

BOOK NO. _____

CITY OF ONEIDA
SPECIFICATIONS
FOR
Sensus Water Meters

SUBMITTED

BY: _____

CITY OF ONEIDA
109 N. MAIN STREET
ONEIDA, NY 13421

2024

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ADVERTISEMENT - INVITATION TO BID

Pursuant to a Common Council resolution 24-29 dated February 6, 2024, the City of Oneida, New York requests bids for the purchase of: **Sensus Water Meters**.

The materials upon which the bidders submit proposals must conform to the specifications prepared by the Water Superintendent and may be obtained from the Purchasing Agent.

Bids are to be sealed and marked on the envelope "**Bid on Sensus Water Meters**". Bids shall be mailed or delivered to Mrs. Lee Ann Wells, Purchasing Agent, 109 North Main Street, Oneida, New York and must be in her office **not later than 11:15 AM., February 22, 2024**, at which time they will be opened and read aloud.

A certified check or bid bond of 5% (five percent) of the amount of the bid, made out to the City of Oneida, New York must accompany each bid as a sign of good faith on the part of the bidder in the performance of his contract. The check of the successful bidder will be retained by the City until the delivery and acceptance of the materials.

The City of Oneida is exempt from the payment of sales and compensating use taxes of the State of New York and of cities and counties thereof on all materials, equipment and supplies sold to the City pursuant to this contract. These taxes are not to be included in the bid.

The City of Oneida reserves the right to revise or amend the specifications prior to the date set for opening of bids. Such revisions and amendments, if any, will be announced by addenda to this advertisement.

This Invitation to Bid is also considered as a part of the specifications and shall be complied with in all respects. The Common Council of the City of Oneida reserves the right to reject any or all bids not in the best interest of the City.

Date

Lee Ann Wells
Purchasing Agent

INSTRUCTIONS TO BIDDERS

ARTICLE 1 - BIDDER'S REPRESENTATION

- 1.1 Each General Bidder (hereinafter called the "Bidder") by making a bid (hereinafter called "bid") represents that:
 1. The Bidder has read and understands the Contract Documents and the bid is made in accordance therewith.
 2. The Bidder has visited the site and is familiar with the local conditions under which the Work has to be performed.
- 1.2 Failure to so examine the Contract Documents and site will not relieve any Bidder from any obligation under the bid as submitted.

ARTICLE 2 - REQUEST FOR INTERPRETATION

- 2.1 Bidders shall promptly notify the City of any ambiguity, inconsistency, or error which they may discover upon examination of the Contract Documents, the site, and local conditions.
- 2.2 Bidders requiring clarification or interpretation of the Contract Documents shall make a written request to the City. The City will use best efforts to answer such requests if received seven (7) calendar days before the date for receipt of the bids.
- 2.3 Interpretation, correction, or change in the Contract Documents will be made by Addendum which will become part of the Contract Documents. The City will not be held accountable for any oral instruction.
- 2.4 Addenda will be mailed First Class postage by the USPS, to every individual or firm on record as having taken a set of Contract Documents.
- 2.5 Copies of addenda will be made available for inspection at the location listed in the Invitation for Bids where Contract Documents are on file.

ARTICLE 3 - PREPARATION AND SUBMISSION OF BIDS

- 3.1 Sealed bids will be received by the Purchasing Agent, Oneida City Hall, 109 North Main Street, City of Oneida, New York, in accordance with the published advertisement.
- 3.2 Bids shall be submitted on the "Bid Form" and are to be returned in the specification book, furnished by the City.
- 3.3 All entries on the Bid Form shall be made by typewriter or in ink.
- 3.4 Damages for delay - This clause will be inserted in the contract with the vendor: "The vendor agrees to make no claim for damages for delay occasioned by an act or omission of the City of Oneida, New York."
- 3.5 No combination bid on any units will be accepted and each unit must be bid separately.
- 3.6 Any quantities indicated on the Bid Form or elsewhere in the specification book or drawings are estimates only and are given solely as a basis for the comparison of bids. The

City does not by implication or otherwise guarantee them to be even approximately correct. The Contractor shall have no claim for additional compensation, or refuse to do the work called for, by reason of the actual quantities involved being greater or lesser by any amount than those called for in the proposal.

