shall be governed by and construed in accordance with the laws of the Commonwealth of Kentucky. No action involving this contract agreement may be brought except in a court of competent jurisdiction located in Henderson County.

24. MISCELLANEOUS PROVISIONS

Penalties: In case of default by Contractor, HWU may procure the products and/or services from other sources and may deduct from any unpaid balance due Contractor or collect against the bond, security, or surety for the amount of excess costs so paid.

Intellectual Property and Third-Party Rights: Any drawings, written reports or other works made by Contractor shall be considered works for hire and become the property of HWU. Any such works shall not be stamped with the Contractor's proprietary markings. This agreement is made for the benefit of HWU and Contractor, not for any outside party.

Non-Endorsement: As a result of the selection of a Contractor to supply services, HWU is neither endorsing nor suggesting that the Contractor's services are the best or only solution. Contractor agrees to make no reference to HWU in any literature, promotional material, brochures, sales presentations, or the like, without the express written consent of HWU.

Severability: If a competent court or arbitrator holds any of the terms, covenants, provisions and agreements contained herein invalid, illegal or unenforceable, this agreement shall be interpreted as if such invalid terms, covenants, provisions, or agreements were not contained herein and the remaining provisions shall be valid and enforceable.

BID FORMS

PROJECT IDENTIFICATION: *Advanced Metering Infrastructure (AMI) Project - Phase C*
Henderson Water Utility
Ref# - 2021-19

THIS BID SUBMITTED TO: Henderson Water Utility
111 Fifth Street
Henderson, KY 42420

CONTACT INFORMATION: All questions regarding this bid solicitation should be directed to the Purchasing Manager as per item #3 in the Solicitation Instructions and Conditions.

DATE REFERENCES: Last day for bid clarifications: 13 September 2021
Bid Closing: 16 September 2021, 1:30 p.m.
HWU Board Meeting (award): 20 September 2021

1. The undersigned BIDDER proposes and agrees, if this Bid is accepted, to furnish equipment as specified or indicated in the Bid Documents and Technical Specifications for the Bid Price(s) and in accordance with the other terms and conditions of the Bid Documents and Technical Specifications.
2. BIDDER accepts all of the terms and conditions of the Advertisement or Invitation to Bid and the Bid Documents and Specifications. This bid will remain subject to acceptance for sixty days after the day of bid closing.
3. In submitting this Bid, BIDDER represents, as more fully set forth in the Agreement that:
 - a. BIDDER has examined copies of all the Bidding Documents and of the following addenda (receipt of all which is hereby acknowledged):

DATE	NUMBER

- b. BIDDER has familiarized itself with the nature and extent of the Bid Documents and Technical Specifications, and all conditions, laws, and regulations that in any manner may affect cost, or furnishing the equipment required.
 - c. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; BIDDER has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; BIDDER has not solicited or induced any person, firm or corporation to refrain from bidding; and BIDDER has not sought

by collusion to obtain for itself any advantage over any other Bidder or over the PURCHASER. Bidder acknowledges and certifies by submission of his bid that all the provisions and statutes of KRS 45a.465 are complied with fully.

- d. Specify a unit price in figures for each bid item for which a quantity is given and show the products of the respective unit prices and quantities written in figures in the space provided for that purpose. Round the products by dropping all digits past the cent. Write in ink or type all figures. In case of discrepancy between a unit price and extended price, the unit price shall govern. Pipe lengths have been rounded up to the nearest foot.

Bid Form
Furnish and Install AMI Equipment and Accessories
Pricing to be held for 60 days after submittal is opened

ITEM No. 1: Mobilization & Demobilization

Includes Mobilization and Demobilization of personnel and subcontractors to site, general conditions, traffic control, permits, Bid Bond, Performance and Payment Bond, etc., and all other costs not included in the other items under this Contract, including demolition and disposal of debris, as required. This item will be paid 75% with the first pay application after the start of construction, and 25% with the last pay application, and includes all costs of any subsequent demobilizations and re-mobilizations as required by the project schedule.

