

SPECIFICATIONS
FOR
FURNISHING AND DELIVERY OF
WATER METERS
2023-2025

EAST WINDSOR MUNICIPAL UTILITIES AUTHORITY
MERCER COUNTY
NEW JERSEY

7 WILTSHIRE DRIVE
EAST WINDSOR, NJ 08520

December 2023

NOTICE TO BIDDERS

**EAST WINDSOR MUNICIPAL UTILITIES AUTHORITY
7 WILTSHIRE DRIVE, EAST WINDSOR, NJ 08520
609-443-6000**

WILL ACCEPT BIDS FOR FURNISHING AND DELIVERY OF WATER METERS

Sealed bids will be received by the Executive Director of the East Windsor Municipal Utilities Authority, East Windsor, New Jersey, County of Mercer, in the Board Room at the Administration Building, 7 Wiltshire Drive, East Windsor, NJ 08520 for: **FURNISHING AND DELIVERY OF WATER METERS**– Bid opening is **Monday, December 18, 2023 at 10:00 a.m. at the East Windsor MUA Administration offices, 7 Wiltshire Drive, East Windsor N.J. 08520.**

Specifications are on file in the Authority Administration Building, 7 Wiltshire Drive, East Windsor, NJ 08520, and may be obtained by prospective bidders during the hours of 9:00 a.m. to 4:00 p.m. Specifications may also be obtained from our website www.Eastwindsormua.com. Bids must be enclosed in a sealed envelope marked appropriately and must have the **NAME AND ADDRESS** of the bidder on the outside of the envelope. Bids may be hand delivered or mailed by certified mail to the above-mentioned address. No other forms will be accepted.

Bidders are required to comply with all applicable statutory requirements including the requirements of N.J.S.A. 10:5.31, et seq N.J.A.C. 17:27 (Equal Employment Opportunity) 42 U.S.C.-12101, et seq (Americans with Disabilities Act). N.J.S.A. 34:11-56.25 et seq (Prevailing Wages) N.J.S.A. 52:32-44, et seq (NJ Business Registration).

A corporation submitting a bid, in response to this advertisement, shall accompany such bid with a resolution authorizing its proper officers to submit such a bid and authorize said officers to execute a contract in the event its bid is accepted.

The East Windsor Municipal Utilities Authority reserves the right to reject any or all bids as in its judgment may be deemed to be in the best interest of the East Windsor Municipal Utilities Authority. The East Windsor Municipal Utilities Authority also reserves the right to waive any minor irregularity or technicality. In the case of tie bids, the East Windsor Municipal Utilities Authority shall have the authority to award the contract to the bidder selected by the East Windsor Municipal Utilities Authority in its sole discretion.

BY ORDER OF East Windsor Municipal Utilities Authority.

**Richard Brand
Executive Director**

INSTRUCTIONS TO BIDDERS

Sealed proposals will be received in accordance with public advertisement as required by law, a copy of said notice being attached hereto and made a part of these specifications.

BIDS FORWARDED THROUGH MAIL

The East Windsor Municipal Utilities Authority will not assume responsibility for bids forwarded by mail. It is the bidder's responsibility to see that bids are presented to the East Windsor Municipal Utilities Authority at the time and at the place designated.

Bids may be hand delivered or mailed. However, the East Windsor Municipal Utilities Authority disclaims any responsibility for bids forwarded by regular or overnight mail. If the bid is sent by overnight mail, name and address of bidder and title of bid must also appear on the outside of the delivery company envelope. Bids received after the designated time and date will be returned unopened.

PROPOSAL FORM

Each proposal is to be submitted on the proposal form attached. The bid proposal form shall be submitted, in a sealed envelope: (1) addressed to the East Windsor Municipal Utilities Authority, (2) bearing the name and address of the bidder written on the face of the envelope, and (3) clearly marked "BID" with the contract title being bid. Proposals on forms other than herewith provided will not be accepted.

All prices and amounts must be written in ink or preferably typewritten. Bids containing any conditions, omissions, unexplained erasures or alterations, items not called for in the bid proposal form, attachment of additive information not required by the specifications, or irregularities of any kind, may be rejected by the East Windsor Municipal Utilities Authority. Any changes, white-outs, strikeouts, etc. on the proposal page must be initialed in ink by the person responsible for signing the bid.

BID PRICES

Bidders must insert prices for furnishing all of the materials and/or labor required by these specifications. Prices shall be net, including any charges for packing, crating, containers, or any other labor or materials required by these specifications. All transportation charges shall be fully prepaid by the contractor F.O.B. destination and placement at locations specified by the East Windsor Municipal Utilities Authority. As specified, placement may require inside deliveries. No additional charges will be allowed for any transportation costs resulting from partial shipments made at the contractor's convenience.

BID GUARANTY - DELETED

PERFORMANCE BOND - DELETED

WARRANTY

The successful bidder shall submit applicable warranties from the product manufacturer prior to award of contract for determination of product compliance with specifications.

GUARANTEE

The vendor shall guarantee any or all materials supplied under these specifications for at least one year. Defective or inferior items shall be replaced at the expense of the vendor.

INTERPRETATION AND ADDENDA

- A. The bidder understands and agrees that its bid is submitted on the basis of the specifications prepared by the East Windsor Municipal Utilities Authority. The bidder accepts the obligation to become familiar with these specifications.
- B. Bidders are expected to examine the specifications and related documents with care and observe all their requirements. Ambiguities, errors or omissions noted by bidders should be promptly reported in writing to the appropriate official. In the event the bidder fails to be notified the East Windsor Municipal Utilities Authority of such ambiguities, errors or omissions, the bidder shall be bound by the bid.
- C. No oral interpretation of the meaning of the specifications will be made to any bidder. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications, and will be distributed to all prospective bidders, in accordance with N.J.S.A. 40A:11-23. All addenda so issued shall become part of the contract documents, and shall be acknowledged by the bidder in the bid. The East Windsor Municipal Utilities Authority's interpretations or corrections thereof shall be final.
- D. Discrepancies in Bids
 - 1. If the amount shown in words and its equivalent in figures do not agree, the written words shall be binding. Ditto marks are not considered writing or printing and shall not be used.
 - 2. In the event that there is a discrepancy between the unit prices and the extended totals, the unit prices shall prevail. In the event there is an error of the summation of the extended totals, the computation by the East Windsor Municipal Utilities Authority of the extended totals shall govern.

FAILURE TO SIGN CONTRACT

The failure of the successful Bidder to sign the Contract within fourteen (14) days of the award of the Contract to the successful Bidder, shall be sufficient cause to rescind the award. The East Windsor Municipal Utilities Authority may then, at its option accept the bid of the next lowest responsible bidder. It is understood by the Bidder that the certified check, cashier's check or bid bond shall be forfeited to East Windsor Municipal Utilities Authority in the event of the Bidder's failure to comply with the foregoing. It is further understood by the Bidder that such forfeiture shall be considered as liquidated damages for the delay and additional expense incurred by the East Windsor Municipal Utilities Authority due to the Bidder's failure to comply with these requirements and shall not be considered a penalty.

AWARD OF CONTRACT –PER BID LINE ITEM UNIT PRICE BASIS

The East Windsor Municipal Utilities Authority reserves the right to award the Contract on a per bid line item Unit Price Basis to the lowest responsible bidder for each respective bid line item. Multiple contract awardees are possible.

WITHDRAWAL OF BIDS

Bids may not be withdrawn after the opening of bids. Furthermore, the attachment of any conditions, limitations, or ancillary provisions by a bidder to the bid proposal will cause the bid to be classified as irregular and will render the bid subject to rejection.

Sealed bids forwarded to the East Windsor Municipal Utilities Authority before the time of opening of bids may be withdrawn upon written application of the bidder who shall be required to produce evidence showing that the individual is or represents the principals involved in the bid. Once bids have been opened, they must remain firm for a period of sixty (60) calendar days.

POWER OF ATTORNEY

Attorneys-in-fact who sign contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

WORKER'S WAGES

The contractor shall at all times during the performance of the contract comply with the Prevailing Wage Act (P.L. 1963), C. 150, N.J.S.A. 34:11-56.25 et. seq.). All workers employed in the performance of the contract shall be paid not less than the prevailing rate in this area for each type of work.

RIGHT TO KNOW ACT

Per N.J.S.A. 34:5A-1 et seq. (Workers and Community Right to Know Act), the State Department of Health has adopted a Workplace Hazardous Substance List (N.J.A.C. 8:59-9) which includes substances that pose a threat to the health and safety of employees. Therefore, each bidder must furnish the East Windsor Municipal Utilities Authority a "Material Safety Data Sheet" for each product they supply the East Windsor Municipal Utilities Authority which contains a substance listed on the Hazardous Substance List. Furthermore, in compliance with the Uniform Labeling requirement, a label shall be affixed or stenciled on any product that contains such substances before delivery to the East Windsor Municipal Utilities Authority.

CERTIFICATE OF PAYMENT

All contracts awarded will require the successful bidder to provide on a monthly basis a certificate of payment that all subcontractors, vendors, laborers, mechanics and trades have been paid per N.J.S.A. 2A:44-128 et seq.

CONDITIONS

N.J.S.40A:11 et seq. (Local Public Contracts Law), in its entirety by reference, applies to all specifications drawn by the East Windsor Municipal Utilities Authority. This includes but is not limited to N.J.A.40A:11-18 which requires that only manufactured and farm products of the United States, wherever available, shall be used.

Unless otherwise specified, materials and equipment purchased will be inspected by the contracting agent as to meeting the quality and quantity requirements of the call for bids. When deemed necessary, samples of supplies or materials will be taken at random from stock received for submission to a commercial laboratory. If the reports indicate that the materials do not meet the specifications, the expense of analysis shall be borne by the bidder holding the contract.

The bidder shall warrant all materials and services supplied under these specifications. The warranty shall include warranty of title, merchantability, fitness for a particular purpose and such other warranties that arise from the course of dealing or usage of trade. Defective or inferior items shall be replaced at the expense of the vendor. In case of rejected materials, the vendor will be responsible for return freight charges.

TERMINATION OF CONTRACT

- A. If through any cause, the successful bidder shall fail to fulfill in a timely and proper manner obligations under this contract or if the contractor shall violate any of the requirements of this contract, the East Windsor Municipal Utilities Authority shall thereupon have the right to terminate this contract by giving written notice to the contractor of such termination and specifying the effective date of termination. Such termination shall relieve the East Windsor Municipal Utilities Authority of any obligation for balances to the contractor of any sum or sums set forth in the contract.
- B. Notwithstanding the above, the contractor shall not be relieved of liability to the East Windsor Municipal Utilities Authority for damages sustained by the East Windsor Municipal Utilities Authority by virtue of any breach of the contract by the contractor and the East Windsor Municipal Utilities Authority may withhold any payments to the contractor for the purpose of compensation until such time as the exact amount of the damage due the East Windsor Municipal Utilities Authority from the contractor is determined.
- C. The contractor agrees to indemnify and hold the East Windsor Municipal Utilities Authority harmless from any liability to subcontractors/suppliers concerning payment for work performed or goods supplied arising out of the lawful termination of the contract by the East Windsor Municipal Utilities Authority under this provision.
- D. In case of default by the successful bidder, the East Windsor Municipal Utilities Authority may procure the articles or services from other sources and hold the successful bidder responsible for any excess cost occasioned thereby.

ASSIGNMENT, TRANSFER, CONVEY, SUBLET OR DISPOSAL OF CONTRACT

The contractor shall not assign, transfer, convey, sublet or otherwise dispose of the contract or any part thereof to anyone without written consent of East Windsor Municipal Utilities Authority, New Jersey.