- 3.7 Where so indicated on the Bid Form, sums shall be expressed in both words and figures. Where there is a discrepancy between the bid sum expressed in words and the bid sum expressed in figures, the words shall control.
- 3.8 All proposals which contain abnormally high prices, or abnormally low prices, for any class of work, or those which contain unbalanced bidding in any form or manner may be rejected as informal.
- 3.9 Bid Deposits shall be submitted in the amount specified in the Invitation to Bid. They shall be made payable to the City of Oneida and shall be either in the form a certified check or a bid bond of 5% (five percent) issued by a surety licensed to do business in the State of New York; and shall be conditioned upon the faithful performance by the principal of the agreements contained in the bid. Failure to submit a certified check or bid bond when specified will result in automatic disqualification of bid.
- 3.10 The Bid, including the bid deposit shall be enclosed in a sealed envelope with the following plainly marked on the outside:
 - GENERAL BID FOR: **Low Lead Water Meters**
 - BIDDER'S NAME, BUSINESS ADDRESS, AND PHONE NUMBER
- 3.11 Date and time for receipt of bids is set forth in the Invitation to Bid.
- 3.12 Timely delivery of a bid at the location designated shall be the full responsibility of the Bidder.

ARTICLE 4 - WITHDRAWAL OF BIDS

- 4.1 Any bid may be withdrawn prior to the time designated for receipt of bids on written or telegraphic request. Telegraphic withdrawal of bids must be confirmed over the Bidder's signature by written notice postmarked on or before the date and time set for receipt of bids.
- 4.2 Withdrawn bids may be resubmitted up to the time designated for the receipt of bids.
- 4.3 No bids shall be withdrawn for sixty days, Saturdays, Sundays and legal holidays excluded, after the opening of the bids.

ARTICLE 5 - CONTRACT AWARD

- 5.1 The City of Oneida will award Contracts to the lowest responsible and responsive bidder for each item listed, within sixty days, Saturdays, Sundays, and legal holidays excluded after the opening of bids.
- 5.2 The City reserves the right to consider informal a bid not prepared and submitted in accordance with the provisions of these specifications, or to waive informalities in any bid

received. The City also reserves the right to reject any and all bids as the best interest of the City may require.

- 5.3 The City reserves the right to make such investigations as deemed necessary to determine the ability of the bidder to perform the work, and the Bidder shall furnish to the City such information and data for this purpose as may be requested, including, but not limited to, the name and address of the manufacturer of the articles quoted on.
- 5.4 It is the purpose of the City not to award this contract to any bidder who does not furnish evidence satisfactory to the Purchasing Agent that he has the ability and experience in this class of work and that he has sufficient capital and plant to enable him to prosecute the same successfully and to complete it within the specified time and that he will complete it in accordance with the terms thereof.
- 5.5 No bid for materials, supplies equipment or services may be accepted from or a contract awarded to any person who is in arrears in taxes upon debt or contract to or with the City or who has defaulted as surety or otherwise upon a contract or obligation to the City, or who may be otherwise disqualified under any act of the legislature not inconsistent with the Charter of Code.
- 5.6 The Vendor or Bidder to whom a contract shall be let, granted or awarded is prohibited from assigning, transferring, conveying, subletting or otherwise disposing of the same, or his right, title or interest therein, or his power to execute such contract to any other person or corporation, except as provided in section 109, General Municipal Law.