LUMP SUM BID PRICE _____

_____ Dollars (\$_____).

(Use words) (figures)

ITEM No. 2: Repeater 100 Installation – 900 First Street (Site R-1)

Installation of a Repeater 100 on HMPL street light pole behind building at 900 First Street, including installation of an HWU-furnished unit (included mounting hardware); labor to install Repeater Antenna; labor and materials for cable, power connection to photocell on streetlight; all complete in place and ready for use.

LUMP SUM BID PRICE _____

_____ Dollars (\$_____).

(Use words) (figures)

ITEM No. 3: Repeater 100 Installation – 510 North Water Street – North WTP (Site R-3)

Installation of a Repeater 100 on an existing radio tower at the North Water Treatment Plant, 510 North Water Street, including installation of an HWU-furnished unit (included mounting hardware); labor to install Repeater Antenna; labor and materials for cable, power connection to power source on the third floor of the Water Plant; all complete in place and ready for use.

LUMP SUM BID PRICE _____

_____ Dollars (\$_____).

(Use words)

(figures)

ITEM No. 4: Repeater 100 Installation – 1900 Clay Street (Site R-4)

Installation of a Repeater 100 on contractor-furnished and installed 45' wood pole @ the former Clay Street Sewer Pump Station site, 1900 Clay Street, including installation of an HWU-furnished unit (included mounting hardware) on back of existing power panel; installation of antenna cable in conduit to new wood pole; installation of remote antenna on pole; labor to install Repeater and Antenna; labor and materials for cable, extension of power to Repeater; all complete in place and ready for use.

LUMP SUM BID PRICE _____

_____ Dollars (\$_____).

(Use words)

(figures)

ITEM No. 5: Repeater 100 Installation – 1885 South Green Street (Site R-5)

Installation of a Repeater 100 on contractor-furnished and installed 35' wood pole at the western corner of the Fairmont water booster station site at 1885 South Green Street, including installation of an HWU-furnished unit (included mounting hardware) inside the existing water booster station building; installation of antenna cable in conduit to new wood pole; installation of remote antenna on pole; labor and materials for extension of power to Repeater; conduit and wiring, cable, jumpers, connectors, grounds, hoisting grips, and stainless steel hardware; all complete in place and ready for use.

LUMP SUM BID PRICE _____

_____ Dollars (\$_____).

(Use words)

(figures)

ITEM No. 6: Repeater 100 Installation – 1029 North Green Street (Site R-6)

Installation of a Repeater 100 on HMPL streetlight pole at the south edge of the parking lot of 1029 North Greet Street, including installation of an HWU-furnished unit (included mounting hardware); labor to install Repeater Antenna; labor and materials for cable, power connection to photocell on streetlight; all complete in place and ready for use.

LUMP SUM BID PRICE _____

_____ Dollars (\$_____).

(Use words)

(figures)

ITEM No. 7: Repeater 100 Installation – 238 North Main Street (Site R-8)

Installation of a Repeater 100 on HMPL streetlight pole in the rear parking area at 238 North Main Street, including installation of an HWU-furnished unit (included mounting hardware); labor to install Repeater Antenna; labor and materials for cable, power connection to photocell on streetlight; all complete in place and ready for use.

LUMP SUM BID PRICE _____

_____ Dollars (\$_____).

(Use words)

(figures)

ITEM No. 8: Repeater 100 Installation – 248 Highland Drive (Site R-9)

Installation of a Repeater 100 on HMPL streetlight pole at the rear of 248 Highland Drive, including installation of an HWU-furnished unit (included mounting hardware); labor to install Repeater Antenna; labor and materials for cable, power connection to photocell on streetlight; all complete in place and ready for use.

LUMP SUM BID PRICE _____

_____ Dollars (\$_____).

(Use words)

(figures)

ITEM No. 9: Repeater 100 Installation – 1602 South Green Street (Site R-10)

Installation of a Repeater 100 on contractor-furnished and installed 45’ wood pole @ the Smith Avenue Sewer Pump Station, 1602 South Green Street, including installation of an HWU-furnished unit (included mounting hardware) on back of existing power panel; installation of antenna cable in conduit to new wood pole; installation of remote antenna on pole; labor to install Repeater and Antenna; labor and materials for cable, extension of power to Repeater; all complete in place and ready for use.

