NOTICE OF BID

Radio Read Water Meters
Watertown Water and Sewer Authority

Sealed bids are invited and will be received by the Purchasing Agent of the Town of Watertown at the office of the Purchasing Agent, Town Hall Annex, 424 Main Street, Watertown, Connecticut, until 11:00 a.m., Thursday, January 30, 2014 at which time and place they will be publicly opened and read aloud for furnishing water meters to the Town of Watertown.

The Information for Bidders, Form of Bid, Specifications, and other contract documents may be obtained or examined at the office of the Purchasing Agent, Town Hall Annex, 424 Main Street, Watertown, Connecticut 06795 or by accessing the Town of Watertown’s website at http://www.watertownct.org. Proposals must be submitted on the forms provided and in a sealed envelope plainly marked “Bid – Water Meters”.

To receive consideration bids must be in the hands of the Purchasing Agent or his authorized representative no later than the day and hour mentioned above.

The Purchasing Agent reserves the right to accept or reject any or all bids; to waive any informality; or to accept any bid deemed in the best interests of the Town of Watertown.

The Town of Watertown reserves the right to take into account the residency of bidders within the Town of Watertown and/or the location of the bidder's business within the Town of Watertown in awarding this bid.

All bids will be considered valid for a period of sixty (60) days.

Jason Warner
Purchasing Agent
Town of Watertown
INFORMATION FOR BIDDERS

TOWN OF WATERTOWN
WATERTOWN, CONNECTICUT 06795

Radio Read Water Meters
Watertown Water and Sewer Authority

BID OPENING: 11:00 a.m., Thursday, January 30, 2014

PROPOSALS RECEIVED
All bids must be in a sealed envelope and received prior to 11:00 a.m., Thursday, January 30, 2014 at the office of the Purchasing Agent, 424 Main Street, Watertown, Connecticut 06795.

PREPARATION OF PROPOSALS
Proposals must be made upon forms contained herein. The blank spaces in the Proposal must be filled in correctly where indicated. The Bidder must state the prices for which he proposes to do each item of the work contemplated. In case of discrepancy where both words and the numerals are requested, the words shall govern. Ditto marks are not considered writing or printing and shall not be used. The Bidder shall sign his Proposal correctly. If the Proposal is made by an individual, his name, post office address and telephone number must be shown. If made by a firm, partnership, or corporation, the Proposal must be signed by an official of the firm, partnership, or corporation authorized to sign contracts, and must show the post office address and telephone number of the firm, partnership, or corporation. Failure to do so may disqualify the bid.

Each bid must be submitted in a sealed envelope bearing on the outside the name of the Bidder, post office address, and name of the project for which the bid is submitted. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed to: The Purchasing Agent, Town Hall Annex, 424 Main Street, Watertown, CT 06795.

All information shall be entered in ink or by typewriter. Mistakes may be crossed out and corrections inserted before submission of your bid. The person signing the bid shall initial corrections in ink.

Corrections and/or modifications received after the closing time specified will not be accepted.

SUBMISSION OF PROPOSALS
All proposals and literature shall be submitted IN DUPLICATE on the proposal form, which is a part of these specifications.

Descriptive literature containing complete specifications must accompany each bid. If a bidder wishes to furnish additional information, more sheets may be added.
Adobe Acrobat® Reader is required to view electronic documents on-line. If you do not have Adobe Acrobat® Reader, you may download it for free from Adobe at http://www.adobe.com/products/acrobat/readstep.html.

Response summaries will be available online at http://www.watertownct.org on the day of the bid opening.

Responses delivered via fax are received subject to the following qualifications and limitations:

- The Town is not responsible for the confidentiality of the information transmitted.
- The Town cannot guarantee that its fax equipment will be operational and able to receive transmittals by a particular time and date. It is the Bidder's responsibility to ensure that quotations are received in their entirety and on time at the required location. It is recommended that vendors be advised to call immediately after transmitting a document electronically to confirm complete and accurate receipt by the Town. The Town assumes no liability in the event that a bidder’s electronic transmission is not received by the Town in a timely fashion, or is not received either in its entirety or error-free.
- Bids transmitted electronically which have a bond requirement are subject to the same submittal requirements as those responses delivered via traditional means, such as mail or hand delivery, or as otherwise stipulated by appropriate authority.

INCURRING COSTS
The Town of Watertown is not liable for any cost incurred for the preparation of proposals or submission of samples by the firms submitting proposals for the work requested in this bid document or request for proposals.

FAMILIARITY WITH THE WORK
Each bidder is considered to have examined the work to fully acquaint himself with the exact existing conditions relating to the work and has fully informed himself as to the work involved and the difficulties and restrictions attending the performance of this bid. Failure to do so will not relieve a bidder of his obligation to furnish and deliver the items specified herein for the consideration set forth in this bid. The submission of a bid will be considered as conclusive evidence that the bidder has made such examination.