ARTICLE 6 - TAXES

- 6.1 The Bidder shall not include in this bid any tax imposed upon the sale or rental of tangible personal property in this State, such as any and all building materials, supplies, services and equipment required to complete the work.
- 6.2 The City is exempt from payment of the New York State Sales Tax, and the Bidder shall not include any sales tax on its bid. The City's exemption Number is 15-6000411 and will sign exemption certificate when required.

**CITY OF ONEIDA, NEW YORK
B I D FORM**

The undersigned proposes to supply and deliver the materials and/or equipment and/or supplies specified below in full accordance with the specifications supplied by the City of Oneida entitled:

SPECIFICATIONS FOR Sensus Low Lead Water Meters

For the contract price(s) specified below, subject to additions and deduction according to the terms of the specifications.

This bid includes addenda number(s) _____, _____

The Bidder proposes to furnish and deliver the materials specified at the following price(s):

| Item | Description | Qty. | Unit Price | Total Price |
|------|--|------|------------|-------------|
| 1. | 5/8x1/2" SRII ECR, 100 cuft | 305 | \$ _____ | \$ _____ |
| 2. | 3/4" SRII ECR, 100 cuft | 3 | \$ _____ | \$ _____ |
| 3. | 1" SRII ECR, 100 cuft | N/A | \$ _____ | \$ _____ |
| 4. | 1 1/2" Omni C2, Flanged, 100 cuft | N/A | \$ _____ | \$ _____ |
| 5. | 2" Omni C2, Flanged, 100 cuft | 1 | \$ _____ | \$ _____ |
| 6. | Meter Transceiver Unit – Model 510M | 100 | \$ _____ | \$ _____ |
| | | | Total | \$ _____ |

Delivery is Guaranteed within 90 Calendar Days from receipt of Purchase Order/Contract.

To the Common Council:

The undersigned declares that _____ are/is the only person(s) interested in this bid, that it is made without any connection with any person making another bid for the same contract, that the bid is in all respects fair, and without collusion or fraud, and that no member of the Common Council or other officer of the City of Oneida or any person in the employ of said City, is directly or indirectly interested in this bid or in the supplies or works indirectly interested in this bid or in the supplies or works to which it relates

or in any portion of the profits thereof. _____ agrees to furnish: **Sensus Low Lead Water Meters** according to specifications prepared by the Water Superintendent for the following amount:

GRAND TOTAL OF BID:

_____ DOLLARS

(written in words)

\$ _____

(figures)

Amount of certified check of bid bond enclosed (5% of Grand Total of Bid)

\$ _____

Date: _____

(Signature)

By: _____

(Name of Bidder)

(Printed Name and Title of Signatory)

(Business Address)

(City, State, Zip)

Phone # _____

FAX # _____

E-Mail: _____

Note: Enclose all specifications and other data requested with bid

NON-COLLUSIVE BIDDING CERTIFICATION
(See General Municipal Law Section 109-D)

The following section is an excerpt from General Municipal Law.

a) By submission of this bid, each Bidder, and each person signing on behalf of the Bidder, certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty or perjury that to the best of their knowledge and belief:

1. The prices in this bid, have been arrived at independently without collusion, consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;

2. Unless otherwise required by law, the prices which have been quoted in the bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to opening, directly or indirectly, to any other Bidder or to any competitor; and

3. No attempt has been made or will be made by the Bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

b) A bid shall not be considered for award nor shall any award be made where (a) (1), (2) and (3) above have not been complied with; provided however, that if in any case the Bidder cannot make the foregoing certification, the Bidder shall so state and shall furnish with the bid a signed statement which sets forth in detail the reasons therefore. Where (a) (1) (2) and (3) above have not been complied with the bid shall not be considered for award nor shall an award be made unless the Purchasing unit of the political subdivision, public department, agency or official determines that such disclosure was not made for the purpose of restricting competition.

The fact that a Bidder (a) has published price lists, rates, or tariffs covering items being procured, (b) has informed prospective customers of proposed or pending publication of new or revised price lists for such items, or (c) has sold the same items to other customers at the same prices being bid, does not constitute, without more, a disclosure within the meaning of subparagraph one (a).