LUMP SUM BID PRICE _____

_____ Dollars (\$_____).

(Use words)

(figures)

ITEM No. 10: Repeater 100 Installation – 2003 Stapp Drive (Site R-11)

Installation of a Repeater 100 on HMPL streetlight pole at the rear of 2003 Stapp Drive, including installation of an HWU-furnished unit (included mounting hardware); labor to install Repeater Antenna; labor and materials for cable, power connection to photocell on streetlight; all complete in place and ready for use.

LUMP SUM BID PRICE _____

_____ Dollars (\$_____).

(Use words)

(figures)

ITEM No. 11: Repeater 100 Installation – 2147 Vanguard Drive (Site R-15)

Installation of a Repeater 100 on HMPL streetlight pole at 2147 Vanguard Drive, including installation of an HWU-furnished unit (included mounting hardware); labor to install Repeater Antenna; labor and materials for cable, power connection to photocell on streetlight; all complete in place and ready for use.

LUMP SUM BID PRICE _____

_____ Dollars (\$_____).

(Use words)

(figures)

ITEM No. 12: Repeater 100 Installation – 2310 Adams Lane (Site R-16)

Installation of a Repeater 100 on contractor-furnished and installed 45’ wood pole @ the Carriage Homes Sewer Pump Station, 2310 Adams Lane, (accessed off KY 2084), including installation of an HWU-furnished unit (included mounting hardware) on back of existing power panel; installation of antenna cable in conduit to new wood pole; installation of remote antenna on pole; labor to install Repeater and Antenna; labor and materials for cable, extension of power to Repeater; all complete in place and ready for use.

LUMP SUM BID PRICE _____

_____ Dollars (\$_____).
(Use words) (figures)

ITEM No. 13: Repeater 100 Installation – 2472 Briarpatch Lane (Site R-18)

Installation of a Repeater 100 on contractor-furnished and installed 35’ wood pole @ 2472 Briarpatch Lane, at the Gardenside sewer pump station, (opposite 2477 Briarpatch Lane), including installation of an HWU-furnished unit (included mounting hardware) on back of existing power panel; installation of antenna cable in conduit to new wood pole; installation of remote antenna on pole; labor to install Repeater and Antenna; labor and materials for cable, extension of power to Repeater; all complete in place and ready for use.

LUMP SUM BID PRICE _____

_____ Dollars (\$_____).
(Use words) (figures)

ITEM No. 14: Repeater 100 Installation 452 Old Corydon Road (Site R-19)

Installation of a Repeater 100 on HMPL streetlight pole on the northwest side of the parking lot at 452 Old Corydon Road (Mathew 25), including installation of an HWU-furnished unit (included mounting hardware); labor to install Repeater Antenna; labor and materials for cable, power connection to photocell on streetlight; all complete in place and ready for use.

LUMP SUM BID PRICE _____

_____ Dollars (\$_____).
(Use words) (figures)

ITEM No. 15: Repeater 100 Installation – 1952 Springfield Drive (Site R-20)

Installation of a Repeater 100 on contractor-furnished and installed 45’ wood pole @ 1952 Springfield Drive, at the Springfield Drive sewer pump station, (behind 1954 Springfield Drive), including installation of an HWU-furnished unit (included mounting hardware) on back of existing power panel; installation of antenna cable in conduit to new wood pole; installation of remote antenna on pole; labor to install Repeater and Antenna; labor and materials for cable, extension of power to Repeater; all complete in place and ready for use

LUMP SUM BID PRICE _____

_____ Dollars (\$_____).
(Use words) (figures)

ITEM No. 16: Repeater 100 Installation – 1131 Fifth Street (Site R-22)

Installation of a Repeater 100 on an existing streetlight pole in the parking area of the former City Garage at 1131 Fifth Street, including installation of an HWU-furnished unit (included mounting hardware); labor to install Repeater Antenna; labor and materials for cable, power connection to photocell on streetlight; all complete in place and ready for use.