AWARD OF CONTRACT – PRICES FIRM

The contract shall be awarded within sixty (60) days unless concerned parties agree to an extension. Award will be based on unit price of each item. Contract shall be awarded for a period of one (1) year ____ or two (2) years X or three (3) years ____.

The contract may be renewed for up to two one-year extensions X or one two-year extension____, upon mutual agreement of the East Windsor Municipal Utilities Authority and the contractor/vendor. In accordance with 40A:11-15, any price increases shall not exceed the change in the index rate for the 12 months preceding the most recent quarterly calculation available at the time the contract is renewed.

The contract is subject to the availability and appropriation annually of sufficient funds as may be required to meet the extended obligation.

QUANTITY

The East Windsor Municipal Utilities Authority reserves the right to take any number of units, when applicable, up to the maximum indicated in the specifications or to increase the quantity by executing a change order not to exceed 20% of the overall contract amount or to omit various items as may be in the best interest of the East Windsor Municipal Utilities Authority to do so in accordance with N.J.A.C. 5:34-4.2. No warranty is given or implied as to the item or quantity that will be purchased.

DELIVERY

Delivery shall be made within thirty (30) calendar days after issuance of any purchase order during the contract period. The EWMUA reserves the right to place multiple orders in any quantity during the course of the contract. Item(s) to be quoted F.O.B. delivered to the following location:

**East Windsor Municipal Utilities Authority,
7 Wiltshire Drive
East Windsor, NJ 08520**

PAYMENT

Payment will be made with final written approval of authorized official within thirty (30) days of receipt of properly certified and tabulated invoice as authorized by the Local Fiscal Affairs Law (N.J.S.A. 40A:5-1 et seq). In accordance with the Prompt Payment Law N.J.S.A. 2A:30A-1 et seq., if applicable.

NOTE: The East Windsor Municipal Utilities Authority is tax exempt.

RESERVATIONS

The East Windsor Municipal Utilities Authority reserves the right to accept or reject any or all bids, to waive minor irregularities and technicalities, to request rebids on the items and award bids in part or whole as the East Windsor Municipal Utilities Authority deems it will best serve its interests.

The East Windsor Municipal Utilities Authority reserves the right to waive minor details.

The East Windsor Municipal Utilities Authority reserves the right, where applicable, pursuant to N.J.S.A. 40A:11-13 (b), to award the bid based on the physical proximity of the bidder which is requisite to the efficient and economical purchase of the material or services.

EXCEPTIONS TO SPECIFICATIONS

For purpose of evaluation where an equivalent product is being furnished in place of one requested, bidder must indicate any variation to our specifications. If no variations are indicated, it will be construed that the bid fully complies with the specifications.

Exceptions, if any, to the bid specifications, shall be noted on the Bid Form. If exceptions are taken, the bidder shall furnish documentation to substantiate equivalency with the item specified. The burden of proof shall be on the vendor. The East Windsor Municipal Utilities Authority shall be the sole judge as to the equivalency of items bid to the specifications.

INSURANCE

The successful bidder shall certify or cause to be certified to East Windsor Municipal Utilities Authority, upon request, Certificates of Insurance for the following:

- (1) Workers Compensation as required by State of New Jersey applicable to the work to be performed;
- (2) Comprehensive General Liability for bodily injury, personal injury and property damage, including damages from collapse, explosion, and underground structures if applicable, at a limit of not less than \$1,000,000 combined single limit for damages arising out of injury to or destruction of property;
- (3) Contractual liability insurance indemnifying and holding the East Windsor Municipal Utilities Authority harmless from any and all claims for personal injury or property damage resulting from the negligence of the bidder or anyone working under its control;
- (4) Comprehensive Automobile Liability shall apply for all owned, non-owned and hired vehicles at a limit of not less than \$1,000,000 combined single limit for bodily injury and property damage for incident;
- (5) With the exception of Workers Compensation, each Certificate shall name the East Windsor Municipal Utilities Authority as an additional insured. A copy of the additional insured endorsement for each insurance policy shall be provided to the Executive Director for the East Windsor Municipal Utilities Authority within thirty (30) days of the award of the contract.
- (6) The Certificate should include a thirty (30) day notice of cancellation provision.

NEW JERSEY BUSINESS REGISTRATION REQUIREMENTS -N.J.S.A. 40A:11-23.2

The contractor must include proof of its own business registration and proofs of business registration of those subcontractors required to be listed in the contractor's submission (i.e., "named subcontractor"). The proof of business registration shall be provided at the time the bid or proposal is officially received and opened by the East Windsor Municipal Utilities Authority.

The contractor shall provide written notice to its subcontractors of the responsibility to submit proof of business registration to the contractor.

Before final payment on the contract is made by the contracting agency, the contractor shall submit an accurate list and the proof of business registration of each subcontractor or supplier used in the fulfillment of the contract, or shall attest that no subcontractors were used.

For the term of the contract, the contractor and each of its affiliates and a subcontractor and each of its affiliates [N.J.S.A. 52:32-44(g)(3)] shall collect and remit to the Director, New Jersey Division of Taxation, the use tax due pursuant to the Sales and Use Tax Act on all sales of tangible personal property delivered into this State, regardless of whether the tangible personal property is intended for a contract with a contracting agency.

A business organization that fails to provide a copy of a business registration as required pursuant to section 1 of P.L.2001, c.134 (C.52:32-44 et al.) or subsection e. or f. of section 92 of P.L. 1977, c.110 (C.5:12-92), or that provides false business registration information under the requirements of either of those sections, shall be liable for a penalty of \$25 for each day of violation, not to exceed \$50,000 for each business registration copy not properly provided under a contract with a contracting agency.

SPECIFICATIONS FOR COLD WATER METERS

Existing System

The existing EWMUA water meter/AMR system consists of approximately 7,250 meters. Of these, 3,100 meters are read via exterior wall mounted Sensus touchpads utilizing Sensus SmartGun wands in conjunction with 3 quantity FL6502 Field Logic Handhelds with RF capability. An additional 2,500 meters are radio read via the Sensus handhelds and Sensus touchpad-piggybacked Sensus MXU's or Sensus SmartPoints. A balance of 1,650 pulse type meters are manually read at remote exterior wall mounted displays and recorded via the Sensus handhelds' keypads. Sensus AutoRead version 9.8.1 software is used to load/download handhelds. Sensus AutoRead software is interfaced to "Edmunds & Associates" user account billing software. EWMUA has also acquired Sensus VGB and VXU vehicle units to read radios via driveby method. A small quantity of meters are located in pits or vaults.

Ongoing Upgrade

EWMUA has an ongoing program to replace the oldest pulse type meters with current encoder register meters and using the existing remote display's wire to attach a Sensus touchpad, which is ultimately piggybacked with a detachable Sensus SmartPoint; thus enabling a read in the event of radio malfunction without the need to access the meter. Additionally, EWMUA can utilize the touchpad to reprogram (increase) the number of reporting digits of existing Sensus meters for future fixed base AMI analytics without the need to access the meter.

Each year EWMUA will install or replace about 600 meters in homes, commercial and light industrial buildings. The larger meters are on an as needed based upon development.

Compatibility/Migratability

The meters, registers, touch pads and radio transceiver units provided under this contract shall be compatible with the existing system described above. If any of the proposed products are not compatible, bidder shall furnish and install any necessary hardware, software and/or programming manpower to ensure compatibility and incorporate any cost therefor into the unit pricing entered on the bid form. Registers, touch pads and radio transceiver units shall be compatible with existing Sensus SmartGuns, Sensus touchpads, Sensus FL6502 handhelds and Sensus VGB vehicle units and shall be migratable to both drive-by vehicle based and fixed based radio read systems. Migratability shall include transmission of alarms, such as leak detection, low battery, empty pipe, reverse flow, and tamper, to a fixed based system which EWMUA intends to deploy in the future. EWMUA shall not accept products which entail maintaining 2 or more independent reading systems/software and/or billing software programs.

BIDDER shall provide an explicit comply/exception assessment of compatibility, which shall detail specific hardware, software and/or programming to be furnished at no additional cost.

SPECIFICATIONS FOR WATER METERS

ELECTROMAGNETIC AND FLOATING BALL TYPE
5/8" THROUGH 10" SIZES

TYPE

Electronic encoder register, Electromagnetic non moving part (5/8"-1") and Integrated advance floating Ball technology type (1.5" – 10") meters may be considered.

SIZE

Must conform to American Water Works Standard C-700 Latest Revision.

LAY LENGTH

<u>Size of Meter</u>	<u>Length</u>
5/8"X3/4"	7 1/2"
3/4" short	7 1/2"
3/4"	
Regular	9"
1"	10 3/4"

CASES

All meters will have a non-corrosive Water Works, Non-Lead bronze, or equal outer case. All 1 1/2" and larger meters must have a separate measuring chamber which can be easily removed from the case. All meters shall have a cast on them, in raised characters, the size and direction of flow through the meter. Crystalline resin (Poly) or Cast-iron frost bottoms, on 5/8", 3/4" and 1" meters. On 1 1/2" thru 10" meters will be of the split case type with a non-lead bronze or Ductile Iron lower and upper shell assemblies. The manufacturer's serial number must be permanently affixed to the main case to aid in identification and must be visible so that it can be read from directly above the water meter. All meters must meet or exceed AWWA C-700 and NSF/ANSI 61 standard. All 1 1/2" thru 10" meters shall be flanged ends. A test port of adequate size must be accessible from the top to allow testing in a pit or vault setting. The port outlet must be threaded and shall be threaded with a coated ductile iron plug or equal.

STRAIGHT READING REMOTE

Must conform to American Water Works Standard C-700 as most recently revised. The register must be of the electronic reading type and have a leak detection, low battery and empty pipe alarm or capability of. The meter shall read in gallons and be capable of direct visual reading both at the meter and by remote reading. All electronics shall be contained in a permanently hermetically sealed, tamper proof enclosure made of a corrosion resistant material that meets

NSF/ANSI 61 standard. The register is to be secured to the upper main case by means of a locking device or molded into the case and located in the interior of the meter so the register cannot be removed externally. Meters must be able to read nine (9) digits, down to the hundredths.

The meter register shall be provided with a touch coupler connection which shall be encapsulated in glass or similar material. Three terminal connections for inside meters are required. All vault and pit meters must contain a water proof connection, preferably a touch coupler connection or MXU connection. The connection between the meter register and external remote shall be accomplished using the three terminals and three conductor non polarized cables. The connection shall be completely water proof and warranted against intrusion.

Seals must conform to A.W.W.A. standard C-700 Latest Revisions.

REGISTERS

Registers shall be straight reading in gallons and shall be hermetically sealed and tamperproof. The figures on the electronic display or number wheels shall be no less than 3/16" so they can be easily read. The register shall be permanently and hermetically attached to the meter flow tube. All registers 5/8" thru 10" shall be tamperproof. The register must be of the electronic reading type (liquid crystal display) with visual indicators for meter reading, leak detection, low battery and empty pipe alarm or capability of. All electronic registers and batteries must have a warranty lasting at least 20 yrs. Three terminal connections for inside meters are required. All vault and pit meters must contain a water proof connection, preferably a touch coupler connection. The connection between the meter register and external remote shall be accomplished using three terminals and three conductor non polarized cables. The connection shall be completely water proof and warranted against intrusion. The touch pad shall have the capability to adapt a radio or fixed base meter reading system (AMI) with minimum labor.