1) Any bid hereafter made to any political subdivision of the state or any public department, agency of official thereof by a corporate Bidder for work or service performed, to be performed or goods sold or to be sold, where the competitive bidding is required by statute, rule, regulation, or local law, and where such bid contains the certification referred to in subdivision one of this section, shall be deemed to have been authorized by the Board of Directors of the Bidder, and such authorization shall be deemed to include the signing of the certification as non-collusion as the act and deed of the corporation.

This is to certify that we have not been disqualified to contract with any municipality and we are in a position to accept any contract subject to the provisions of Section 103-d of General Municipal Law.

The foregoing statement is affirmed as true under penalty of perjury.

(S) _____
Legal Name of Person, Firm, or Corporation

Title _____

Date _____

(Corporate seal, if any)

If no seal write
"No Seal" across this place and sign.

(This form must be completed prior to the submission of the Bid)

CITY OF ONEIDA

109 N. MAIN STREET
ONEIDA, NY 13421

PHONE # (315) 363-4800 FAX # (315) 363-9558
Federal ID: 15-6000411

PO Number :

Date :

Page:

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Purchase Order

Vendor : 00000

Ship To:
CITY OF ONEIDA
109 N MAIN STREET
ONEIDA, NY 13421

Bill To:
CITY OF ONEIDA
109 N MAIN STREET
ONEIDA, NY 13421

Description: WATER METER

| Qty. | Unit | Description | Unit Price | Amount |
|---------------|------|------------------------------|------------|--------|
| | | WATER METER 002.8300.0324 | | |
| Total: | | | | |

CC Approved

Material Safety Data Sheets Required for all chemical purchases

1. Please send two copies of your invoice.
2. Enter this order in accordance with the prices, terms, delivery method, and specifications listed above.
3. Please notify us immediately if you are unable to ship as specified.

Ordered By:

Approved By: AS

Authorized Official

Date

Authorized Official

Date

Authorized Official

Date

Authorized Official

Date

Technical Specifications

PART 1 - GENERAL

1. General Terms and Conditions

- A. Bidders are advised that all deliveries are to be new, unused, and first quality. No "seconds", rejects or otherwise imperfect or low quality material will be acceptable.
- B. Any material delivered by the Vendor which is not in accordance with the specifications or is otherwise unsatisfactory, in the opinion of the City, may be retained and if necessary used, until it is replaced with satisfactory material.
- C. The successful bidder shall indemnify and save harmless the City and all persons acting for on behalf of it from all suits and claims against them, or any of them, arising from or occasioned by the use of any material, equipment or apparatus, or any part thereof, which infringes or is alleged to infringe on any patent rights. In case such material, equipment or apparatus, or any part thereof, in any such suit is held to constitute infringement, the successful bidder, within a reasonable time, will at it's expense, and as the City may elect, replace such material, equipment or apparatus with non-infringing material, equipment or apparatus, or remove the material, equipment or apparatus, and refund the sums paid therefore.
- D. The successful bidder shall comply with all applicable Federal State and Local laws and regulations.
- E. Verbal orders are not binding on the City and deliveries made or work done without formal Purchase Order or Contract are at the risk of the successful bidder or Contractor and may result in an unenforceable claim.
- F. The successful bidder shall agree to indemnify, defend and hold the City harmless from any and all claims arising out of the performance of this contract.
- G. For the sake of simplicity, in drawing the accompanying specification, manufacturer name/ or catalog numbers have been frequently used. In all such cases, they are well known manufacturers whose catalogs are readily available to all bidders. The use of a particular manufacturer's name or number is not intended to restrict bidding or bar the equal or superior products of other manufacturers. Dimensions given are approximate and bidders are to verify all figures.
- H. Right To Know: Any vendor who receives an order or orders resulting from this invitation agrees to submit a Material Safety Data Sheet (MSDS) for each toxic or hazardous substance or mixture containing such substance, pursuant to state and federal regulations when deliveries are made. The vendor agrees to deliver all containers properly labeled pursuant to state and federal regulations. Failure to submit an MSDS and/or label on each container will place the vendor in noncompliance with the purchase order and could result in cancellation of the contract.