LUMP SUM BID PRICE _____

_____ Dollars (\$_____).
(Use words) (figures)

ITEM No. 17: Repeater 100 Installation – 2154 Hwy 136 West (Site R-24)

Installation of a Repeater 100 on contractor-furnished and installed 45’ wood pole @ the Henderson City-County Airport sewer pump station, (adjacent to the terminal building), including installation of an HWU-furnished unit (included mounting hardware) on back of existing power panel; installation of antenna cable in conduit to new wood pole; installation of remote antenna on pole; labor to install Repeater and Antenna; labor and materials for cable, extension of power to Repeater; all complete in place and ready for use

LUMP SUM BID PRICE _____

_____ Dollars (\$_____).
(Use words) (figures)

ITEM No. 18: Repeater 100 Installation – 2646 Daffodil Court (Site R-28)

Installation of a Repeater 100 on contractor-furnished and installed 35' wood pole @ 2646 Daffodil Court, Irish Ivy sewer pump station, (behind 2650 Daffodil Court), including installation of an HWU-furnished unit (included mounting hardware) on back of existing power panel; installation of antenna cable in conduit to existing wood pole; installation of remote antenna on pole; labor to install Repeater and Antenna; labor and materials for cable, extension of power to Repeater; conduit and wiring, cable, jumpers, connectors, grounds, hoisting grips, and stainless steel hardware; all complete in place and ready for use.

LUMP SUM BID PRICE _____

_____ Dollars (\$_____).
(Use words) (figures)

TOTAL BASE BID PRICE – Items 1 through 18

TOTAL BID PRICE _____

_____ Dollars (\$_____).
(Use words) (figures)

Bidders – please attach a “post-it” note or other tag to this page, in your completed bid.

Shop Drawing / Completion Schedule:

Number of days from Award of Purchase Order to shop drawing approval: _____ days

Number of days from shop drawing approval to substantial completion: _____ days

Exceptions Taken to this Proposal: List any and all exceptions. (If none, check here).

The Owner reserves the right to negotiate additional installation locations with the low bidder.

SIGNATURE PAGE

Non-Collusive Bid Statement: The undersigned bidder, having fully informed himself regarding the accuracy of the statements made herein, certifies that: (1) The bid has been arrived at by the bidder independently and has been submitted without collusion with and without any agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment, or services described in the bid, designed to limit independent bidding or competition, and (2) The contents of the bid have not been communicated by the bidder or its employees or agents to any person not any employee or agent of the bidder or its surety on any bond furnished with the bid, and will not be communicate by any such person prior to the official opening of the bid.

Signature of Authorized Official

Name and Title (printed)

Legal Name of Business

Address

Address

Telephone Number

Date

Affix seal below if bid is by corporation.

This seal was herewith affixed in the presence of:

Signature _____ Title _____

**REQUIRED AFFIDAVIT FOR BIDDERS, OFFERORS AND CONTRACTORS
CLAIMING QUALIFIED BIDDER STATUS**

FOR BIDS AND CONTRACTS IN GENERAL:

I. The bidder or offeror swears and affirms under penalty of perjury that the entity bidding, and all subcontractors therein, meets the requirements to be considered a “qualified bidder” in accordance with 200 KAR 5:410(3); and will continue to comply with such requirements for the duration of any contract awarded. Please identify below the particular “qualified bidder” status claimed by the bidding entity.

_____ A nonprofit corporation that furthers the purposes of KRS Chapter 163

_____ Per KRS 45A.465 (3), a “Qualified nonprofit agency for individuals with severe disabilities” means an organization that:

- (a) Is organized and operated in the interest of individuals with severe disabilities; and
- (b) Complies with any applicable occupational health and safety law of the United States and the Commonwealth; and
- (c) In the manufacture or provision of products or services listed or purchased under KRS 45A.470, during the fiscal year employs individuals with severe disabilities for not less than seventy-five percent (75%) of the man hours of direct labor required for the manufacture or provision of the products or services; and
- (d) Is registered and in good standing as a nonprofit organization with the Secretary of State.