MAGNETIC DRIVE

Both the driver and the driven magnets are to be sealed out of the path of the water so that neither magnet is operating in direct contact with the water.

MEASURING CHAMBER

The measuring chamber for all meters shall be made of one of the following: a non- lead bronze, (polymeric material) Non corrosive Crystalline resin (5/8", 3/4" & 1") or epoxy coated ductile Iron (1 1/2" thru 10") and shall not be cast as part of the outer case. The epoxy coating shall be fusion bonded and adhere to NSF/ANSI 61 (non-lead). The measuring chamber is to be properly fitted inside the outer case without the use of screws or locating pins. Adjustments for maintaining meter accuracy shall be made within the measuring chamber assembly only.

The measuring chamber shall consist of a measuring element, removable housing and electronic register. The measuring element shall be mounted on a horizontal, stationary titanium, or stainless steel shaft with sleeve bearings or of equal design. The measuring chamber shall be capable of operating within the listed accuracies limits without calibration when transferred from one case to another of equal size. The measuring shall be so configured to capture all flows as specified, without the requirement of an automatic valve.

STRAINERS

All meters 1 ½" or larger shall be provided with strainers. Strainers shall be made from perforated sheet corrosion resistant material and shall be rigid, fit snugly and be easily removable. Straining area shall be one hundred percent (100%). The meter strainer shall be an integral and cast as part of the meters main case for meters 1 ½" up to 3". All sizes greater than 3" may be separate but part of the lay length. The strainers 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 of a non-lead (NSF/ANSI 61 standard) preferably ductile iron fusion bonded epoxy coated identical to the meters main case. The strainer body shall contain a cover plate which is removable for inspection and debris removal. All fasteners shall be stainless steel and capable of handling .200 PSIG static pressure rating.

SEAL SCREWS

Seal screws shall not be required in that the register is to be tamper proof without actual destruction and is to be secured to the meter within.

EXTERNAL BOLTS AND WASHERS

All external meter bolts shall be of corrosion resistant material (preferably stainless steel) and be designed for easy removal after being long in service. The washers may be either ferrous or nonferrous, but if ferrous material, must be properly treated for corrosion resistance. External bolts shall screw directly into the outer case without the use of nuts.

GUARANTEES - WORKMANSHIP AND MATERIALS

All meters and remote units shall be guaranteed against a defect in workmanship and materials for a period of (1) year from date of delivery; further a time and a usage guarantee shall cover the meters, i.e.: 5/8" thru 1" meters to be guaranteed to meet A.W.W.A. test specifications for Twenty (20) years. On expiration of these guarantees, programs must be provided covering the complete repair of meters and/or a measuring chamber exchange program be available. No charges for either of these programs shall be made unless these options are exercised by return of complete meters or measuring chambers.

GUARANTEES

All meters shall be guaranteed against defects in material and workmanship for a period of (1) year from the date of delivery. In addition, all 5/8", 3/4" and 1" meters will be guaranteed to perform to A.W.W.A. new meter accuracy standards for a period of Ten years or more, and will perform to at least A.W.W.A. repaired meter accuracy standards for the following minimum total time periods:

5/8" Meter - 20 years from date of delivery

3/4" Meter - 20 years from date of delivery

1" Meter - 20 years from date of delivery

The main cases for such sized meters will be guaranteed for at least twenty-five (25) years (under normal use), electronic registers for Twenty (20) years. Touch Pads, Radio Reads, AMI reads and all other equipment shall be covered under a minimum Ten (10) year materials and workmanship warranty.

Other manufacturer's computer hardware and accessory equipment shall be covered under said companies guarantee policies. All guarantees shall commence from the date of delivery.

In addition, bidders will supply their published maintenance program that is available and becomes effective when the expressed guarantees expire, which cover years Twenty (20) through twenty (25) from date of delivery. No charge will be made until utilized by the utility.

The outside device shall be compact, sturdy and tamper proof. The sealing of the unit shall be accomplished by a plastic tab which will accommodate seal wire and a lead seal. The remote Touch Pad shall be provided with two terminal connections to accept the three-conductor cable which mates with the meter register. A snap out feature on the radio box (MXU) or Fixed base unit (AMI) for easy care of the remote unit is required. Sealed case units are preferred.

SCRAMBLE TEST

On receipt of each shipment of meters, six (6) or more will be selected for the Scramble Test: Our service person shall completely disassemble meters, all parts mixed and then reassembled and tested. The manufacturer guarantees A.W.W.A. test performance limits are met on each meter.

ENCODER REGISTERS AND REMOTE

Must conform to American Water Works Standard C-700 as most recently revised. The register must be of the electronic reading type and have a leak detection, low battery and empty pipe alarm or capability of. It shall read in gallons and be capable of direct visual reading both at the meter and by remote reading. All electronics shall be contained in a permanently hermetically sealed, tamper proof enclosure made of a corrosion resistant material that meets NSF/ANSI 61 standard. The register is to be secured to the upper main case by means of a locking device or molded into the case and located in the interior of the meter so the register cannot be removed externally.

The meter register shall be provided with a touch coupler connection which shall be encapsulate in glass or similar material. Three terminal connections for inside meters are required. All vault and pit meters must contain a water proof connection. The connection between the meter register and external remote shall be accomplished using the three terminals and three conductor non polarized cables. The connection shall be completely water proof and warranted against intrusion.

The register shall be capable of transmitting the meter reading and customers' identification number directly to an automatic meter reading transponder of an interface device or AMI device.

Register output data format for automatic meter reading shall be a 7-bit ASCII (American Standard Code for Information Interchange) digital, plus an even parity bit. The first character is ASCII "R" followed by a 4-digit meter reading (most significant digit first), followed by an 8-digit meter ID number. Data is to be positive true. The register's ASCII digital output is to be capable of interfacing directly to an automatic meter reading transponder to transmit data via Radio, cable, telephone or power lines to a central location.

STRAINERS

All meters 1 ½" or larger must be provided with a corrosion resistant strainer which is easily removable from the meter without the meter itself being disconnected from the pipeline.

ACCURACY AND HEAD LOSS TESTS

Meters shall conform to current A.W.W.A. test flow and accuracy specification.

PRESSURE CAPABILITY

Meters shall operate up to a working pressure of 200 psi (pounds per square inch) without leakage or damage to any parts. The accuracy shall not be affected when operating at this pressure due to the possible distortion. Accuracy shall not be affected by variations in pressure up to 200 psi.

CONNECTOR CABLE

Twenty-five feet of connector cable shall be supplied per meter. The connector cables #18 – 3 to be supplied on one-thousand foot spools for cutting to the required length at the time of installation.

SPECIFICATION FOR COLD WATER METERS
SINGLE REGISTER COMPOUND
1 1/2" THROUGH 10" SIZES

TYPE AND SIZE

A Single register compound meters, Magnetic type in sizes 1 1/2" thru 10". The 10" size to be Single Register Compound. All with companion flanges, bolts and gaskets. The 10" to be equipped with flanges and companion flanges. Meters shall be capable of constant low to medium flow to high flow usage and intended for critical billing measurement for commercial, industrial and multi - family residential applications. The size of the meter shall be determined by the nominal size of the opening of the inlet and outlet flanges. All meters must meet or exceed American Water Works Association (AWWA) standard C701 and C702 as most recently revised. Additionally, the meter shall not require a valve to meet these standards. All meters shall be NSF approved to the latest standard.

Length

The maximum overall length of the unit shall be the face to face dimension as listed by AWWA standard C 700

<u>Meter Lay Length</u>	
<u>Size of Meter</u>	<u>Length</u>
1 1/2"	13"
2"	15 1/4"
3"	17"
4"	20"
6"	24"
8"	30 1/8"
10"	41 1/8"

CASING

All meters shall be of Epoxy coated Ductile Iron Pipe or a Non Lead bronze composition. All 1 1/2" and larger meters must have a separate measuring chamber which can be easily removed from the case. All meters shall have a cast on them, in raised characters, the size and direction of flow through the meter. The manufacturer's serial number must be permanently affixed to the main case to aid in identification and must be visible so that it can be read from directly above the water meter. All meters must meet AWWA C-700 and NSF/ANSI 61 standard. A test port of adequate size must be accessible from the top to allow testing in a pit or vault setting. The port outlet must be threaded and shall be threaded with a coated ductile iron plug or equal.

MEASURING CHAMBER

The measuring chamber for all meters shall be made of one of the following: a non-lead bronze, or epoxy coated ductile Iron (1 ½" thru 10") and shall not be cast as part of the outer case. The epoxy coating shall be fusion bonded and adhere to NSF/ANSI 61 (non-lead). The measuring chamber is to be properly fitted inside the outer case without the use of screws or locating pins. Adjustments for maintaining meter accuracy shall be made within the measuring chamber assembly only.

The measuring chamber shall consist of a measuring element, removable housing and electronic register. The measuring element shall be mounted on a horizontal, stationary titanium, or stainless steel shaft with sleeve bearings or of equal design. The measuring chamber shall be capable of operating within the listed accuracies limits without calibration when transferred from one case to another of equal size. The measuring shall be so configured to capture all flows as specified, without the requirement of an automatic valve.

CONNECTIONS

All 1 ½" thru 2" meters shall be two bolt flanged ends with companion flange. All flanges 1 ½" thru 10" must be of the non-lead bronze or epoxy coated fusion bonded Ductile Iron. All 3" thru 10" meters shall have flanges of the class 125 round type, flat faced and shall conform to ANSI B16.1 for specified diameter, drilling and thickness. All new meter installs must come with companion flanges, Stainless steel nuts/bolts and gaskets..

STRAINER

All meters 1 ½" or larger shall be provided with strainers. Strainers shall be made from perforated sheet corrosion resistant material and shall be rigid, fit snugly and be easily removable. Straining area shall be one hundred percent (100%). The meter strainer shall be an integral and cast as part of the meters main case for meters 1 ½" up to 3". All sizes greater than 3" may be separate (by flange) but part of the total lay length. The strainers 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 of a non-lead (NSF/ANSI - 61 standard) preferably ductile iron fusion bonded epoxy coated identical to the meters main case. The strainer body shall contain a cover plate which is removable for inspection and debris removal. All fasteners shall be stainless steel and capable of handling 200 PSIG static pressure rating. The strainer should be part of the meter housing.

REGISTER

Registers shall be straight reading in gallons and shall be hermetically sealed and tamperproof. The figures on the electronic display or number wheels shall be no less than 3/16" so they can be easily read. The register shall be permanently and hermetically attached to the meter flow tube. All registers 1 ½" thru 10" shall be tamperproof. The register must be of the electronic reading type (liquid crystal display) with visual indicators for meter reading, leak detection, low battery and empty pipe alarm or capability of. All electronic registers must have a warranty lasting at least 10 years. The meter register shall be provided with a touch coupler connection which shall be encapsulated in glass. Three terminal connections for inside meters are required. All vault and pit meters must contain a water proof connection. The connection between the

meter register and external remote shall be accomplished using the three terminals and three conductor non polarized cables. The connection shall be completely water proof and warranted against intrusion.

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. The use of oil in the registers shall not be acceptable.

The register output data format shall be 7-bit ASCII (American Standard Code for Information Interchange) digital, plus and even parity bit. Upon interrogation with a Touch Pad or AMR, the register will transmit a 7 digit odometer reading (customer specified) and an 8-digit register identification number. The register identification number is to be factory set and non-programmable so as to protect the integrity of the system by eliminating possible programming duplication of the identification number in the field.