CONSIDERATION OF PRIOR SERVICE
Previous performance, quality of service and merchandise will be considered.

ADDENDA AND INTERPRETATIONS & ALTERNATE PROPOSALS
Addenda information will be available online at http://www.watertownct.org. Adobe Acrobat® Reader may be required to view this document. It is strongly suggest that Bidders check for any addenda a minimum of forty eight hours in advance of the bid deadline.

At the time of the opening of bids each Bidder will be presumed to have inspected the work and to have read and to be thoroughly familiar with all of the Contract Documents (including all addenda).
The failure or omission of any Bidder to receive or examine any form, instruction or document shall in no way relieve any bidder from any obligation in respect to his bid.

If any person contemplating submitting a proposal is in doubt as to the true meaning of any part of these specifications, he may submit a written request for an interpretation to the Purchasing Agent. No interpretations as to the meaning of the plans, specifications or other Contract Documents will be made to any Bidder orally.

Every request for such interpretation should be in writing addressed (duplicate copy) to the Town of Watertown, Purchasing Agent, 424 Main Street, Watertown, Connecticut 06795, and to be given consideration, must be received at least five (5) days prior to the date fixed for the opening of Bids. Any and all such interpretations and any supplementary instructions will be in the form of written Addenda to the Specifications which, if issued, will be mailed by Registered Mail with Return Receipt Requested to all prospective Bidders at the respective addresses furnished for such purposes, not later than three (3) days prior to the date fixed for the opening of bids. Failure of any Bidder to receive any such Addendum or interpretations shall not relieve any Bidder from any obligations under his bid as submitted. All Addenda so issued shall become part of the Contract Documents. Oral explanations will not be binding on the Town.

The specifications listed are to be interpreted as meaning the minimum acceptable by the Town of Watertown. Bidders are required to submit quotations on the basis of these specifications. Alternative bids providing a broader scope and/or services than requested in these specifications may receive consideration providing such equipment and/or service is clearly explained. Any exceptions to the specifications requested herein must be clearly noted in writing and are to be included as a part of the bid proposal. If none are included it will be assumed that there are none.

Definition of the word "complete" means that each unit of the equipment proposed shall include all appurtenances, fasteners, parts, accessories, and services ordinarily catalogued.

An item equal to that named or described in the specifications may be furnished by the Bidder, except where expressly noted as “no substitutions.” The naming of any commercial name, trademark, or other identification shall not be construed to exclude any item of any manufacturer not mentioned by name, nor limit competition, but shall establish a standard of equality only. An item shall be considered equal to the item so named or described if:

- It is at least equal in quality, durability, appearance, strength and design.
- It will perform at least equally the function imposed by the design for the work being contracted for or the material being purchased.
- It conforms substantially, even with deviations, to the detailed requirements for the item in the specifications.

The Bidder shall hold the Town of Watertown, its officers, agents, servants, and employees, harmless from liability of any nature or kind because of use of any copyrighted or uncopyrighted compositions, secret process, patented or unpatented inventions, articles or appliances furnished or
used under this bid, and agrees to defend, at his own expense, any and all actions brought against the Town of Watertown or himself because of the unauthorized use of such articles.

**QUOTATION LIMITATION**

Bidders shall offer only **ONE ITEM AND PRICE** for each line item bid. If an “or equal” item is to be bid, the bidder is to select the brand and model that meets or exceeds the specified item, and submit his bid for that item.

**ESTIMATE OF WORK**

For bidding purposes, the work has been subdivided into unit price items. The quantities shown are to be considered as approximate only. The Purchasing Agent does not expressly or by implication agree that the actual quantity will correspond therewith, but reserves the right to increase or decrease the amount of any item or portion of the work as deemed necessary.

**SAMPLES**

Samples of articles, when required shall be furnished free of cost of any sort to the Town of Watertown. Samples received may be retained by the Town for future comparison. Samples which are not destroyed by testing, or which are not retained for future comparison will be returned upon request at the bidder's expense.

**WITHDRAWAL OF BID**

Bidders may withdraw their proposals at any time prior to the bid date. No agent/broker shall withdraw or cancel their proposal for a period of sixty (60) days after the bid closing date of **11:00 a.m., Thursday, January 30, 2014**. The successful agent/broker shall not withdraw, cancel or modify their proposal.

**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.

**SUBCONTRACTORS**

- Each bidder contemplating the use of any subcontractor shall submit a list of subcontractors as listed on the Bid Form.
- The apparent low bidder shall file with the Town of Watertown, within five (5) days after the date of bid opening, a complete list of the names and addresses of competent, responsible and qualified subcontractors who are actually to perform major portions of the work. This in no way restricts or limits the requirement that all subcontractors must be approved by the Town.
- Subcontractors listed on the Bid Form or those previously approved may not be changed without the approval of the Town of Watertown.