The BIDDING AGENCY reserves the right to request documentation supporting a bidder’s claim of qualified bidder status. Failure to provide such documentation upon request may result in disqualification of the bidder or contract termination.

Signature

Printed Name

Title

Date

Company Name

Address

Subscribed and sworn to before me by _____ this ____ day of _____, 2021.

Notary Public

My Commission Expires

[Seal of Notary}

Check this box if not claiming Qualified Bidder Status

**REQUIRED AFFIDAVIT FOR BIDDERS, OFFERORS AND CONTRACTORS
CLAIMING RESIDENT BIDDER STATUS**

FOR BIDS AND CONTRACTS IN GENERAL:

The bidder or offeror hereby swears and affirms under penalty of perjury that, in accordance with KRS 45A.494(2), the entity bidding is an individual, partnership, association, corporation, or other business entity that, on the date the contract is first advertised or announced as available for bidding:

1. Is authorized to transact business in the Commonwealth;
2. Has for one year prior to and through the date of advertisement
 - a. Filed Kentucky corporate income taxes;
 - b. Made payments to the Kentucky unemployment insurance fund established in KRS 341.49; and
 - c. Maintained a Kentucky workers' compensation policy in effect.

The BIDDING AGENCY reserves the right to request documentation supporting a bidder's claim of resident bidder status. Failure to provide such documentation upon request shall result in disqualification of the bidder or contract termination.

Signature

Printed Name

Title

Date

Company Name

Address

Subscribed and sworn to before me by _____ this ____ day of _____, 2021.

Notary Public

My Commission Expires

[Seal of Notary}

Check this box if not claiming Resident Bidder Status

**Statement Required Pursuant to KRS 45A.395
NON-COLLUSIVE AFFIDAVIT OF PRIME BIDDER**

State of _____)

County of _____)

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

1. He or she is the owner, partner, officer, representative, or agent of _____, the Bidder that he or she has submitted the attached bid;
2. He or she is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;
3. Such Bid is genuine and is not a collusive or sham Bid;
4. Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached bid or of any other bidder, or to fix any overhead, profit or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Henderson Water Utility, the City of Henderson or any person interested in the proposed Contract: and
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.

Signed

Title

Subscribed and sworn to before me this _____ day of _____, 2021.

_____ My commission expires _____
Title

TECHNICAL SPECIFICATIONS FOR THE AMI PHASE C PROJECT

A. GENERAL

1. SCOPE OF WORK – BONDS - PERMITS

This request is for a proposal to furnish and install Owner-furnished data collector, repeater, and antennae equipment as part of an Advanced Metering Infrastructure (AMI) system, for the Henderson Water Utility, Henderson, Kentucky.

For the Owner-furnished equipment, each TCU/CCU comes with the 8 dBi antennas (for top of tank), mounting hardware, and power cable. The TCU/CCU units also come with the required GPS and Cell antenna with mounting hardware that will be mounted on the ground-mounted frame for the TCU/CCU cabinet.

Each bid item should include any delivery fees, handling fees, fuel surcharges, or any other fees/charges associated with the purchase, delivery, and installation of the product.

If the total construction contract amount (bid) awarded is an amount in excess of twenty-five thousand dollars (\$ 25,000), a Performance bond and a Payment bond shall be furnished. Performance and Payment bonds shall be in an amount equal to one hundred percent (100%) of the contract price. (KRS 45A.435).

Bid security (bid bond) in an amount equal to five percent (5%) of the amount of the bid shall be furnished for all bids. If the successful low bidder fails or refuses to execute the contract and bonds required within ten (10) days after notice of acceptance of his bid, he shall forfeit to the Owner as liquidated damages the bid security submitted with his bid.

If the work is not completed within the time specified, liquidated damages in the amount of \$ 500 per week shall be deducted from the compensation due the contractor.

The Contractor is responsible for obtaining local and state permits for erosion control, if required.

2. SUBMITTALS (Shop Drawings and Product Data)

The Vendor shall submit to the Engineer a minimum of three copies of information describing and depicting the details of the equipment, controls, materials and/or services to be provided, hereinafter referred to as “shop drawings.”