EXTERNAL BOLTS AND WASHERS

All external meter bolts shall be of corrosion resistant material (preferably stainless steel #316) and be designed for easy removal after being long in service. The washers may be either ferrous or nonferrous, but if ferrous material, must be properly treated for corrosion resistance. External bolts that screw directly into the outer case without the use of nuts shall also be of the stainless type (# 316).

ACCURACY

Accuracy ranges on all sizes shall be in accordance with the latest specifications of the A.W.W.A.

Meter size	<u>COMPOUND METER</u>			
	Low Flow <u>(95% min)</u>	Operating Range <u>(98.5% - 101.5%)</u>	Intermittent flow <u>(98.5% - 101.5%)</u>	Pressure loss <u>(Not to exceed)</u>
1 1/2"	.25 gpm	.5 to 160 gpm	200 gpm	6.0 psi@160 gpm 4.3 psi @ 160 gpm
2"	.25 gpm	.5 to 160 gpm	200 gpm	3.2 psi @400 gpm
3"	0.5 gpm	1.0 to 400 gpm	500 gpm	6.4 psi@ 800 gpm
4"	.75 gpm	1.5 to 800 gpm 3.0 to 1600	1000 gpm	5.5 psi@ 1600 gpm
6"	1.5 gpm	4.0 to 2700 gpm	2000 gpm	4.0 psi@ 2700 gpm
8"	2.5 gpm	5.0 to 4000 gpm	3400 gpm	4.5 psi@ 4000 gpm
10"	3.5 gpm	gpm	5000 gpm	gpm

GUARANTEES - WORKMANSHIP AND MATERIALS

All meters and remote units shall be guaranteed against a defect in workmanship and materials for a period of one (1) year from date of delivery. Further, a time and a usage guarantee shall cover the meters, i.e.: 1 1/2" thru 10" meters to be guaranteed to meet A.W.W.A. test specification for Ten (10) years. On expiration of these guarantees, programs must be provided covering the complete repair of meters and/or measuring chamber exchange program be available. No charges for either of these programs shall be made unless these options are exercised by return of complete meters or measuring chambers.

GUARANTEES

All meters shall be guaranteed against defects in material and workmanship for a period of (1) year from the date of delivery. In addition, all 1 1/2" thru 10" meters will be guaranteed to perform to A.W.W.A. new meter accuracy standards for a period of 15 years, and will perform to at least A.W.W.A. repaired meter accuracy standards for the following total time periods:

4" thru 10" Meter - 15 years from date of delivery.

The main cases for such sized meters will be guaranteed for twenty-five (25) years, electronic registers for Ten (10) years minimum. Touch Pads and all other equipment shall be covered under a standard one year materials and workmanship warranty. Other manufacturer's computer hardware and accessory equipment shall be covered under said companies guarantee policies. All guarantees shall commence from the date of delivery.

In addition, bidders will supply their published maintenance program that is available and becomes effective when the expressed guarantees expire, which cover years Sixteen (16) through twenty (20) from date of delivery. No charge will be made until utilized by the utility.

The outside device shall be compact, sturdy and tamper proof. The sealing of the unit shall be accomplished by a plastic tab which will accommodate seal wire and a lead seal. The remote Touch Pad shall be provided with two terminal connections to accept the three-conductor cable which mates with the meter register. A snap out feature on the radio box (MXU) or Fixed base unit (AMI) for easy care of the remote unit is required. Sealed case registers are preferred.

SCRAMBLE TEST

On receipt of each shipment of meters, six (6) or more will be selected for the Scramble Test: Our service person shall completely disassembled meters, all parts mixed and then reassembled and tested. The manufacturer guarantees A.W.W.A. test performance limits are met on each meter.

SPECIFICATIONS FOR TURBO METERS
1 1/2" THROUGH 10" SIZE

TYPE AND SIZE

A Single register Turbo meters, Magnetic type in sizes 1 1/2" thru 10". The 10" size to be Single Register Turbo. All with companion flanges, bolts and gaskets. The 10" meter to be equipped with flanges, companion flanges, bolts and gaskets. Meters shall be capable of constant low to medium flow to high flow usage and intended for critical billing measurement for commercial, industrial and multi - family residential applications. The size of the meter shall be determined by the nominal size of the opening of the inlet and outlet flanges. All meters must meet or exceed American Water Works Association (AWWA) standard C701 and C702 as most recently revised. Additionally, the meter shall not require a valve to meet these standards. All meters shall be NSF approved to the latest standard.

Length

The maximum overall length of the unit shall be the face to face dimension as listed by AWWA standard C 700

<u>Meter Lay Length</u>	
<u>Size of Meter</u>	<u>Length</u>
1 1/2"	13"
2"	15 1/4"
3"	17"
4"	20"
6"	24"
8"	30 1/8"
10"	41 1/8"

MAIN CASING

All meters shall be of Epoxy coated Ductile Iron Pipe or a Non Lead bronze composition. All 1 1/2" and larger meters must have a separate measuring chamber which can be easily removed from the case. All meters shall have a cast on them, in raised characters, the size and direction of flow through the meter. The manufacturer's serial number must be permanently affixed to the main case to aid in identification and must be visible so that it can be read from directly above the water meter. All meters must meet AWWA C-700 and NSF/ANSI 61 standard. A test port of adequate size must be accessible from the top to allow testing in a pit or vault setting. The port outlet must be threaded and shall be threaded with a coated ductile iron plug or equal.

MEASURING CHAMBER

The measuring chamber for all meters shall be made of one of the following: a non-lead bronze, or epoxy coated ductile Iron (1 ½" thru 10") and shall not be cast as part of the outer case. The epoxy coating shall be fusion bonded and adhere to NSF/ANSI 61 (non-lead). The measuring chamber is to be properly fitted inside the outer case without the use of screws or locating pins. Adjustments for maintaining meter accuracy shall be made within the measuring chamber assembly only.

The measuring chamber shall consist of a measuring element, removable housing and electronic register. The measuring element shall be mounted on a horizontal, stationary titanium, or stainless steel shaft with sleeve bearings or of equal design. The measuring chamber shall be capable of operating within the listed accuracies limits without calibration when transferred from one case to another of equal size. The measuring shall be so configured to capture all flows as specified, without the requirement of an automatic valve.

CONNECTIONS

All 1 ½" thru 2" meters shall be two bolt flanged ends with companion flange. All flanges 1 ½" thru 10" must be of the non-lead bronze or epoxy coated fusion bonded Ductile Iron. All 3" thru 10" meters shall have flanges of the class 125 round type, flat faced and shall conform to ANSI B16.1 for specified diameter, drilling and thickness. All new meter installs must come with companion flanges, Stainless steel nuts/bolts and gaskets..

STRAINER

All meters 1 ½" or larger shall be provided with strainers. Strainers shall be made from perforated sheet corrosion resistant material and shall be rigid, fit snugly and be easily removable. Straining area shall be one hundred percent (100%). The meter strainer shall be an integral and cast as part of the meters main case for meters 1 ½" up to 3". All sizes greater than 3" may be separate but part of the lay length. The strainers 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 of a non-lead (NSF/ANSI - 61 standard) preferably ductile iron fusion bonded epoxy coated identical to the meters main case. The strainer body shall contain a cover plate which is removable for inspection and debris removal. All fasteners shall be stainless steel and capable of handling .200 PSIG static pressure rating. The strainer should be part of the meter housing.

EXTERNAL BOLTS AND WASHERS

All external meter bolts shall be of corrosion resistant material (stainless steel # 316) and be designed for easy removal after being long in service. The washers may be either ferrous or nonferrous, but if ferrous material, must be properly treated for corrosion resistance. External bolts shall screw directly into the outer case without the use of nuts.

ACCURACY

Accuracy ranges on all sizes shall be in accordance with the latest specifications of the A.W.W.A.

Meter size	Low Flow (95% min)	<u>TURBO METER</u>		Pressure loss (Not to exceed)
		Operating Range (98.5% - 101.5%)	Intermittent flow (98.5% - 101.5%)	
1 1/2"	.75 gpm	1.25 to 160 gpm	200 gpm	6.9 psi@160 gpm 7.0psi @ 200 gpm
2"	1.0 gpm	1.5 to 200 gpm	250 gpm	5.1 psi @500 gpm
3"	1.5 gpm	2.5 to 500 gpm	650 gpm	8.7 psi@ 1000 gpm
4"	2.0 gpm	3.0 to 1000 gpm	1250 gpm	8.2 psi@ 2000 gpm
6"	2.5 gpm	4.0 to 2000 gpm	2500 gpm	5.1 psi@ 3500 gpm
8"	4.0 gpm	5.0 to 3500 gpm	4700 gpm	7.2 psi@ 5500 gpm
10"	5.0 gpm	6.0 to 5500 gpm	7000 gpm	

REGISTERS

Registers shall be straight reading in gallons and shall be hermetically sealed and tamperproof. The figures on the electronic display or number wheels shall be no less than 3/16" so they can be easily read. The register shall be permanently and hermetically attached to the meter flow tube. All registers 1 1/2" thru 10" shall be tamperproof. The register must be of the electronic reading type (liquid crystal display) with visual indicators for meter reading, leak detection, low battery and empty pipe alarm or capability of. All electronic registers and batteries must have a warranty lasting at least 10 yrs. The meter register shall be provided with a touch coupler connection which shall be encapsulated in glass. Three terminal connections for inside meters are required. All vault and pit meters must contain a water proof connection, preferably a touch coupler connection. The connection between the meter register and external remote shall be accomplished using the three terminals and three conductor non polarized cable. The connection shall be completely water proof and warranted against intrusion.

MAGNETIC DRIVE

Both the driver and the driven magnets are to be sealed out of the path of the water so that neither magnet is operating in direct contact with the water.

ENCODER REGISTER AND REMOTE

Must conform to A.W.W.A. C-707 as most recently revised.

MAXIMUM OPERATING PRESSURE

All meters shall operate without leakage. The accuracy shall not be affected by possible distortion when operating at pressures up to 150 psi.

GUARANTEES

All meters shall be guaranteed against defects in material and workmanship for a period of (1) year from the date of delivery. In addition, all 1 ½" thru 10" meters will be guaranteed to perform to A.W.W.A. new meter accuracy standards for a period of one year, and will perform to at least A.W.W.A. repaired meter accuracy standards for the following total time periods:

4" THRU 10" Meter - 15 years from date of delivery or the registration of 100,000,000 gallons, whichever occurs first.

The main cases for such sized meters will be guaranteed for twenty-five (25) years, electronic registers for Ten(10) years minimum. Touch Pads and all other equipment shall be covered under a standard one year materials and workmanship warranty. Other manufacturer's computer hardware and accessory equipment shall be covered under said companies guarantee policies. All guarantees shall commence from the date of delivery.

In addition, bidders will supply their published maintenance program that is available and becomes effective when the expressed guarantees expire, which cover years Eleven(11) through twenty (20) from date of delivery. No charge will be made until utilized by the utility.

SPECIFICATIONS FOR FIRE SERVICE METERS
4" THROUGH 10" SIZE

TYPE AND SIZE

These specifications set forth the minimum acceptable design criteria and performance requirements for cold water meters – Fire Service type consisting of a class 2 turbine type meter, and a Ductile Iron strainer assembly. This meter assembly is intended where an extremely wide flow range is required and where measurement of both domestic and fire service water usage is desired. The meter shall be of the Magnetic type in sizes 4" thru 10". The 10" size to be Single Register Turbo. All with companion flanges. The 10" meter to be equipped with flanges and companion flanges. Meters shall be capable of constant low to medium flow to high flow usage and intended for critical billing measurement for commercial, industrial and multi - family residential applications. The size of the meter shall be determined by the nominal size of the opening of the inlet and outlet flanges. All meters must meet or exceed American Water Works Association (AWWA) ANSI / AWWA standard C703 standard for class 2, Single register Class 2 Turbo meters as most recently revised. Additionally, the meter shall not require a valve to meet these standards. All meters shall be NSF and NFP approved to the latest standard.