Local subcontractors, material suppliers, and labor in the Town of Watertown should be considered and sought insofar, as is practical in the performance of this project.
QUALIFICATION OF BIDDER
In determining the qualifications of a bidder, the Town may consider his record in the performance of any contracts for similar work into which he may have previously entered; and the Town expressly reserves the right to reject the bid of such bidder if such record discloses that such bidder, in the opinion of the Town, has not properly performed such contracts or has habitually, and without just cause, neglected the payment of bills or has otherwise disregarded his obligations to subcontractors, suppliers, state or local codes, men or employees of subcontractors.

The Town may make such investigation as he deems necessary to determine the ability of the bidder to perform the work and the bidder shall furnish to the Town all such information and data for this purpose as the Town may request. The Town reserves the right to reject any bid if the evidence submitted by or the investigation of such bidder fails to satisfy the Town that such bidder is properly qualified, or that such bidder misrepresented material facts in the bid documents.

DISQUALIFICATION OF BIDDERS
More than one proposal from an individual, firm, partnership, corporation, or an association under the same or different names will not be considered. Reasonable grounds for believing that any Bidder is interested in more than one proposal for the work contemplated will cause the rejection of all proposals in which such Bidder is interested. Any or all proposals in which such Bidder is interested will be rejected if there is reason for believing that collusion exists among the Bidders and all participants in such collusion will not be considered in future proposals for the same work. Proposals in which the prices are obviously unbalanced may be rejected. No Contract will be awarded except to competent Bidders capable of performing the class of work contemplated.

SERVICE CENTER REQUIREMENTS
Bidders must state the location of the nearest available factory authorized service center for all components of the equipment specified.

DELIVERY
Inasmuch as this work concerns a needed public improvement, the provisions of this bid relating to the time of delivery, performance and completion of the work are of the essence of this bid. Accordingly, the successful bidder shall commenced work upon receipt of the signed Purchase Order unless the Town shall authorize or direct a further delay, and shall proceed with the work diligently so as to permit delivery no later than 60 calendar days after receipt of the Town’s Purchase Order.

Time of delivery shall be stated as the number of calendar days following receipt of the Purchase Order by the Bidder to receipt of the goods or services by the Town of Watertown.

Prices quoted must include delivery to the Town of Watertown as specified on the Purchase Order. No charges will be allowed for parking, crating, freight, express or cartage unless specifically stated and included in this bid.

Time of delivery may be considered in the award.
PAYMENT
The Town, after inspection and acceptance of workmanship, and in consideration of the faithful performance by the Bidder of all and singular his covenants, promises, and agreements contained herein, agrees to pay the Bidder for the full completion by him of the work embraced in this Contract, within (30) Thirty Days of the receipt of the final invoice. When subcontractors or suppliers are utilized, the successful Bidder for this project shall be required to submit a Mechanics Lien Waiver, acceptable to the Town, with each progress payment and/or at time of final payment prior to any payment being made.

Time, in connection with any discount offered, will be computed from the date of delivery to the Town or from the date a correct invoice is received by the Town's Finance Department, if the latter date is later than the date of delivery.

Prices will be considered as NET, if no cash or payment discount is shown.

The successful bidder shall submit invoices to the following address:
Town of Watertown
Water & Sewer Authority
747 French Street
Oakville, CT 06779

IT IS UNDERSTOOD AND AGREED THAT SHOULD A BID BE ACCEPTED, IT WILL AUTOMATICALLY BECOME THE CONTRACT OR AN ADDENDUM TO ANY CONTRACT AGREED UPON.

Notification of the bid award will be made by issuance of a purchase order. Bidders are to list their bids on the appropriate attached sheets. Bidders may attach a letter of explanation. A clear notification should be made on the standard bid sheets at the appropriate point of explanation that there is a letter of explanation attached. All bids must be NET prices.

The successful bidder shall submit an itemized invoice to the Town of Watertown for the work as described herein.

The bidder shall be required to submit a Mechanics Lien Waiver, acceptable to the Town of Watertown, with each progress payment and at time of final payment prior to any payment being made.

At the time of award the successful bidder shall be required to supply the Town of Watertown a Certificate of Good Standing, certifying that the corporation is in fact a valid corporation and presently licensed to conduct business in the State of Connecticut.

SALES TAX
Certain materials and supplies incorporated in the work of this project are exempt from Connecticut Sales Tax. The Bidder shall familiarize himself with current regulations of the State Tax
Department. The tax on materials or supplies exempted by such regulations shall not be included as part of the bid. The Town will furnish the successful Bidder sales tax exemption authorization.