Shop drawings are not required for Owner-furnished items (collectors, repeaters, and antennae), but are required for vendor-furnished items such as cable, connectors, etc. Also, provide a generalized layout drawing for each location, with a detailed, keyed list of materials, showing general installation details. Shop drawings shall be submitted no later than 30 days after the purchase order date.

Information may be submitted in .pdf format, except for color charts, color samples, and physical material samples. Submit each electronic submittal as an attachment to an email. Scanned material shall be in color, legible, and any markings by the Contractor shall be made in red. Pages shall be rotated to a position for easy reading. File size shall be controlled to allow submission by email, or as an alternative, the Contractor may set up an ftp site or SharePoint access shall be provided.

Distribution of reviewed submittals to subcontractors and suppliers is the responsibility of the Contractor.

Contractors shall provide Product data as required to supplement shop drawings. Product data include illustrations, standard schedules, instructions, brochures, diagrams or other information to illustrate use of some material, product, or system related to the work.

After approval, the Engineer will distribute the shop drawings as follows: two sets to Owner's central files, and one set to the Vendor. If the Vendor requires more copies, specify that at the time of submittal; the Engineer will review up to five sets of each shop drawing submittal. Shop drawing shall not be required for Owner-furnished materials.

Shop drawings shall be submitted per the bid data, after the purchase order date. The first shop drawing submittal shall consist of a Construction Schedule (bar chart), and a list of all submittals to be made on the Project.

Rejection of the same shop drawings on three separate occasions shall constitute grounds for total rejection of the proposed vendor as being unable or unwilling to meet the requirements of this request for proposals.

Shop drawings for the equipment and materials described in this Request for Proposals must show, as a minimum, the following information:

- a. Manufacturer's cut sheets or other detailed product information.
- b. Detailed dimensional drawings of each valve and fitting.
- c. Detailed description of materials of construction and applicable standards.

3. MATERIAL TO BE OBTAINED FROM THE CONTRACTOR

The Bidder shall provide all items named in this Request for Proposals or so noted on the Purchase Order and such incidental items as may be required for the safe and proper installation and operation of the materials and equipment furnished for the purpose(s) intended.

The Vendor shall provide all gaskets, bolts, and other miscellaneous items required to install the material described in this Request for Proposals.

Equipment or materials offered contrary to the provisions of this Paragraph will be subject to rejection.

4. TRANSPORT AND DELIVERY

Transport and handle items using equipment and methods that prevent damage to the coating. Deliver pipe adequately stored on timbers or pallets. Valves, gaskets, fittings and small parts shall be delivered on pallets, and shall be boxed, shrink-wrapped, or otherwise protected from weather and loss.

Repair minor damage to exterior and interior coatings as the Engineer directs before pipe installation. Significant damage due to improper procedures for packing and handling of pipe and other materials will be reason for rejection.

5. MATERIALS OR EQUIPMENT TO BE FURNISHED ("OR EQUAL" CLAUSES)

Where the specifications state "equal to" followed by a brand name or model, a standard of quality is being set. The naming of a brand or model is a matter of convenience to avoid writing a volume. Other brands or equipment under this category may be submitted. The Engineer will consider other products on the basis of materials of construction, weight, function, size (it must fit the space provided), service history and electrical and mechanical characteristics.

Where the specifications state one or more model numbers and manufacturers followed by the words "or approved equal" the meaning is that the product(s) specified is acceptable and that while there may be other products that are acceptable the only way to be assured is to submit the desired substitution during the BID PROCESS and receive an affirmative answer. The Engineer will consider the factors previously described in making the determination.

Unless otherwise specified, all materials shall be the best of their respective kinds and shall be in all cases fully equal to approved samples. The Engineer shall have the right to require the use of such specifically designated material, article, or process. The Engineer, where practical, may require submission of actual samples of materials or products.

6. SAFETY

All work shall be carried out in accordance with all applicable rules and regulations of the Kentucky Labor Cabinet, Division of Occupational Safety and Health, and HWU Safety Policies.

Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

1. all persons on the Site or who may be affected by the Work;
2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

All damage, injury, or loss to any property caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone 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 Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7. PRODUCT DELIVERY, STORAGE AND HANDLING

Care shall be exercised in transporting and handling to avoid damage to pipe and fittings, and all appurtenances. Materials shall be stored in an enclosure or under protective coverings if required by the engineer to prevent damage. Materials shall not be stored directly on the ground. The inside of pipes and fittings shall be kept free of dirt and debris.

Contractor shall be responsible for all materials furnished and shall replace at his own expense all materials found defective in handling after delivery. Contractor shall report to HWU immediately upon finding defects in any material supplied by HWU. Contractor shall furnish all materials and labor required for replacement of installed materials discovered defective or damaged.

HWU reserves the right to reject any materials that do not comply with these standards.

8. NOTIFICATON & ACCESS

Working space on this project will be limited to street rights-of-way and easements obtained by the Owner. Storage and handling of materials, and work performed within streets, alleys or easements must provide for continued access and ingress/egress for private property owners.

The Contractor shall give the Owner or Owner's representative a minimum of 48-hour notice before starting construction. Where a public roadway must be closed, notify all safety agencies and the general public in accordance with local and state regulations. Where a private driveway must be closed, provide the resident a minimum 48-hours' notice. Maintain continuous access to residential private driveways to the maximum extent possible.

9. INSPECTION

The Owner's Engineer shall make periodic observations during construction to provide final certification that the improvements were installed in conformance with HWU standards and the approved construction drawings. In addition to observation by the Engineer, a final inspection will be made prior to putting the facilities in service. Final inspection will be made prior to acceptance of any facilities and only after all construction is complete. The Contractor shall provide labor and materials as required to complete the punch list developed during final inspection. Inspectors shall be provided access to the construction site and construction records at all times.

B. MATERIALS & INSTALLATION

1. TCU / CCU / REPEATERS, AND ACCESSORIES

The TCU 100 reads data from Itron gas and water endpoints, and repeaters. It is used to extend the reading distance of each collector by the increased height of the collector's antenna. The extended coverage increases the number of meter endpoints per collector. With the TCU 100, the network can be scaled to optimize the assets in the field giving utilities the flexibility to balance equipment and coverage with budgets.

Data is forwarded from the collector to the utility over a public wide area network (cellular-based WAN or broadband) or a private WAN supporting IP-addressable packet data. Data uploads occur at scheduled intervals. The TCU 100 can also facilitate on-demand read requests when needed.

The TCU 100 enclosure contains a back-up battery and connects to the antennas mounted atop the tower. The TCU 100 operates on a dedicated power supply from a source within the tower site. In the event of an outage, the collector sends an alarm to the Itron Fixed Network Software with information describing various events, including power loss, restoration, and low-battery conditions.

The CCU 100 (also known as a cell control unit or collector) is the main collection point for the HWU Fixed Network. The CCU reads data from Itron gas and water endpoints and gathers consumption, daily, or hourly meter reads, and other information from endpoints and communicates it back to the utility over a public or private network. When used with the Fixed Network Repeater 100, the coverage territory per CCU 100 is extended. It also manages the collection, processing, and storage of endpoint data and can support two-way functionality to the endpoint

Repeater 100s are used to extend the range of the CCU and add communication reliability and redundancy between endpoints and collectors. Installed on towers, buildings, poles or other structures, the Repeater 100 collects meter data from Itron gas and water endpoints and relays the meter data to collectors within the network.

Data collector and repeater equipment will be furnished by HWU. Technical information on these units is available as an additional download to this specification.

Photos attached to this specification show general information about these installations; actual field conditions may vary, and the Bidder is cautioned to inspect the sites.

All other materials are to be furnished by the Contractor.

Clips, banding cable hoists, etc., shall be stainless steel.

Electrical tape shall be 3M Super 33 or approved equal. Zip ties used shall be UV and cold-weather resistant. Coax cable, cell and GPS antenna cables shall be furnished by the Contractor, and shall meet the following specifications.

