INVITATION TO BID (ITB) SPECIFICATIONS

Proposals are requested and will be received by the City of Florence (City) for "Furnishing and Installing a Radio Frequency Based Automatic Water Meter Reading System."

Proposals will be accepted at City of Florence City Hall, ATTN: Mike Miller, 250 Hwy 101, Florence, OR 97439 on September 21, 2017 until 2:00 PM local time.

Each Proposal shall be submitted with the Contract Document in an envelope addressed to the City and clearly marked "Proposal for Furnishing and Installing a Radio Frequency Based Automatic Meter Reading System".

The City of Florence reserves the right to reject any or all Proposals and to award a contract to any vendor deemed to be in the best interests of the City of Florence.

All major requests for information, clarification or related inquiries should be submitted in writing to Mike Miller, Public Works Director, at City of Florence 250 Hwy 101, Florence, OR 97439, via U.S. mail. Miscellaneous requests can be sent via email to mike.miller@ci.florence.or.us or phone 541-997-4106. All answers and clarifications shall be shared with all Vendors.

INTRODUCTION AND BACKGROUND

The City of Florence currently has approximately 3,996 water service meters. Of these, approximately 714 are currently read via touch-read, 1,879 radio read, with the remaining approximately 1,403 meters read manually (i.e., via direct visual reading). Approximately 95 percent are residential (3/4-inch and 1-inch) and 5 percent are larger residential and commercial (1.5-inch through 8-inch).

The City is requesting Proposals from qualified and experienced manufacturers, suppliers, vendors, and installers of Radio Frequency Based Automatic Meter Reading (R.F. A.M.R.) Systems. This Request for Proposal solicits price quotes for furnishing and installing a new, complete Radio Frequency Based Automatic Meter Reading System for approximately 3,996 service meters. The System, as proposed, will include, but not be limited to, meter bodies and registers, R.F. components, data collection equipment and data collection software. The target date for the full (R.F. A.M.R.) system deployment is no later than June 1, 2018.

Additional Background Information

1. Meter Count Estimate (# of existing water service meters, based on City records)

Meter Size	**Quantity to be Replaced**	**Quantity to be Retrofitted**	**Total Quantity**
3/4"	1321	2382	3703
1"	39	133	172
1.5"	2	15	17
2"	32	46	78
3"	6	7	13
4"	1	7	8
8"	2	3	5
Total	**1403**	**2593**	**3,996**

2. Current Reading System. Meter reading occurs using a cycle/route grouping system and every meter in the City is read monthly. Meter readers collect water consumption data using handheld computers. Meter route information is downloaded into the handheld devices. Water consumption data is obtained either through touch-read and/or radio devices or visually read and entered by hand. When meter routes are completed, water consumption data is uploaded into the billing system.

3. Current Billing and Customer Information Systems. The City utilizes Caselle Connect for utility billing.

PURPOSE AND SCOPE OF THE PROJECT

This Invitation to Bid solicits responses from qualified vendors capable of furnishing and installing a Radio Frequency Automatic Meter Reading System as specified herein.

The proposed R.F. A.M.R. System will be implemented on all City meter services. It is the intention of City of Florence to replace the existing system in order to:

1) Improve customer service and response
2) Improve cash flow
3) Eliminate reading and billing errors
4) Reduce employer liabilities
5) Optimize meter reading efficiencies
6) Streamline bill generation
7) Improve consumption data collection and analysis
8) Improve meter accuracy

The contract awarded in favor of this solicitation will be a single-year contract. It is the intention of City of Florence to install the R.F. A.M.R. System immediately.

SCOPE OF WORK

The work involved under the terms of the contract with the Contracted Respondent shall be full and complete execution of the items noted below, and as described further throughout this RFP. This effort involves the furnishing of an R.F. A.M.R. system, to include but not be limited to the following:

1. Furnish and install R.F. A.M.R. System Radio Meter Interface Units (MIUs) for all water service meter locations.
    a. For existing meters, provide, if applicable, required cabling, splice kits, and all equipment necessary to connect existing meter registers to MIUs.
    b. Furnish and install replacement meters and meter registers compatible with the furnished MIUs. Note that factory potting (i.e., direct connection, with no wire

splicing) of the MIUs to meter registers is required for those locations where replacement meters are being furnished/installed along with MIUs.

2. Obtain all Federal, State and local permits required for the installation and operation of the system and any other approvals.
3. Provide technical and installation support to the City during system deployment.
4. The Contracted Respondent will be the single point of contact to resolve any and all issues between meters, registers, software, etc. ***Therefore, all system components must be manufactured by one and the same manufacturer.***

INSTRUCTIONS TO VENDORS

THE GENERAL TERMS AND CONDITIONS WHICH FOLLOW APPLY TO ALL PURCHASES AND SERVICES AND BECOME A DEFINITE PART OF EACH FORMAL INVITATION TO PROPOSE, PURCHASE ORDER, OR CONTRACT ISSUED BY CITY OF FLORENCE, UNLESS OTHERWISE SPECIFIED. BY SUBMITTING A PROPOSAL, THE VENDOR AGREES TO BE BOUND BY THESE TERMS AND CONDITIONS. VENDORS OR THEIR AUTHORIZED REPRESENTATIVES ARE EXPECTED TO FULLY INFORM THEMSELVES OF THE CONDITIONS, REQUIREMENTS, AND SPECIFICATIONS BEFORE SUBMITTING PROPOSALS. FAILURE TO DO SO WILL BE AT THE VENDORS OWN RISK AND WILL NOT SECURE RELIEF ON THE PLEA OF ERROR.