**CARE AND PROTECTION OF PROPERTY**

The Bidder shall take particular care to avoid damages to all private and public property and to private or public improvements within the Town's right of way. He shall make good any damages to the satisfaction of the Town. There shall be no additional compensation for the repair or restoration of private or public property improvements.

**COMPLIANCE WITH FEDERAL, STATE AND LOCAL CODES**

The Bidder shall be responsible for full compliance with any Federal, State and/or Local codes, laws, regulations and standards, as applicable.

**AWARD**

The Town of Watertown reserves the right to accept or reject any bid to best serve its interests, or to hold the bids for sixty (60) days before decision.

The Town reserves the right to reject any and all bids (or any part thereof), to waive defects in proposals, or to accept any proposal deemed to be in its best interest.

*Exceptions will be considered to the specification provided, providing they are listed and fully explained on a separate page entitled "EXCEPTIONS TO SPECIFICATIONS"

Each exception will be considered as to its degree of impact and total effect on the bid. The purchaser shall determine which (if any taken) exceptions are acceptable, and this determination shall be final.

The Town of Watertown reserves the right:

- To award bids received on the basis of individual items, or groups of items, or on the entire list of items.
- To reject any or all bids, or any part thereof.
- To waive any informality in the bids.
- The Town of Watertown reserves the right to take into account the residency of bidders within the Town of Watertown and/or the location of the bidders business within the Town of Watertown in awarding this bid.
- To accept the bid that is in the best interest of the Town of Watertown. The Purchasing Agent's decision shall be final.

**INSURANCE**

A. General:

The Bidder shall be responsible for maintaining insurance coverage in force for the life of the contract of the kinds and adequate amounts to secure all of the Bidder’s obligations under the contract with an insurance company with an AM Best Rating of A - VII or better licensed to write such insurance in Connecticut and acceptable to the Town of Watertown.
The insurer shall provide the Town of Watertown with Certificates of Insurance signed by an authorized representative of the insurance company(ies) prior to the performance of this contract describing the coverage and providing that the insurer shall give the Town of Watertown written notice at least thirty (30) days in advance of any termination, expiration, or any and all change in coverage.

Such insurance or renewals or replacements thereof shall remain in force during the Bidder’s responsibility under this agreement.

The Bidder at his own cost and expense shall procure and maintain all insurance required and shall name the Town of Watertown, its employees, departments, boards, committees and commissions, as an additional insured on all contracts except Worker’s Compensation and Professional Errors & Omissions coverage.

In order to facilitate this requirement for insurance, it is recommended that the bidder forward a copy of this exhibit to the bidder’s insurance representative(s).

B. **Specific Requirements:**

1. **Workers’ Compensation Insurance**
   The Bidder shall provide Workers’ Compensation Insurance required by law and the Employer’s Liability Insurance for at least the amounts of liability for Bodily Injury by accident of $100,000 each accident; Bodily Injury by Disease each employee of $100,000; Bodily Injury by Disease, policy limit of $500,000.

2. **Commercial General Liability Insurance**
   The Bidder shall carry Commercial General Liability policy (Insurance Services Office Incorporated Form CG-0001 or equivalent). A per occurrence limit of $1,000,000 is required. The Aggregate Limit will be not less than $1,000,000.

3. **Business Automobile Liability Insurance**
   The Bidder shall carry Business Automobile Liability Insurance. (Insurance Services Office Incorporated Form CA-00001 or equivalent). A per occurrence limit of $1,000,000 is required. “Any Auto” (symbol 1 or equivalent) is required.

C. **Hold Harmless & Subcontractor’s Requirements:**

The Bidder shall require the same insurance that it is required to carry by the Town of Watertown to be carried by any subcontractors and independent contractors hired by the Bidder and to obtain Certificates of Insurance before subcontractors and independent contractors are permitted to begin work.

The Bidder shall require that the Town of Watertown, its employees, departments, boards, committees and commissions, be named as Additional Insured on all subcontractor’s and independent contractor’s policies before they are permitted to begin work.
The Bidder and all subcontractors and independent contractors and their insurers shall waive all rights of subrogation against the Town of Watertown, and its officers, agents, servants and employees for losses arising from the work performed by each on this contract.

The Bidder assumes and agrees to hold harmless, indemnify, protect and defend the Town of Watertown against any and all liability for injuries and damages to Bidder and to Bidder’s employees, agents, subcontractors and guests, third parties or otherwise incident to or resulting from any and all operations performed by a contractor under any terms of this contract.

D. Other Data:
NOTE 1: If Bidder is only a vendor shipping goods via Common Carrier only, General Liability is required.

NOTE 2: If Bidder is a Professional, Errors & Omission coverage will be required.

NOTE 3: The Town reserves the right to amend amounts of coverage required and the types of coverage provided based on work or service to be performed.