Ground Mounted Cabinets: Provide a support structure of 3" Schedule 40 Steel pipe, or other approved type for the CCU/TCU cabinet in ground-mounted location at the base of the tank, near the existing control building. Support structure shall be sturdy and properly braced, with pipe supports in 12" post-holes, at least 36" deep, with concrete backfill to a point 6" below ground surface. Mounting height shall be 40" from ground to bottom of cabinet.

Power for the ground mounted CCU/TCU unit will be fed by the Contractor from the existing electrical service in control buildings at the tank sites. Furnish and install a properly sized breaker in the existing electrical panel, conduit, wire to the CCU/TCU equipment, and provide a suitably sized disconnect (Square D 70A or approved equal) located on the support structure for the CCU/TCU. Provide a #2 solid ground lead from the support structure to a 5/8" x 8' ground rod and weld the lead to the tank and the ground rod. Alternatively, ground to the existing grounding system installed around the tank.

All power wiring for the ground-mounted cabinets shall be in conduit. Coordinate this work with the HWU Automation Leader. All electrical work on this project shall be performed by a licensed electrician.

Cables and Antennae: Cable from control unit to antenna shall be coax per the table below. Use existing empty conduits on the water tank for these cable runs; coordinate this work with the HWU Automation Leader.

Antenna cable from the control support structure to the antenna at the top of the tank shall be positioned in existing unused conduit attached to the tank. Cables from the support structure to the existing conduit shall be protected in conduit. Where necessary, use approved cable ties to attach the cable to the existing handrail at the top of the tank. Cable shall not be attached to ladders, legs or struts of the tanks.

Provide a 1" aluminum mounting pole, firmly attached to the existing tank handrail with SS U-clamps for the antenna, which shall be PCTEL BOA9025.

<i>Coax Specification</i>	<i>0-120 feet</i>	<i>121-200 feet (high gain antenna only)</i>	<i>201-250 feet (high gain antenna only)</i>
Standard black jacket cable	AVA5-50	AVA6-50	AVA7-50
Optional Fire-Retardant cable	AVA5RK-50	AVA6RK-50	AVA7RK-50
Cable Diameter (nominal)	7/8 inch	1-1/4 inch	1-5/8 inch
Cable Weight (lbs./ft.)	0.33	0.46	0.70
Minimum Bend Radius	10 in.	8 in.	15 in
Cable attenuation @ 915 MHz	~ 1.2 dB /100 ft.	~ 0.84 dB /100 ft.	~ 0.70 dB /100 ft.

Furnish and install grounding cables from the ground lug on the TCU or CCU to earth ground.

C. OTHER ITEMS OF WORK

1. EXISTING UTILITIES

Special precautions shall be taken by the Contractor to avoid damage to existing overhead and underground utilities owned and operated by the City or by public or private utility companies.

Where existing utilities or appurtenant structures, whether underground or aboveground are encountered, they shall not be displaced or disturbed unless necessary, and in such cases shall be replaced in as good or better condition than found as quickly as possible.

The Contractor shall bear the entire responsibility for locating, avoiding or repairing damage to said existing utilities. No work shall be performed prior to contacting Kentucky 811 and existing underground utilities being located and marked. Contractor is responsible for contacting utilities that do not subscribe to Kentucky 811.

2. TRAFFIC CONTROL

If the Contractor's operations block any portion of the roadway, flaggers shall be provided for control of traffic in each direction from the blockage.

All workers within the right-of-way who are exposed either to traffic (vehicles using the highway for purposes of travel) or to work vehicles and construction equipment within the temporary traffic control zone shall wear high-visibility safety apparel that meets the Performance Class 3 requirements of the ANSI/ISEA 107-2004 publication entitled "American National Standard for High-Visibility Safety Apparel and Headwear" or equivalent revisions, and labeled as meeting the ANSI 107-2004 standard performance for Class 3 risk exposure.

All traffic control devices and signs shall meet the standards of KYTC and conform to the Manual of Uniform Traffic Control Devices, Chapter 6.

Provide drums or cones at the edge of the roadway to delineate the work zone. Provide barricades or other protective devices for any excavation or pit that remains open after working hours.