Length

The maximum overall length of the unit shall be the face to face dimension as listed by AWWA standard C 700

<u>Meter Lay Length</u>	
<u>Size of Meter</u>	<u>Length</u>
4"	33"
6"	45"
8"	53"
10"	68"

MAIN CASING

All meters shall be of Epoxy coated Ductile Iron Pipe or a Non Lead bronze composition. All 4" and larger meters must have a separate measuring chamber which can be easily removed from the case. All meters shall have a cast on them, in raised characters, the size and direction of flow through the meter. The manufacturer's serial number must be permanently affixed to the main case to aid in identification and must be visible so that it can be read from directly above the water meter. All meters must meet AWWA C-700 and NSF/ANSI 61 standard. A test port of adequate size must be accessible from the top to allow testing in a pit or vault setting. The port outlet must be threaded and shall be threaded with a coated ductile iron plug or equal.

MEASURING CHAMBER

The measuring chamber for all meters shall be made of one of the following: a non-lead bronze, or epoxy coated ductile Iron (4" thru 10") and shall not be cast as part of the outer case. The epoxy coating shall be fusion bonded and adhere to NSF/ANSI 61 (non-lead). The measuring chamber is to be properly fitted inside the outer case without the use of screws or locating pins. Adjustments for maintaining meter accuracy shall be made within the measuring chamber assembly only.

The measuring chamber shall consist of a measuring element, removable housing and electronic register. The measuring element shall be mounted on a horizontal, stationary titanium, or stainless steel shaft with sleeve bearings or of equal design. The measuring chamber shall be capable of operating within the listed accuracies limits without calibration when transferred from one case to another of equal size. The measuring shall be so configured to capture all flows as specified, without the requirement of an automatic valve.

STRAINER

All meters 4" or larger shall be provided with strainers. Each meter shall have a separate UL (underwriters Laboratories) listed and FM (Factory Mutual) approved external fire service strainer as part of the meter package. Strainers shall be made from perforated sheet corrosion resistant material (Stainless steel) and shall be rigid, fit snugly and be easily removable. Strainer's screen area shall have a minimum net open area of at least four (4) times the pipe opening area and be a V shaped for the purpose of obtaining a full unobstructed flow pattern. The strainer body shall be of a non-lead (NSF/ANSI - 61 standard) preferably ductile iron fusion bonded epoxy coated identical to the meters main case. The strainer body shall contain a cover plate which is removable for inspection and debris removal. All fasteners shall be stainless steel and capable of handling 200 PSIG static pressure rating.

STRAIGHTENING VANES

A straightening vane assembly is mandatory and shall be positioned directly upstream of the measuring element. The straightening vane assembly shall be an integral component of the measuring chamber.

CONNECTIONS

All 4" thru 10" meters must be of the non-lead bronze or epoxy coated fusion bonded Ductile Iron. All 4" thru 10" meters shall have flanges of the class 125 round type, flat faced and shall conform to ANSI B16.1 for specified diameter, drilling and thickness. All new meter installs must come with companion flanges, Stainless steel nuts/ bolts and gaskets..

ACCURACY

Accuracy ranges on all sizes shall be in accordance with the latest specifications of the A.W.W.A.

Meter size	Low Flow (95% min)	<u>FIRE LINE METER</u>		Pressure loss (Not to exceed)
		Operating Range (98.5% - 101.5%)	Intermittent flow (98.5% - 101.5%)	
4"	.75 gpm	1.5 to 1000 gpm	1250 gpm	6.4 psi@ 1000 gpm
6"	1.5 gpm	3.0 to 2000 gpm	2500 gpm	6.7 psi@ 2000 gpm
8"	2.5 gpm	4.0 to 3500 gpm	4700 gpm	5.0 psi@ 3500 gpm
10"	3.5 gpm	5.0 to 5500 gpm	7000 gpm	7.0 psi@ 5500 gpm

CERTIFICATIONS AND MARKINGS

All sizes of meter packages shall be UL (underwriters Laboratories) listed and FM (Factory Mutual) approved as being accepted for use on fire service lines and domestic water use. For such applications, the meter shall have a UL/FM listed and approved strainer immediately upstream of the inlet flange. The meter shall have an identification tag affixed, indicating such acceptance and the strainer shall also bear such acceptance symbols and markings on the casting.

STRAIGHT READING REMOTE TOUCH PAD

The outside remote shall be of sturdy and tamper proof construction. The remote shall be protected from the environment with watertight seals. Seals must conform to A.W.W.A. Standard C-700 latest revisions. The remote touch pad to be provided with two terminal connections to accept the three-conductor cable which connects it with the meter register. The remote Touch Pad will have provisions to cover and seal the mounting screws to prevent tampering. The touch pad shall have the capability to adapt to a radio or Fixed Base meter reading system which accepts a three conductor cable with limited labor. The connection shall be completely water proof and warranted against intrusion.

REGISTERS

Registers shall be straight reading in gallons and shall be hermetically sealed and tamperproof. The figures on the electronic display or number wheels shall be no less than 3/16" so they can

be easily read. The register shall be permanently and hermetically attached to the meter flow tube. All meter registers 4" thru 10" shall be tamperproof. The register must be of the electronic reading type (liquid crystal display) with visual indicators for meter reading, leak detection, low battery and empty pipe alarm or capability of. All electronic registers and batteries must have a warranty lasting at least 10 yrs. The meter register shall be provided with a touch coupler connection which shall be encapsulated in glass. Three terminal connections for inside meters are required. All vault and pit meters must contain a water proof connection, preferably a touch coupler connection. The connection between the meter register and external remote shall be accomplished using the three terminals and three conductor non polarized cable. The connection shall be completely water proof and warranted against intrusion.

MAGNETIC DRIVE

Both the driver and the driven magnets are to be sealed out of the path of the water so that neither magnet is operating in direct contact with the water.

ENCODER REGISTER AND REMOTE

Must conform to A.W.W.A. C-707 as most recently revised.

TOUCH READ ECR ENCODER REGISTER

The register must be of the straight reading type and have a full test dial on the face of the register. It shall read in gallons and be capable of direct visual reading both at the meter and by remote reading utilizing a visual interrogation device which connects through to the water meter via a Touch Pad 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 at the bottom of the dial face with the reading obtained from left to right. All reduction gearing shall be contained in a permanently hermetically sealed, tamper proof enclosure made of a corrosion resistant material.

The register shall be secured to the main case by means of a locking device located in the interior of the meter so the register cannot be removed externally by non utility personnel. An external register box assembly is not acceptable.

The meter register shall be provided with three terminal connections. The connection between the meter register and the Touch Pad shall be accomplished with the use of only three terminal connections. The connection between the meter register and the MXU/AMI shall be accomplished with the use of all three terminal connections. The register shall transmit the meter reading and register the identification number directly to the interrogation device through the Touch Pad or to the MXU when interrogated by an AMR system or through an AMI system.

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. The use of oil in the registers shall not be acceptable.

The register output data format shall be 7-bit ASCII (American Standard Code for Information Interchange) digital, plus and even parity bit. Upon interrogation with a Touch Pad or AMR, the register will transmit a 8-digit odometer reading (customer specified) and an 8-digit register identification number. The register identification number is to be factory set and non-programmable so as to protect the integrity of the system by eliminating possible programming duplication of the identification number in the field. The 4-digit or 6-digit meter reading is to be interrogated from the register by direct contact of the register's odometer wheels to a circuit board which encodes the meter reading to the interrogation device. Data is to be positive true.

MAXIMUM OPERATING PRESSURE

All meters shall operate without leakage. The accuracy shall not be affected by possible distortion when operating at pressures up to 150 psi.

GUARANTEE

Turbo Meters are to be guaranteed for one (1) year from date of delivery with a maintenance program available after guarantee expires. Maintenance program will consist of complete measuring chamber exchange without removing main case from line. No charge for this maintenance program shall be made until the user exercises his right to this program.

GUARANTEES

All meters shall be guaranteed against defects in material and workmanship for a period of (1) year from the date of delivery. In addition, all 4" thru 10" meters will be guaranteed to perform to A.W.W.A. new meter accuracy standards for a period of one year, and will perform to at least A.W.W.A. repaired meter accuracy standards for the following total time periods:

4" THRU 10" Meter - 15 years from date of delivery or the registration of 100,000,000 gallons, whichever occurs first.

The main cases for such sized meters will be guaranteed for twenty-five (25) years, electronic registers for Ten (10) years. Touch Pads and all other equipment shall be covered under a standard one year materials and workmanship warranty. Other manufacturer's computer hardware and accessory equipment shall be covered under said companies guarantee policies. All guarantees shall commence from the date of delivery.

In addition, bidders will supply their published maintenance program that is available and becomes effective when the expressed guarantees expire, which cover years Eleven (11) through twenty (20) from date of delivery. No charge will be made until utilized by the utility.

SPECIFICATIONS FOR COLD WATER METERS

FIRE HYDRANT METER

TYPE

Right angle magnetic drive flow control meter with 2½" National Standard Fire Hose couplings.

CASES

All casings must be Non lead brass, epoxy coated Ductile Iron, or aluminum.

REGISTER

Hermetically sealed

GENERAL

The meter shall comply explicitly with all requirements of A.W.W.A. standards.

ACCURACY

The accuracy of the meter shall be within 1½ percent of the actual flow.

REGISTERS

Registers shall be straight reading in gallons and shall be hermetically sealed and tamperproof. The figures on the electronic display or number wheels shall be no less than 3/16" so they can be easily read. The register shall be permanently and hermetically attached to the meter flow tube. All hydrant meter registers shall be tamperproof. The register must be of the electronic reading type (liquid crystal display) with visual indicators for meter reading, leak detection, low battery and empty pipe alarm or capability of. All electronic registers and batteries must have a warranty lasting at least 10 yrs. The meter register shall be provided with a touch coupler connection which shall be encapsulated in glass. The connection between the meter register and external remote shall be accomplished using the three terminals and three conductor non polarized cables. The connection shall be completely water proof and warranted against intrusion. All hydrant meters shall have the capability to be read with an AMR or AMI system

STRAINER

All meters 1 ½" or larger shall be provided with strainers. Strainers shall be made from perforated sheet corrosion resistant material and shall be rigid, fit snugly and be easily removable. Straining area shall be one hundred percent (100%). The meter strainer shall be an integral and cast as part of the meters main case for meters 1 ½" up to 3". All sizes greater than 3" may be separate but part of the lay length. The strainers 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 of a non-lead (NSF/ ANSI - 61 standard) preferably ductile iron fusion bonded epoxy coated identical to the meters main case. The strainer body shall contain a cover plate which is removable for inspection and debris removal. All fasteners shall be stainless steel and capable of handling .200 PSIG static pressure rating. The strainer should be part of the meter housing.

CONNECTIONS

All hydrant meters shall be of the National fire thread (2 ½") class 125.

SPECIFICATIONS FOR COLD WATER METERS

ULTRASONIC METERS

MEASUREMENT

Ultrasonic transit time measurement shall comply with AWWA C750.