GUARANTEE
The bidder shall unconditionally guarantee for a period of one (1) year from the date of acceptance, all materials, supplies, equipment, and services; including but not limited to its workmanship, delivery and installation. If within the guarantee period there are any defects or signs of deterioration the bidder shall repair, adjust or replace the item(s) to the complete satisfaction of the Town. These repairs, adjustments, or replacements are at the sole expense of the bidder and shall be made at such times that are agreeable to the Purchasing Agent so that it is least detrimental to instructional programs.

PERMITS
When required all licenses and permits for complying with any applicable Federal, State, and Municipal laws, codes, regulations in connection with the prosecution of the work shall be obtained by the Bidder, at no additional cost to the Town. The cost of local building permits will be assessed at sixteen cents per one thousand dollars of construction value as declared on the building permit application pursuant to State of Connecticut Statute Sec. 29-263 by the Town of Watertown. The successful contractor will be responsible for payment to the Town of Watertown Building Inspection Department.

NONDISCRIMINATION IN EMPLOYMENT
The successful bidder shall agree and warrant that, in the performance of this contract, he will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, sex, religion, or national origin in any manner prohibited by State, Federal, County, or Municipal law. A certification of Nonsegregated Facilities and a Certification Regarding Equal Employment Opportunity shall be considered a part of this contract.
MECHANICS LIEN WAIVERS
The successful Bidder shall be required to submit a Mechanics Lien Waiver, acceptable to the Town of Watertown, with each progress payment, and/or at time of final payment, prior to any payment made.

For further technical or administrative information contact Jason Warner, Purchasing Agent at (860) 945-5260 or via email at warner@watertownct.org.
TOWN OF WATERTOWN
WATERTOWN, CONNECTICUT

TECHNICAL SPECIFICATIONS

Radio Read Water Meters
Watertown Water and Sewer Authority

Overview
The Town of Watertown, Water & Sewer Authority is seeking proposals from qualified vendors for radio read water meters of various sizes and configuration (inside and pit versions) as manufactured by NEPTUNE Technologies Group or equal. Meters from ½” – 2” shall be NEPTUNE T-10 with integrated E-Coder R-900i and meters 3” – 4” shall be NEPTUNE TRU-FLO Compound with integrated E-Coder R-900i or equal.

The meters must be compatible with the Town of Watertown’s remote meter reading system which utilizes a NEPTUNE CE5320X handheld data collector and N_Sight Mobile software.

INTEGRATED ENCODER AND METER INTERFACE UNIT (IMIU)
These specifications cover a fully integrated self-contained solid state absolute register and a radio frequency meter interface unit metering system designed to obtain simultaneous water meter registration that is guaranteed to exactly match the registration on the register odometer. The metering information shall be obtained through a full integrated radio frequency device using a compatible data capture system. The above system shall be configured as follows:

- Solid state absolute encoder meter register—Direct mounting, electro-magnetically encoded measuring element into an electronic solid-state odometer. Encoder shall provide value-added flow data including:
  - Leak detection
  - Backflow detection
  - No flow detection
  Digital counters requiring batteries and volatile memory for consumption data re not allowed. Encoder register shall periodically display flow rate information at register.

- Fully integrated radio frequency meter interface unit providing a communication link for the transmission of information from the register.

- Data acquisition equipment with which the above components can be interrogated. Such equipment shall be configured in two types:
  - A device that captures information and displays it visually to confirm correct system installation.
  - A device that is pre-programmed with route information and is capable of storing collected data in solid-state memory. This device shall also electronically transfer the data for use by the utility billing company.
INTEGRATED METER INTERFACE UNIT (IMIU) DESCRIPTION–GENERAL
The unit shall interrogate the solid state odometer of the absolute encoder register and transmit the
meter reading and other information to a data collection reading device. The unit shall be capable of
being read by a walk-by handheld computer equipped with a RF interface unit, a mobile system with
a unit mounted in a vehicle, and/or a targeted fixed network data collection system. This shall allow
an easy migration between the three systems without any change to devices or need to revisit the site.
The absolute solid state encoder register with IMIU shall be attached to new meters
, or they shall retrofit existing meters in the field via a bayonet mount on top of the meter maincase. The absolute
solid-state encoder register with IMIU shall be manufactured in both inside and pit models. The
inside IMIU will be mounted inside without degradation of performance and the pit MIU shall have
the ability to be mounted in a pit or an underground vault. The inside IMIU shall have a water-
resistant enclosure and a permanent antenna, while the pit IMIU enclosure shall be a roll-sealed
copper can and glass lens design to ensure a water-tight seal, and offer a short whip antenna or an
optional through-the-pit-lid antenna to address various applications. The IMIU battery shall be field
replaceable on both the inside set and pit set designs.