2. Method of Award

- A. All items will be ordered from the lowest responsible bidder.

3. Quantities

- A. The City reserves the right to adjust the quantities purchased with no change in the unit price.

4. Information to be furnished with Bid

- A. In order that the bid will receive proper consideration, the bidder must submit detailed manufactures specifications, details, circulars, illustrations and other pertinent data on the materials proposed to be furnished if the materials proposed differ from the provisions in these specifications.

- B. The City reserves the right to request additional information necessary for the evaluation of the bids. If the materials offered differs from these specifications, such differences must be explained in detail, and the bid will receive proper consideration if such differences are to the best interest of the City and do not depart from the intent of this specification.

5. Delivery

- A. Prices quoted must include delivery to the City, as specified on the Purchase Order.
- B. Delivery of materials except specialty items shall be completed **within 90 calendar days**, FOB, City of Oneida, New York in full conformance with these specifications from the date of the purchase order.
- C. The award to the successful bidder may be canceled if successful bidder shall fail to prosecute the work with promptness and diligence. Except for causes not in the control of the Vendor, no request for postponement of the delivery, or completion, shall be considered; any initiative in such respect being reserved for the City of Oneida.

6. Exceptions

- A. In the event that satisfactory bids are not received, the City may consider alternate proposals deviating from these technical specifications

7. Qualification of Bidder

- A. Consideration will be given to bids from manufacturers and authorized distributors only.

8. Performance Bond

- A. If so stated in the Invitation to Bid the successful bidder will be required to furnish a performance and/or a labor and material payment bond, in an amount, in a form and with a surety satisfactory to the City. The bidder shall be responsible for the cost of the bond(s).
- B. A successful bidder upon his failure or refusal to execute a Performance Bond, if required, within five days after he has been notified or the acceptance of his bid, shall forfeit to the City as liquidated damages for such failure or refusal, any security deposited with his bid.

9. Guarantee/Warranty

- A. The successful bidder shall replace, repair or make good, without cost to the City, any defects or faults arising within sixty (60) days after date of acceptance of articles furnished hereunder (acceptance not to be unreasonably delayed) resulting from imperfect or defective work done or materials furnished by the successful bidder.

10. Municipal Piggyback

- A. This contract is available for use by other political subdivisions authorized under the General Municipal Laws of the State of New York, to purchase goods or services awarded as a result of a City of Oneida bid in accordance with the latest amendments to NYS GML 100 through 103,
 - a. allows such political subdivisions to participate in the awarded contract per the same terms and conditions,
 - b. any political subdivision choosing to utilize the contract will be wholly responsible for any debts incurred by them,
 - c. all orders will be placed by the participating entities,
 - d. and each participating entity shall be billed by and make payment directly to the Vendor.
- B. It is understood that the extension of such contract is at the discretion of the Vendor and the successful bidder is only bound to any contract between the City of Oneida and the Vendor.

PART 2 - PRODUCTS

Item #1 - Sensus Low Lead Water Meters

1. Type

A. Magnetic Drive, Sealed Register, Positive Displacement Type Oscillating Piston only.

2. Size

A. As specified on the Bid Form. Must conform to American Water Works Standard C-700 as most recently revised.

3. Length

A. Must conform to American Water Works Standard C-700 as most recently revised.

4. Cases

A. All Meters shall have a noncorrosive Bismuth Bi-Alloy CDA89836 or EnviroBrass™ II C89520 alloy outer case with a separate measuring chamber which can be easily removed from the case. All Meters shall have cast on them, in raised characters, the size and direction of water flow through the meter. Cast Iron frost bottoms shall be provided on 5/8", 3/4", and 1" Meters. Main case will be marked with a "BA" or "EB" to denote the material used which meets the requirements of ANSI/NSF Standard 61, Annex F and G.