REGISTERS

Registers shall be straight reading in gallons and shall be hermetically sealed and tamperproof. The figures on the electronic display shall be no less than 3/16" so they can be easily read. The register shall be permanently and hermetically attached to the meter flow tube. All meter registers shall be tamperproof. The register must be of the electronic reading type (liquid crystal display) with visual indicators for meter reading, leak detection, low battery and empty pipe alarm or capability of. All electronic registers and batteries must have a full warranty (unprorated) lasting at least 10 yrs. The meter register shall be provided with a touch coupler connection which shall be encapsulated in glass. The connection between the meter register and external remote shall be accomplished using the three terminals and three conductor non polarized cables. The connection shall be completely water proof and warranted against intrusion. All meters shall have the capability to be read with an AMR or AMI system

Warranty

Manufacturer's standard warranty shall be provided at time of bid submission. Encoder register and battery shall be fully warrantied (unprorated) for ten years, minimum. Proration of warranty, if any, after ten years shall be clearly stated at time of bid submission.

STRAIGHT READING REMOTE TOUCH PAD

The outside remote shall be of sturdy and tamper proof construction. The remote shall be protected from the environment with watertight seals. Seals must conform to A.W.W.A. Standard C-700 latest revisions. The remote to be provided with two terminal connections to accept the three-conductor cable which connects it with the meter register. The remote Touch Pad will have provisions to cover and seal the mounting screws to prevent tampering. The touch pad shall have the capability to adapt to a radio or Fixed Base meter reading system which excepts a three conductor cable with limited labor. The connection shall be completely water proof and warranted against intrusion.

SMART GUN SPECIFICATIONS **FOR USE WITH TOUCH READ SYSTEMS REGISTERS**

PURPOSE

A meter reading device that can interrogate Sensus Touch Read system registers through the use of a wall mounted or pit lid mounted Touch Pad. The visual meter reading and/or the register identification number can then be transferred to a permanent recording device is desired by the utility. The Smart Gun can also be connected to a Sensus or Touch Read compatible hand held meter reading device for automatic data transfer of the register data to the memory of the hand held unit.

VISUAL READING UNIT

The visual reading device must be housed in a rugged thermoplastic case. The device must be able to withstand rugged use in field conditions over a wide range of temperatures. The housing must also be water tight that will permit the use of the visual reader in wet weather without the use of exterior covers. The visual reading device shall be able to be belt mounted that allows the meter other hands free functions. All software updates will be at no cost to the East Windsor Municipal Utilities Authority. It is the responsibility of the vendor to assure notification to the East Windsor Municipal Utilities Authority of any updates in software.

DISPLAY

The display must be clear and able to display a 6-digit register odometer reading and 8-digit register identification number. The display should have a delay capability of approximately fifteen (15) seconds from interrogation of the register data for appropriate action by the utility.

CONNECTION PORT

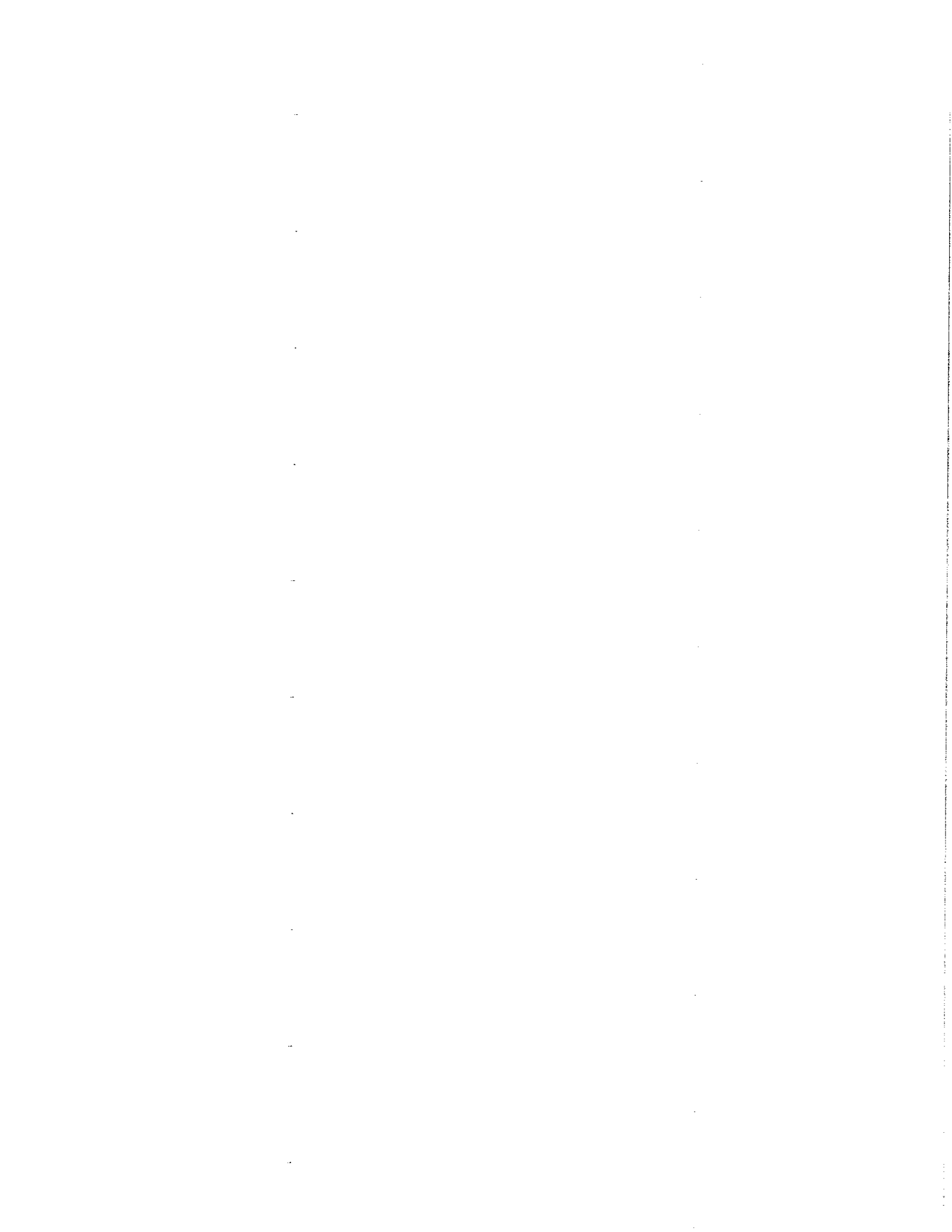
The Smart Gun shall have a water tight gun connection port to prevent moisture failure while in field use. The gun connection port will provide the capability to connect the Smart Gun to a Sensus or Touch Read compatible hand held meter reading device with the use of a connection cable.

BATTERY CHARGE

The batteries of the visual reader shall not be field replaceable and be able to be recharged for continuous daily use of not less than eight (8) hours. The battery charger will connect to the same water tight connection port as the hand held connection cable.

ERROR CODE INDICATIONS

The visual shall provide error code indication on the visual display whenever an error is detected in the meter register or incorrect meter and wire installation.



SMART POINTS (MXU) SPECIFICATIONS

1.0 COMMUNICATION PARAMETERS

All equipment must comply with current Federal Communications Commission (FCC) requirements which include proper labeling of the MIU (SmartPoint). The bidder must have supporting documentation available upon request to verify compliance. The 2-way radio frequency transmission from the MIU (SmartPoint) to the Tower Gateway Basestation, or vice versa, must utilize a primary use licensed frequency band owned by the manufacturer, operating in the 901MHz band. Operation on a secondary license or in the ISM band is unacceptable.

1.2 AMI TRANSMITTERS (SMART POINTS)

1.2.1 FUNCTION

- 1.3.1.1 The MIU (SmartPoint) shall transmit the reading data to the Tower Gateway Base Station (TGB) at least four (4) times per day.
- 1.3.1.2 The SmartPoint shall be capable of collecting hourly readings and transmitting that information 4 times per day.
- 1.3.1.3 Each transmission shall contain the past 8-168 readings in order to provide redundancy. If a transmission is missed, the system shall be capable of recovering the missed reading information from the endpoint on the next transmission.
- 1.3.1.4 After being transmitted from the meter SmartPoint, transmissions must be immediately received at the back-end software for review. No "storing and forwarding" of readings on collectors shall be acceptable. Low power endpoints, under 2 Watts of power output, (originally designed for walk-by/drive-by applications) shall not be acceptable due to low power and range capabilities, and undesirable quantity of required "data collectors".

1.3.2 CONSTRUCTION

- 1.3.2.1 The water transmitter shall be enclosed in a two-piece molded plastic housing capable of being mounted on a wall or installed through the meter/vault lid.
- 1.3.2.2 The SmartPoint plastic housing shall incorporate a tamper resistant, waterproof connection, known as TouchCoupler technology (or equivalent), allowing SmartPoints to be installed utilizing an existing Metering Systems TouchPad (Sensus) with a two wire connection, or a 3-wire connection if a touchpad is not available.

- 1.3.2.3 The electronics of the transmitter shall be hermetically sealed in a High Density Polyethylene (HDPE) enclosure that is waterproof and provides an operating temperature range of -22°F to 185°F (-30°C to 85°C).
- 1.3.2.4 Pit set transmitters shall have the ability to be completely submerged in water for the life of the product without any internal damage or malfunction.
- 1.3.2.5 The two-piece enclosure must contain the unit components including, HDPE enclosure, battery, and wire connections.
- 1.3.2.6 The pit unit shall be available with TouchCoupler technology (or equivalent) that eliminates the need for wire connectors.

1.3.3 PERFORMANCE REQUIREMENTS

- 1.3.2.1 The SmartPoint shall be a two-way device that transmits at a power level of two (2) Watts in primary-use licensed band in the 900 MHz spectrum. The SmartPoint shall provide inbound and outbound access to water measurement and ancillary device diagnostics via radio signal.
- 1.3.2.2 The SmartPoint shall also be required to transmit at least eight (8) reading digits from the encoded register in a resolution of at least 0.1 gallon or 0.01 cubic feet for meters up to 1 inch.
- 1.3.2.3 SmartPoints must also have the ability to provide leak detection capability. Units must be able to have hourly reads that transmit 4 times a day.
- 1.3.2.4 The SmartPoints/transmitters shall be FCC Part 90, 101, and 24 approved for licensed band operation, and shall transmit on a primary use (unshared) licensed band in the 890-960 MHz spectrum.
- 1.3.2.5 The SmartPoints shall communicate with the TGB using an RF modulation designed specifically for AMR/AMI applications. Furthermore, the modulation shall use CRC-32 error detection and Viterbi forward error correction scheme capable of recovering up to one bit error out of every three bits. The receiver will have a sensitivity of -109 dBm or better in order to provide adequate range for minimal infrastructure.
- 1.3.2.6 SmartPoints shall be capable of providing an instantaneous notification of a successful installation and successful communication with the Metro Tower Gateway Base Station (TGB).

- 1.3.2.7 The SmartPoint shall receive input from the meter register and remotely send "top of the hour" data to a collection device, based on its fixed base system configuration.
- 1.3.2.8 The SmartPoint shall be compatible to a fixed base system by simply installing a Metro Tower Gateway Basestation (TGB). The power output of the SmartPoint transmitter in fixed base mode, shall be a minimum of 2 watts of power and utilize a primary use licensed frequency band.
- 1.3.2.9 As a fixed base endpoint, the SmartPoint shall interact with the strategically placed Sensus Metro Tower Gateway Basestation located in East Windsor MUA service area. Readings and other diagnostics are instantly forwarded to the Regional Network Interface (RNI) at time of transmission.
- 1.3.2.10 SmartPoints shall provide an on-demand read when interrogated by the EWMUA from the Regional Network Interface (RNI).
- 1.3.2.11 SmartPoints shall be Sensus Model 510M TC or Model 520M TC (Pit-Set) or approved equal as determined by the East Windsor MUA..