ENCODER DESCRIPTION–GENERAL
The self-contained solid-state absolute encoder register metering system shall be designed to obtain
remote simultaneous water meter registration that is guaranteed to exactly match the registration on
the register odometer. The solid-state absolute encoder meter register shall be a direct mounting,
electromagnetically encoded measuring element into an electronic solid-state odometer. The encoder
shall provide value-added flow data including leak, tamper and reverse flow detection
when communicating with a compatible RF AMR MIU. Batteries and digital counters using volatile
memory are not allowed. Encoder register shall display flow rate information at register.

IMIU PHYSICAL/MECHANICAL REQUIREMENTS
Inside Unit

● The integrated meter interface unit (IMIU) housing shall be constructed of a poly-carbonate
plastic compound and be capable of mounting indoors. The device must be water-resistant
and capable of exposure to spray and splash. The device must be able to withstand a 200-
hour salt fog test as specified in NEMA 4 standard.

● The device shall provide a location for a tamper deterrent seal. Tampering with the device
functions or connections shall not be possible without causing visible damage to the device
exterior or to the seal.

● The device shall be capable of operating at temperatures of -22F to 149F (-30C to +65C)
with a humidity factor of 0 to 95%.

● The circuit board will be coated for moisture protection.
• The battery will be protected by encapsulation in a hard potting and will be easily field replaceable.

• The unit must retrofit to existing installations.

• The IMIU device must be protected against static discharge without loss of data per IEC 801-2, issue 2.

**Pit Unit**

• For pit or vault applications, the IMIU shall be designed with a whip-type antenna for below-the-pit-lid applications.

• The device shall be designed for an optional remote antenna capable of being installed through the industry standard 1-3/4” hole in the pit lid for maximum transmission range. The meter interface unit will be capable of mounting to various thicknesses of pit lids from 1/2” to 2-1/2” and various distances from meters.

• The through-the-pit-lid antenna option shall be rigid in design to withstand traffic and shall have a dual seal connection to the IMIU housing.

• The IMIU device must be protected against static discharge without loss of data per IEC 801-2, issue 2.

**ENCODER REGISTER UNIT**

**Registration**

• The solid-state absolute encoder register shall provide at least a 9-digit visual registration at the meter.

• The unit shall provide an 8-digit meter reading for transmission through the radio MIU.

• The register shall employ a visual LCD leak indicator as well as provide remote leak indication through an ASCII format to the data collection device.

• The register shall provide reverse flow detection, days of no consumption and number of days of leak or reverse flow condition.

• Internal batteries shall not be allowed. Battery must be external to register and field replaceable.
• The manufacturer will guarantee that the reading obtained electronically matches the LCD odometer reading on the register and that the manufacturer will pay the difference at the current rate whenever a discrepancy appears.

• The register shall display flow rate information.

**Mechanical Construction**

• The basement set enclosure shall feature a hermetic sonic weld seal. The pit set enclosure shall be a roll-sealed glass and copper can design to protect the internal components against moisture intrusion.

• The register and IMIU shall be attached to the meter case by a bayonet attachment. Fastening screws or nuts shall not be required. A tamper-proof seal pin shall be used to secure the register to the maincase.

• The register shall be removable from the meter without disassembling the meter body and shall permit field installation and/or removal without taking the meter out of service.

• Provision shall be made in the register for the use of seal wires to further secure the register.

**Electrical Construction**

• The solid-state absolute encoder register shall incorporate an Application Specific Integrated Circuit (ASIC) and firmware designed to verify accurate measurement, information transmission and data integrity.

**Meter Reading Information**

• The solid-state absolute encoder register shall provide to the reading equipment an 8-digit meter reading.

• The solid-state absolute encoder register shall provide additional value-added information remotely, such as detailed leak detection data, days of leak state, days of no consumption, and reverse flow indication. This information shall be communicated through the encoder protocol and RF IMIU to the route management software to allow the seamless integration of data into a CIS package.

**OPERATION SPECIFICATIONS**

• For reliability and meter reading integrity, the vendor shall be the sole manufacturer of the different components of the system (water meters, RF transmitter, meter reading equipment, and route management software) and provide a turn-key system offering to the utility.
The manufacturer will guarantee that the reading obtained electronically matches the visual reading on the register when the register is interrogated by the IMIU and that the manufacturer will pay the difference at the current rates whenever a discrepancy appears. Synchronization of electronic reading and mechanical reading for any reason (battery change, register change, cut wire, register roll-over…) is not acceptable.

For the purpose of ease of implementation, the system shall not require any special licensing, including licenses from the FCC. The system must, therefore, operate in the 902 MHz to 928 MHz unlicensed bandwidth.

The system implementation shall not be delayed due to the uncertainty of Federal licensing requirements.