5. External Bolts and Washers

A. All external bolts and washers shall be of corrosion resistant material and be easily removed from the maincase. All threaded maincase bolt holes must be covered, to aid in removal of the bolts for repair.

6. Registers

A. Must conform to American Water Works Standard C-707 as most recently revised.

B. The register must be of the straight reading type and have a full test dial on the face of the register that records one-tenth of the right-most odometer wheel. It shall read in cubic feet units and be capable of direct visual reading both at the meter and by remote reading utilizing a visual interrogation device that connects through to the water meter via a TouchPad located external to the meter, and/or by a Meter Interface Unit (MIU) for remote based Automatic Meter Reading (AMR). The direct read numeral wheel assembly shall be located in the middle of the dial face with reading obtained from left to right using standard notation (billions, millions, and thousands separators and decimal points). All reduction gearing shall be contained in a permanently hermetically sealed, tamperproof enclosure made of a corrosion resistant material.

C. For indoor installations, the register is to be of a one piece configuration secured to the maincase with a locking ring as part of the register. For outdoor installations, the register shall be attached to the meter utilizing a bronze or plastic bonnet register box. The register shall be secured to the maincase by means of a tamper-resistant locking screw so that non-utility personnel cannot remove the register. The register must be field replaceable by utility personnel with the use of a manufacturer-supplied field tool. The

field tool must not be commercially available. Seal wiring or a frangible head seal screw is not acceptable.

- D. The meter register shall be provided with three terminal connections. The connection between the meter register and the TouchPad shall be accomplished with the use of only two terminal connections. The connection between the meter register and the MIU shall be accomplished with the use of all three terminal connections. The register shall transmit the meter reading and register data directly to the interrogation device through the TouchPad or to the MIU when interrogated by an AMR system.
- E. For installations where moisture is not a concern, the terminal connections shall be protected with a dust cover on the register. The dust cover will be of a snap on configuration not requiring screws and be equipped with seal wire holes for security. When the meter is to be installed in a vault or pit set installation, the terminal connections shall be permanently factory sealed to three wire interconnecting cable with an environmentally approved epoxy to prevent moisture penetration and eliminate the need for field sealing requirements.
- F. The register output data format shall be 7-bit ASCII (American Standard Code for Information Interchange) digital, plus an even parity bit. Upon interrogation with a TouchPad or AMR product, the register will transmit an odometer reading containing from 1 to 8 digits (field programmable) and a user defined alphanumeric identification of up to 12 characters (field programmable). The odometer reading is to be obtained from the register by “magnetic field position sensing” technology to determine the rotational position of each odometer wheel. Encoders with a mechanical brush contact with the odometer wheel will not be acceptable. The register can also be programmed to output a factory set, non-programmable identification number, Customer Text of up to 20 alphanumeric characters (field programmable), a reading multiplier ranging from 10-99 to 1099 (field programmable), and/or a reading measurement unit indicator (for example, US Gallons – field programmable). Data is to be positive true. The register’s ASCII digital output is to be capable of interfacing directly to an AMR transponder to transmit data via cable TV, telephone, radio signal, or power lines to an AMR system.

7. Measuring Chamber

- A. The measuring chamber shall be a suitable synthetic polymer and shall not be cast as part of the maincase. All piston assemblies shall be interchangeable in all measuring chamber assemblies of the same size. The measuring chamber piston shall operate against a replaceable control roller, allowing for repair to AWWA standards. The control roller shall rotate on a stainless measuring chamber steel pin, to provide added strength, wear resistance and corrosion resistance. There shall be an elastomeric seal or seals between measured and unmeasured water, preventing leakage around the measuring element.