EAST WINDSOR MUNICIPAL UTILITIES AUTHORITY

BIDDER'S FINAL CHECK SHEET

WE REQUEST THAT THE FOLLOWING CHECK POINTS BE OBSERVED AND REVIEWED FOR COMPLETION, PRIOR TO SUBMITTAL OF BID. FAILURE TO PROPERLY COMPLETE THESE DOCUMENTS, ETC., AND FORWARD SAME WITH BID WILL BE GROUNDS FOR REJECTION OF YOUR BID.

_____ **COMPLETE CORPORATE RESOLUTION REQUIREMENT IN SPECIFICATIONS. (To Be Supplied With Bid)**

_____ **COMPLETE STOCKHOLDER DISCLOSURE CERTIFICATION REQUIREMENT AS PER SPECIFICATIONS. (To Be Supplied with Bid)**

N/A _____ **COMPLETE PROPER SECURITY (CERTIFIED CHECK, CASHIER'S CHECK OR BID BOND ONLY!!). (To Be Supplied With Bid)**

_____ **COMPLETE ACKNOWLEDGEMENT OF RECEIPT OF ADDENDA. (To Be Supplied With Bid)**

_____ **BID FORM SIGNED BY RESPONSIBLE PERSON. (To Be Supplied With Bid)**

_____ **MAIL OR HAND CARRY BID TO ARRIVE ON TIME AS SPECIFIED IN SPECIFICATIONS. ANY BIDS RECEIVED AFTER THE BID OPENING TIME MUST BE RETURNED UNOPENED.**

_____ **PLEASE INDICATE BID NAME, NUMBER, OPENING DATE AND TIME ON OUTSIDE OF ENVELOPE!!**

_____ **COMPLETE DATA PERTINENT TO AFFIRMATIVE ACTION PROGRAM. (To Be Supplied If Awarded Contract)**

_____ **CERTIFICATES OF INSURANCE. (To Be Supplied If Awarded Contract)**

_____ **PREVAILING WAGE FORM. (Obtainable from the NJ Dept. of Labor). (To Be Supplied If Requested)**

_____ **NON COLLUSION AFFIDAVIT. (To Be Supplied With Bid)**

_____ **DEPARTMENT OF THE TREASURY BUSINESS REGISTRATION CERTIFICATE.**

_____ **POLITICAL CONTRIBUTION DISCLOSURE. (PAY TO PLAY)**

PROPOSAL

To: East Windsor Municipal Utilities Authority
7 Wiltshire Drive
East Windsor, New Jersey 08520

Attn: Richard Brand, Executive Director

PROPOSAL OF: _____

ADDRESS: _____

Phone: _____ E-mail: _____

FOR: FURNISHING AND DELIVERY OF WATER METERS

Gentlemen/Ladies:

We hereby certify that we are the only person or persons interested in this bid, that it is made without collusion with any person, firm, or corporation making another bid of the same contract, that the bid is in all respects fair and that no office of East Windsor Municipal Utilities Authority or any person in the employ is directly or indirectly interested in this bid or in the supplies or work to which it relates; or in the profits or any portion thereof.

We further declare that we have carefully examined the Instructions to Bidders, Specifications, and Contract Form herein referred to and propose to furnish and deliver all necessary materials specified and in the manner and time prescribed at the following Unit Prices and further agree that the following Unit Prices are inclusive of all costs:

RESOLUTION:

RESOLVED, that the following named officers:

be and hereby are authorized and empowered to sign and submit to the East Windsor Municipal Utilities Authority, the attached bid or proposal and further that said officers are authorized to execute the contract or any other agreement or bond or statement necessary for the fulfillment of obligations incurred by the acceptance of the East Windsor Municipal Utilities Authority of the bid or proposal.

I hereby certify that the above constitutes a true copy of a Resolution passed and approved by the Board of Directors at a meeting held on

Affix Seal:

Secretary

ACKNOWLEDGMENT OF RECEIPT OF ADDENDA TO BID DOCUMENTS

EAST WINDSOR MUNICIPAL UTILITIES AUTHORITY

As required by N.J.S.A. 40A:11-23.la., the undersigned Bidder hereby acknowledges receipt of the following notices, revisions, or addenda to the bid advertisement, specifications or bid documents. By indicating date of receipt, bidder acknowledges the submitted bid takes into account the provisions of the notice, revision or addendum. Note that the local unit's record of notice to bidders shall take precedence and that failure to include provisions of changes in a bid proposal may be subject for rejection of the bid.

Reference Number or Title of Addendum/Revision	How Received (mail, fax, pick-up, etc.)	Date Received

Acknowledgment by bidder:

Name of Bidder: _____

Name and Title of Authorized Representative: _____

Signature: _____

Date: _____

THIS FORM MUST BE RETURNED EVEN IF NO ADDENDA IS PROVIDED

NON-COLLUSION AFFIDAVIT

STATE OF NEW JERSEY

)

) ss:

COUNTY OF

)

I, _____ of, _____
in the County of _____ and the State of _____
of full age, being duly sworn according to law on my oath depose and say that:

I am _____
of the firm of _____
the bidder making the Proposal for the above-named project, and that I executed the said Proposal with full authority so to do; that said bidder has not directly or indirectly, entered into any agreements, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above-named project; and that all statements contained in said Proposal and in this affidavit are true and correct, and made with full knowledge that the _____ relies upon the truth of the statements contained in said Proposal and in the statements contained in this affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by

(Name of Contractor)

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

Notary Public of _____
My Commission Expires _____, 20 _____

(Also type or print name of affiant signature)

STOCKHOLDER DISCLOSURE STATEMENT
in compliance with N.J.S.A. 40A:11-23.2

Name of Business: _____

Principal Place of Business: _____

PARTNERSHIP CORPORATION SOLE PROPRIETORSHIP

I certify that the list below contains the names and home addresses of all stockholders holding 10% or more of the issued and outstanding stock of the undersigned. If one or more of the below is itself a corporation or partnership, I have annexed the names and addresses of anyone owning a 10% or greater interest therein.

I certify that no one stockholder owns 10% or more of the issued and outstanding stock of the undersigned.

PLEASE CHECK APPROPRIATE BOXES ABOVE AND SIGN BELOW.

STOCKHOLDERS:

NAME	STREET ADDRESS	CITY AND STATE	% OF STOCK OR PARTNERSHIP
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

I further certify that no officer or employee of the East Windsor Municipal Utilities Authority has any interest, direct or indirect, in this corporation or partnership or in this contract.

I certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

SWORN AND SUBSCRIBED TO
BEFORE ME THE _____ DAY
OF _____, 20____

Signature of Notary Public

Notary Public of _____

My Commission expires _____

SIGNATURE

PRINT OR TYPE NAME

TITLE OF PERSON SIGNING

1063218

P-11

DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

OPS Number: _____ Proposer: _____

PART 1

Pursuant to Public Law 2012, c. 25 any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that neither the person or entity, nor any of its parents, subsidiaries, or affiliates (any parent, successor, subunit, direct or indirect subsidiary, or any entity under common ownership or control with, any entity), is identified on the Department of Treasury's Chapter 25 list as a person or entity engaging in investment activities in Iran. The Chapter 25 list is found on the State of New Jersey, Department of Treasury, Division of Purchase and Property website at <http://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf>

Bidders must review this list prior to completing the below certification. Failure to complete the certification will render a bidder's proposal non-responsive. If the Authority finds a person or entity to be in violation of law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited to, imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party.

PLEASE CHECK THE APPROPRIATE BOX:

I certify, pursuant to Public Law 2012 c. 25, that neither the bidder listed above nor any of the bidder's Parents, subsidiaries, or affiliates is listed on the N.J. Department of the Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012 c. 25 ("Chapter 25 List"). I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. I will skip Part 2 and sign and complete the Certification below.

OR

I am unable to certify as above because the bidder and/or one or more of its parents, subsidiaries, or affiliates is listed on the Department's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such will result in the proposal being rendered as non-responsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

PART 2

You must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the box below.

Name: _____	Relationship to Proposer: _____
Description of Activities: _____	
Duration of Engagement: _____	Anticipated Cessation Date: _____
Proposer Contact Name: _____	Contact Phone Number: _____

Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity. I acknowledge that the Authority is relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the Authority to notify the Authority in writing of any changes to the answers or information contained herein. I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the Authority and the Authority at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): _____ Signature: _____

TITLE: _____ DATE: _____

AFFIRMATIVE ACTION COMPLIANCE NOTICE

N.J.S.A. 10:5-31 and N.J.A.C. 17:27

**GOODS AND SERVICES CONTRACTS
(INCLUDING PROFESSIONAL SERVICES)**

This form is a summary of the successful bidder's requirement to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27-1 et seq.

The successful bidder shall submit to the public agency, after notification of award but prior to execution of this contract, one of the following three documents as forms of evidence:

(a) A photocopy of a valid letter that the contractor is operating under an existing Federally approved or sanctioned affirmative action program (good for one year from the date of the letter);

OR

(b) A photocopy of a Certificate of Employee Information Report approval, issued in accordance with N.J.A.C. 17:27-4;

OR

(c) A photocopy of an Employee Information Report (Form AA302) provided by the Division and distributed to the public agency to be completed by the contractor in accordance with N.J.A.C. 17:27-4.

The successful vendor may obtain the Affirmative Action Employee Information Report (AA302) from the contracting unit during normal business hours.

The successful vendor(s) must submit the copies of the AA302 Report to the Division of Contract Compliance and Equal Employment Opportunity in Public Contracts (Division). The Public Agency copy is submitted to the public agency, and the vendor copy is retained by the vendor.

The undersigned vendor certifies that he/she is aware of the commitment to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27.1 et seq. and agrees to furnish the required forms of evidence.

The undersigned vendor further understands that his/her bid shall be rejected as non-responsive if said contractor fails to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27-1 et seq.

COMPANY: _____

SIGNATURE: _____

PRINT NAME: _____

TITLE: _____

DATE: _____

CONTRACT

THIS AGREEMENT MADE THIS _____ day of _____, Two thousand _____, between East Windsor Municipal Utilities Authority, East Windsor, New Jersey, party of the first part, and _____ of _____ party of the second part.

WITNESSETH, that the said party of the second part, for and in consideration of the payments hereinafter specified and agreed to be made by the party of the first part hereby covenants and agrees to furnish, deliver and/or install to wit:

FURNISHING AND DELIVERY
OF WATER METERS

All to be furnished, delivered and/or installed at East Windsor Municipal Utilities Authority as set forth in the Instructions to Bidders and in accordance with the specifications, which said Instructions to Bidders, Proposal and specifications are hereby made a part of this agreement as fully and with the same effect as if the same had been set forth in the body of this agreement and will furnish said material required at any time during the term of the contract, which shall commence on the third day after this contract is signed and remain in force for the contract period.

The party of the second part agrees to make payment of all proper charges for labor and materials required in the aforementioned work and indemnify and save harmless the party of the first part, its officers, agents and servants and each and every one of them, against and from all suits and costs of every name and description and from all damages to which the said party of the first part, its officers, agents and servants and each and every one of them may be put, by reason of injury to person or property resulting from carelessness in the performance of said work, or through negligence of the said party of the second part or through any improper or defective machinery, implements or appliances used by the said party of the second part in the aforementioned work, or through any act or omission on the part of the second part, or his agent or servant.