The system must be expandable at any time without getting authorization from the FCC.

No wake-up tone shall be necessary.

To minimize the potential for RF interference from other devices, the IMIU shall transmit using the Frequency Hopping Spread Spectrum technique comprised of alternating pseudo-random frequencies within the 902 MHz to 928 MHz unlicensed bandwidth.

The IMIU shall operate within FCC Part 15 regulations for devices operating in the 902 MHz to 928 MHz unlicensed bandwidth. The output power of the devices will be governed by their conformances with these relevant FCC standards.

Power shall be supplied to the IMIU by a lithium battery. The Vendor shall warrant that any battery provided with the IMIUs by the Vendor shall be free of manufacture and design defects for a period of twenty years—the first ten (10) years from their date of shipment from factory without pro-rating, and the second ten (10) years with pro-rating, as long as the IMIU is working under the environmental and meter reading conditions specified.

The battery life shall not be affected by ambient erroneous wake-up tones (i.e., other water, electric or gas utilities reading and therefore sending out a wake-up tone.)

The number of reads performed must not affect the battery life.

The batteries shall be field replaceable (the replacement shall be demonstrated) and be designed for minimum twenty (20) years life expectancy. The IMIU shall not require reprogramming if the battery discharges before it is replaced.

No IMIU programming shall be necessary for installation.

The IMIU shall not send readings older than an hour. Sending a reading older than an hour is not acceptable, as it can lead to incorrect billing.
• The IMIU shall transmit the meter reading continuously at a predetermined transmission interval to maximize battery life.

• Each device shall have a unique pre-programmed identification number of 10 characters. ID numbers will be permanent and shall not be altered. Each device shall be labeled with the ID number in numeric and bar code form. The label shall also display FCC approval information, manufacturer's designation and date of manufacture.

• The IMIU shall transmit the encoder meter reading and a unique IMIU ID number.

• The handheld reading equipment shall provide a test mode to verify proper operation of the IMIU by displaying the IMIU ID number and meter reading.

• The IMIU reading shall be capable of being received by either a handheld receiver, mobile receiver, or fixed network receiver without special configuration or re-manufacture.

INSTALLATION AND TRAINING
Complete installation and operating instructions will be included for all of the supplied hardware and software equipment. The system manufacturer, using accredited factory trainers, must supply the training. Costs associated with any additional training and assistance to install and begin operation of the system, shall be included in bid prices for the hardware. The Vendor will also inform the customer of what pre-installation activities are to be completed and what support material will be needed for the initial installation.

The Contractor will provide any customization of the software required to allow import of Authority meter and billing data into the supplied software, or for export of such data back to the Authority billing system. Any required training shall take place at Water and Sewer Department Office, 747 French Street, Oakville.

PERFORMANCE WARRANTIES
In evaluating bid submittals, warranty coverage will be considered. The Vendor shall be required to state its warranty and/or guarantee policy with respect to each item of proposed equipment. The procedure for submitting warranty claims must also be provided.

As a minimum, the electronics shall be warranted for one year from date of shipment for defects in material and workmanship.

SYSTEM MAINTENANCE AND SUPPORT
Software maintenance and upgrades must be included at a minimum for the duration of this contract. In addition to warranty periods, Vendors are required to supply information on required or optional maintenance programs beyond the warranty period for both hardware and software. Vendor must offer multiple-year maintenance contracts so the Authority can take advantage of multi-year
discounts. The location of and procedures for obtaining such support shall be stated. A toll-free support number must be provided for system support.

**VENDOR QUALIFICATIONS**
The qualified Vendor will have a minimum of twenty years experience with reading systems. The selected Vendor shall be thoroughly versed in encoder meter technology and be a major supplier in the marketplace. The proposed system shall be manufactured and maintained by the selected Vendor or an equity partner. All Vendors shall document which manufacturers and models they are capable of interrogating with the proposed meter reading equipment.
TOWN OF WATERTOWN
WATERTOWN, CONNECTICUT 06795

BID PROPOSAL

Radio Read Water Meters
Watertown Water and Sewer Authority

BID OPENING: 11:00 a.m., Thursday, January 30, 2014

TO:  Jason Warner, Purchasing Agent
     Town of Watertown
     Town Hall Annex
     424 Main Street
     Watertown, CT 06795

The undersigned, as bidder, agrees to furnish the equipment and related services as specified herein
and declares that no person or persons, other than those named herein, are interested in this Proposal;
that this Proposal is made without collusion with any person, firm, or corporation; that he has
carefully examined the location of the proposed work, that no person or persons acting in any official
capacity for the Town is directly or indirectly interested therein or in any portion of the profit thereof;
and that he proposes and agrees, if this Proposal is accepted, to provide all necessary equipment,
tools, labor and deliver and to do all work and furnish all materials specified in the manner and time
therein prescribed, and according to the requirements of the Town as therein set forth, and that he
will take in full payment therefor, the unit prices and lump sums, to wit:

FIRM _______________________________________________________________________

Name _______________________________________________________________________

Street _______________________________________________________________________

City  State  Zip Code

NAME _______________________________________________________________________
   Please Print

TELEPHONE NUMBER ________________________________

FAX NUMBER ________________________________

EMAIL ADDRESS ________________________________

SIGNED _____________________________________ DATE __________________
## Proposal

Manufacturer: Neptune T-10  
Model: E-Coder R-900i-Inside Version

<table>
<thead>
<tr>
<th>Description/Unit Price</th>
<th>Estimated Quantities/Year</th>
<th>Computer Totals</th>
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</thead>
<tbody>
<tr>
<td>Item #1 – 5/8” Water Meters</td>
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<td>The unit price of</td>
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<td>Item #2 – 5/8” x 3/4” Water Meters</td>
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<td>Item #4 – 1” Water Meters</td>
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<td>Item #5 – 1.5” Water Meters</td>
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<td>Item #6 – 2” Water Meters</td>
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Computed Total (This Section) $__________

20
## PROPOSAL

**Manufacturer** Neptune T-10

**Model** E-Coder R-900i-Pit Version

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**Item #7 – 5/8” Water Meters**

The unit price of

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**Item #8 – 5/8” x 3/4” Water Meters**

The unit price of

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**Item #9 – 3/4” Water Meters**

The unit price of

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**Item #10 – 1” Water Meters**

The unit price of

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**(Dollars and Cents ($)) Per each**

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**Item #11 – 1.5” Water Meters**

The unit price of

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**(Dollars and Cents ($)) Per each**

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**Item #12 – 2” Water Meters**

The unit price of

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**(Dollars and Cents ($)) Per each**

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**Computed Total (This Section)** $___________
PROPOSAL

Manufacturer Neptune Tru Flo Model E-Coder R-900i

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<th>Description/Unit Price</th>
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<td></td>
<td>Totals</td>
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**Item # 17– Neptune R900 Wallmount Radio Transmitter**
The unit price of

Dollars
and Cents

($____________) Per each

10

$_______

**Item # 18– Neptune R900 Pit Mount w/6’ of wire**
The unit price of

Dollars
and Cents

($____________) Per each

10

$_______

**Item # 19- Warranty**
The unit price of

Dollars
and Cents

($____________) Per each

Term: $_______

per year

$_______

**Item # 20- Maintenance and Support**
The unit price of

Dollars
and Cents

($____________) Per each

Term: $_______

per year

$_______

**Computed Total (This Section)** $_______

**Payment Terms** ________________________________________________________________
Have you taken any exceptions or have you deviated from our printed Specification and, if so, are such suggested changes clearly noted on the page provided for exceptions to Specifications?:

Yes _______  No _______

Please list any additional components or services that you believe the Town of Watertown should consider in awarding this purchase:

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EXCEPTIONS TAKEN TO SPECIFICATIONS

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23
## RECEIPT OF ADDENDA

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**NAME OF BIDDER:** ____________________________________________________________

**OFFICIAL ADDRESS:** __________________________________________________________

**PHONE NUMBER:** ___________________________________________________________

**BY:** _________________________ TITLE: ________________________________

(Please Print)

**DATE:** __________________________________________________________

**SIGNATURE:** ____________________________________________________________
## Proposed Subcontractors

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<tr>
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<th>Zip Code</th>
<th>Contact</th>
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Type of work to be performed: 

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Type of work to be performed: 

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Please print.

Type of work to be performed: 

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REFERENCES
Please list a minimum of three references of similar work performed within the last three years.

FIRM __________________________________________________________________________

Name __________________________________________________________________________

Street __________________________________________________________________________

City State Zip Code _____________________________________________________________

CONTACT ____________________________________ TELEPHONE ________________________

Please Print

TYPE OF WORK TO BE PERFORMED ____________________________________________________________________________________

_______________________________________________________________________________

FIRM __________________________________________________________________________

Name __________________________________________________________________________

Street __________________________________________________________________________

City State Zip Code ___________________________________________________________________________________________________

CONTACT ____________________________________ TELEPHONE ________________________

Please Print

TYPE OF WORK TO BE PERFORMED ____________________________________________________________________________________

_______________________________________________________________________________

FIRM __________________________________________________________________________

Name __________________________________________________________________________

Street __________________________________________________________________________

City State Zip Code ___________________________________________________________________________________________________

CONTACT ____________________________________ TELEPHONE ________________________

Please Print

TYPE OF WORK TO BE PERFORMED ____________________________________________________________________________________

_______________________________________________________________________________

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