8. Magnetic Coupling

- A. The motion of the piston will be transmitted to the sealed register through the use of a magnetic coupling.

9. Strainers

- A. All meters must be provided with a corrosion-resistant strainer, with an effective straining area at least twice the bore diameter which can be easily removed from the meter without the meter itself being disconnected from the pipeline.

10. Accuracy and Headloss Tests

- A. Meters shall conform to current AWWA C-700, current revision, test flows, headloss and accuracy standards.

11. Pressure Capability

- A. Meters shall operate up to a working pressure of 150 pounds per square inch (psi), without leakage or damage to any parts. The accuracy shall not be affected by variation in pressure up to 150 psi.

12. Performance Warranties

- A. In evaluating bid submittals, warranty coverage will be considered. All bidders are required to submit their most current nationally published warranty statements for water meter maincases, registers and measuring chambers.

13. Outside Touchpad

- A. TouchPads are not required. Do not supply TouchPads.

14. Remote Meter Wire

- A. Each meter ordered will be supplied with 15 feet of 3 conductor 22-gauge wire. The wire shall be solid copper—color coded red, green & black.
- B. Wire shall be supplied on reels not exceeding 1,000 feet in length.

Item #4 - Sensus Large Meters (1 1/2" – 2")

- A. Electronic Register: Shall be tamper resistant, solid state, battery operated electromagnetic flow measurement system with a hermetically sealed, heat tempered glass covered, with a liquid crystal, nine programmable (9) digit display. The register must be an electronic device encapsulated in heat tempered glass, utilizing a liquid crystal display (LCD). It must have indicators for flow direction, battery life, and unit of measurement. The register shall not be removable from the measuring sensor. The register shall utilize a magnetic coupling technology to connect to a touch read or radio read system in either an inside or pit set installation.
- B. Conformance to Standards: The meter package shall meet or exceed all requirements of ANSI/AWWA Standard C701 and C702 for Class II compound and turbine meter assemblies. Each meter assembly shall be performance tested to ensure compliance. The meter package shall meet or exceed all requirements of NSF/ANSI Standard 61, Annex F and G.
- C. Measuring Chamber: The measuring chamber shall consist of a measuring element, removable housing, and all-electronic register. The measuring element shall be mounted on a horizontal, stationary stainless steel shaft with sleeve bearings and be essentially weightless in water. The measuring chamber shall be capable of operating within the accuracy standard without calibration when transferred from one main case to another of the same size. The meter shall utilize a drop-in type measuring chamber that allows

replacement of the measuring chamber without the necessity of pulling the meter main case from the service location.

- D. Maincase: The meter maincase shall be of epoxy coated ductile iron composition. The epoxy coating shall be provided as standard fusion-bonded and adhere to NSF for non-lead regulation compliance.
- E. Strainer: The meter strainer shall be integral and cast as part of the meter's main case. The strainer's screen shall have a minimum net open area of at least two (2) times the pipe opening and be a V-shaped configuration for the purpose of maintaining a full unobstructed flow pattern. The strainer body shall be a coated ductile iron fusion-bonded epoxy identical to that of the meter's main case. All fasteners shall be stainless steel.
- F. Connections: Flanges for the 1 ½" and 2" size meter assemblies shall be of the 2-bolt oval flange configuration.

Item #6 - Meter Transceiver Unit - Model 510M

- A. Meter Transceiver Unit (MXU) Model 510M shall be a non-pit set radio signal device which permits off site meter reading via radio signals. The MXU interfaces with any compatible absolute encoder-equipped utility meter with a Sensus RadioRead interrogator device. The MXU will be single port model. The MXU will be compatible with the Sensus MultiRead™ Module that permits two, four, or eight meter connections per MXU port. The MXU will be TouchCoupler Design utilizing the patented Sensus inductive coupling meter reading system (TouchRead) to communicate with its encoder.