The parties to this contract do hereby agree to comply with the provisions of New Jersey Public Law 1975, Chapter 127 (N.J.A.C. 17:27), dealing with discrimination in employment on public contracts and the rules and regulations promulgated pursuant thereunto are hereby made a part of this contract and are binding on them.

Payments to be made within thirty (30) days after delivery of materials(s) and upon presentation by the contracting unit of the proper certificate.

The contract is to be binding upon the party of the first part, its successors or assigns and upon the party of the second part, its successors or assigns.

IN WITNESS WHEREOF, the said party of the first part has caused this instrument to be signed by its Chairman, attested by its Clerk and its Corporate Seal to be hereunto affixed, pursuant to a resolution of the said party of the first part passed for that purpose and the said party of the second part has set (its) (their) hand (s) and seal (s), the day and year first written above.

EAST WINDSOR MUNICIPAL UTILITIES AUTHORITY

By: _____

(SEAL)

ATTEST: _____
Richard Brand, EAST WINDSOR MUA

SUPPLIER

By: _____

Address

City and State

**Signed, sealed and delivered
in the presence of:**

Title

Dated: _____

EXHIBIT A

MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE N.J.S.A. 10:5-31 et seq., N.J.A.C. 17:27

GOODS, PROFESSIONAL SERVICES AND GENERAL SERVICE CONTRACTS

During the performance of this contract, the contractor agrees as follows:

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation or sex. Except with respect to affectional or sexual orientation, the contractor will take affirmative action to ensure that such applicants are recruited and employed, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation or sex. Such action shall include, but not limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause.

The contractor or subcontractor, where applicable, will in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation or sex.

The contractor or subcontractor, where applicable, will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer advising the labor union or workers' representative of the contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer pursuant to N.J.S.A. 10:5-31 et seq. as amended and supplemented from time to time and the Americans with Disabilities Act.

The contractor or subcontractor agrees to make good faith efforts to employ minority and women workers consistent with the applicable county employment goals established in accordance with N.J.A.C. 17:27-5.2, or a binding determination of the applicable county employment goals determined by the Division, pursuant to N.J.A.C. 17:27-5.2.

The contractor or subcontractor agrees to inform in writing its appropriate recruitment agencies including, but not limited to, employment agencies, placement bureaus, colleges, universities, labor unions, that it does not discriminate on the basis of age, creed, color, national origin, ancestry, marital status, affectional or sexual orientation or sex, and that it will discontinue the use of any recruitment agency which engages in direct or indirect discriminatory practices.

The contractor or subcontractor agrees to revise any of its testing procedures, if necessary, to assure that all personal testing conforms with the principles of job-related testing, as established by the statutes and court decisions of the State of New Jersey and as established by applicable Federal law and applicable Federal court decisions.

In conforming with the applicable employment goals, the contractor or subcontractor agrees to review all procedures relating to transfer, upgrading, downgrading and layoff to ensure that all such actions are taken without regard to age, creed, color, national origin, ancestry, marital status, affectional or sexual orientation or sex, consistent with the statutes and court decisions of the State of New Jersey, and applicable Federal law and applicable Federal court decisions.

The contractor and its subcontractor shall furnish such reports or other documents to the Division of Contract Compliance and EEO as may be requested by the Division from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Division of Contract Compliance and EEO for conducting a compliance investigation pursuant to **Subchapter 10 of the Administrative Code at N.J.A.C. 17:27.**

East Windsor MUA BID Form - Water Meters

ITEM	QTY	SIZE	DESCRIPTION	UNIT PRICE	EXTENSION	MFR.	MODEL
1.01	200	5/8" x 5/8"	No Moving Parts, Electromagnetic Meter				
1.02	200	5/8" x 3/4"	No Moving Parts, Electromagnetic Meter				
1.03	400	3/4" x 3/4"	No Moving Parts, Electromagnetic Meter				
1.04	600	1" x 1"	No Moving Parts, Electromagnetic Meter				
2.01	40	1.5" x 1.5"	Compound Meter, single register, floating ball				
2.02	60	2" x 2"	Compound Meter, single register, floating ball				
2.03	10	3" x 3"	Compound Meter, single register, floating ball				
2.04	10	4" x 4"	Compound Meter, single register, floating ball				
2.05	4	6" x 6"	Compound Meter, single register, floating ball				
2.06	2	8" x 8"	Compound Meter, single register, floating ball				
2.07	2	10" x 10"	Compound Meter, single register, floating ball				
3.01	25	1.5" x 1.5"	Turbo Meter				
3.02	25	2" x 2"	Turbo Meter				
3.03	5	3" x 3"	Turbo Meter				
3.04	5	4" x 4"	Turbo Meter				
3.05	4	6" x 6"	Turbo Meter				
3.06	2	8" x 8"	Turbo Meter				
3.07	2	10" x 10"	Turbo Meter				
4.01	10	1.5 x 1.5	Fire Meter				
4.02	16	2" x 2"	Fire Meter				

East Windsor MUA BID Form - Water Meters

ITEM	QTY	SIZE	DESCRIPTION	UNIT PRICE	EXTENSION	MFR.	MODEL
4.03	12	3" x 3"	Fire Meter				
4.04	10	4" x 4"	Fire Meter, floating ball				
4.05	10	4" x 4"	Fire Meter, single register, Turbo				
4.06	4	6" x 6"	Fire Meter, floating ball				
4.07	4	6" x 6"	Fire Meter, single register, Turbo				
4.08	2	8" x 8"	Fire Meter, floating ball				
4.09	2	8" x 8"	Fire Meter, single register, Turbo				
4.10	2	10" x 10"	Fire Meter, floating ball				
4.11	2	10" x 10"	Fire Meter, single register, Turbo				
5.01	200	5/8" x 5/8"	No Moving Parts, Ultrasonic Meter, Composite Body				
5.02	200	5/8" x 5/8"	No Moving Parts, Ultrasonic Meter, Metallic Body				
5.03	200	5/8" x 3/4"	No Moving Parts, Ultrasonic Meter, Composite Body				
5.04	200	5/8" x 3/4"	No Moving Parts, Ultrasonic Meter, Metallic Body				
5.05	400	3/4" x 3/4"	No Moving Parts, Ultrasonic Meter, Composite Body				
5.06	400	3/4" x 3/4"	No Moving Parts, Ultrasonic Meter, Metallic Body				
5.07	600	1" x 1"	No Moving Parts, Ultrasonic Meter, Composite Body				
5.08	600	1" x 1"	No Moving Parts, Ultrasonic Meter, Metallic Body				
5.09	40	1.5" x 1.5"	No Moving Parts, Ultrasonic Meter, Composite Body				
5.10	40	1.5" x 1.5"	No Moving Parts, Ultrasonic Meter, Stainless Body				
5.11	40	1.5" x 1.5"	No Moving Parts, Ultrasonic Meter, Bronze Body				

East Windsor MUA BID Form - Water Meters

ITEM	QTY	SIZE	DESCRIPTION	UNIT PRICE	EXTENSION	MFR.	MODEL
5.12	40	1.5" x 1.5"	No Moving Parts, Ultrasonic Meter, Ductile Iron Body				
5.13	60	2" x 2"	No Moving Parts, Ultrasonic Meter, Composite Body				
5.14	60	2" x 2"	No Moving Parts, Ultrasonic Meter, Stainless Body				
5.15	60	2" x 2"	No Moving Parts, Ultrasonic Meter, Bronze Body				
5.16	60	2" x 2"	No Moving Parts, Ultrasonic Meter, Ductile Iron Body				
5.17	10	3" x 3"	No Moving Parts, Ultrasonic Meter, Stainless Body				
5.18	10	3" x 3"	No Moving Parts, Ultrasonic Meter, Ductile Iron Body				
5.19	10	4" x 4"	No Moving Parts, Ultrasonic Meter, Stainless Body				
5.20	10	4" x 4"	No Moving Parts, Ultrasonic Meter, Ductile Iron Body				
5.21	4	6" x 6"	No Moving Parts, Ultrasonic Meter, Stainless Body				
5.22	4	6" x 6"	No Moving Parts, Ultrasonic Meter, Ductile Iron Body				
5.23	2	8" x 8"	No Moving Parts, Ultrasonic Meter, Stainless Body				
5.24	2	8" x 8"	No Moving Parts, Ultrasonic Meter, Ductile Iron Body				
5.25	2	10" x 10"	No Moving Parts, Ultrasonic Meter, Ductile Iron Body				
6.01	4	2.5" x 2.5"	Hydrant Meter, floating ball w/ connections and BFP				
7.01	100	5/8" x 5/8"	meter cplg-FORD C38-11-2-375-NL or equal - each				
7.02	100	5/8" x 3/4"	meter cplg-FORD C38-23-2-5-NL or equal - each				
7.03	100	3/4" x 3/4"	meter cplg-FORD C38-23-2-5-NL or equal - each				
7.04	100	1" x 1"	meter cplg-FORD C38-44-2-625-NL or equal - each				
7.05	40	1.5" x 1.5"	Bronze companion flanges (2), SS bolts/Nuts				

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ITEM	QTY	SIZE	DESCRIPTION	UNIT PRICE	EXTENSION	MFR.	MODEL
7.06	60	2" x 2"	Bronze companion flanges (2), SS bolts/Nuts				
7.07	10	3" x 3"	Bronze companion flanges (2), SS bolts/Nuts				
7.08	10	4" x 4"	Bronze companion flanges (2), SS bolts/Nuts				
7.09	4	6" x 6"	Bronze companion flanges (2), SS bolts/Nuts				
7.10	2	8" x 8"	Bronze companion flanges (2), SS bolts/Nuts				
7.11	2	10" x 10"	Bronze companion flanges (2), SS bolts/Nuts				
7.12	500	5/8" x 5/8"	gaskets each				
7.13	500	5/8" x 3/4"	gaskets each				
7.14	1000	3/4" x 3/4"	gaskets each				
7.15	1500	1" x 1"	gaskets each				
7.16	100	1.5" x 1.5"	gaskets each				
7.17	150	2" x 2"	gaskets each				
7.18	30	3" x 3"	gaskets each				
7.19	30	4" x 4"	gaskets each				
7.20	10	6" x 6"	gaskets each				
7.21	10	8" x 8"	gaskets each				
7.22	10	10" x 10"	gaskets each				
8.01	1000	each	touchpad -wall mounted			SENSUS	Sensus Touchpad
8.02	2000	each	MXU -touchpad mounted			SENSUS	510 TC
8.03	50	each	MXU for touch coupler, pit lid mounted			SENSUS	520 TC

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ITEM	QTY	SIZE	DESCRIPTION	UNIT PRICE	EXTENSION	MFR.	MODEL
8.04	50	each	MXU dual port Hard Wire touchpad mount			SENSUS	510 TC dual port
8.05	50	each	MXU dual port pit lid mounted			SENSUS	520 TC dual port
8.06	10	1000' reel	Cable - 18 gage - 3 wire				
8.07	20	box of 100	gel caps -3M Scotchlok or equal				
8.08	2	each	hand held touchpad reader - pocket style				
8.09	2	each	Smart Gun w/ telescopic Wand			SENSUS	AG65908 & PitProbe Ext
8.10	1	each	Vehicle transceiver unit w/ antenna and cabling			SENSUS	VXU3600