PREPARATION OF PROPOSALS

The vendors shall submit their sealed Proposal on the proposal forms provided. The Proposal shall be executed properly and all writing shall be ink or typewritten, except the signature of the vendor that shall be written in ink.

The vendor shall specify in figures, in the places provided, a price for each of the separate items called for in the proposal forms.

Vendors are requested to submit their Proposals directly to the City of Florence in a properly sealed envelope. If the Vendor is a corporation, the legal name of the corporation, the state of incorporation and the business address shall be set forth together with signature of the officer or officers authorized to sign contracts on behalf of the corporation and attested by the secretary of the corporation. The corporate seal shall also be affixed. If the Vendor is a partnership the true name and address of the firm shall be set forth together with the signatures of authorized partners. If the Vendor is an individual, the signature and address shall be inscribed. If the signature is by an agent other than an officer of the corporation or member of the partnership, a power of attorney must be submitted with the Proposal; otherwise, the Proposal may be regarded as irregular. All names must be printed below the signature.

Each vendor's response shall be organized in a fashion similar to that outlined below:

Section 1: Executive Summary
Section 2: Vendor Qualifications (including sub-vendor/sub-contractor)
Section 3: Technology Solution Overview
Section 4: Project Overview
Section 5: Compliance for ITB Technical Specification 1.0 – 10.0
Use ITB pages and note after each bulleted item and/or section in *blue italics*
Answers are to be in the form:

- Comply

- Alternate - Include explanation
- Exception - Include explanation

Section 5: System Pricing
Section 6: Bidder's Financial Information
Appendix A Client Reference List

The vendor's system shall meet the technical requirements outlined in this document:

Your response shall contain an explicit comply/exception assessment of whether your system meets each requirement and, whenever necessary, description of compliance to each point. Shall your system or any part of the system fail to meet any of the following requirements, explain the reasoning that substantiates that the variation from these requirements is not critical.

Please note that all answers must reflect current capabilities.

VENDOR QUALIFICATION – AWARD OF CONTRACT

The Contract will be awarded to the responsible Vendor determined by the City of Florence to be in the best interests of the City of Florence, who complies with all the provisions of the Invitation to Submit Proposals. City of Florence reserves the right to reject any or all Proposals or to waive any non-conformity in Proposals received whenever such rejection or waiver is in the best interests of City of Florence. City of Florence also reserves the right to reject the Proposal of a Vendor who has previously failed to satisfactorily perform a contract, has not completed contracts on time, or whom an investigation shows is not in a position to perform the contract.

In determining responsiveness of the Vendor, the following qualifications will be considered by City of Florence:

(a) The ability, capacity, and skill of the Vendor to perform the contract or provide the service required;

(b) Whether the Vendor can perform the Contract or provide service promptly, or within the time specified, without delay or interference;

(c) The character, integrity, reputation, judgment, experience, and efficiency of the Vendor;

(d) The quality of performance of previous contracts or services;

(e) The previous and existing compliance by the Vendor with laws and ordinances relating to the contract or service;

(f) The sufficiency of the financial resources and ability of the Vendor to perform the contract or provide the service;

(g) The quality, availability, and adaptability of the supplies or contractual services to the particular use required;

The selected Vendor must demonstrate the ability to furnish, install and support the R.F. A.M.R. System detailed herein. Selection of the Vendor by City of Florence will include a thorough evaluation of the

experience and expertise of the Vendor and his sub-vendors. The selection criteria are specifically outlined in this document.

ADDITIONAL PROVISIONS

EVALUATION AND SELECTION CRITERIA

ITEM	POINTS
1. Qualifications and experience in accordance with qualifications on page 4 of the ITB	**100**
2. Technology solution overview, includes required technical brief	**100**
3. Compliance with technical specifications	**100**
4. Formal presentation to City staff	**100**
5. System Pricing	**50**
6. Contractor availability	**50**
7. Delivery	**50**
Total Maximum Points	**550**

City of Florence reserves the right to waive technicalities and award a Contract to the Vendor whose proposal is deemed to be in the best interest of City of Florence.

Vendors shall provide a comprehensive narrative and technical brief describing the R.F. A.M.R. System proposed for installation and implementation in City of Florence.

City of Florence will evaluate proposals for "Mobile" R.F. A.M.R. Systems only.

City of Florence, at its' sole option, may engage any or all Vendors in interviews in order to clarify and evaluate Proposals.

City of Florence recognizes the long-term implications of implementing a Radio Frequency Automatic Meter Reading System. City of Florence, therefore, will evaluate each Proposal based on long-term cost effectiveness, initial cost, future maintenance and similar system characteristics.

City of Florence Selection Team will consider, at a minimum, the following criterion in evaluating Proposals:

1) Qualifications and experience of vendor and/or manufacturer.
2) Qualifications and experience of vendor and/or installer or subcontractor.
3) References and past project performance.
4) Initial price and life cycle cost.
5) Number of trained, full-time support staff available for on-going technical assistance to the City after implementation of R.F. A.M.R. system.
6) Technology proposed for implementation in City of Florence.

The analysis of Proposals will include a thorough review of projects of similar size and scope installed by the Vendor or by the Vendor's team. Vendors must furnish at least three references from municipally owned water utilities with R.F. A.M.R. Systems installed within the last five years. The reference information shall include:

1) Name of Municipal Water Utility.
2) Contact person and phone number at Municipal Water Utility.
3) Type of R.F. A.M.R. System Installed.
4) Meter body manufacturer.
5) Name of R.F. A.M.R. System manufacturer installed.
6) Number of meters installed as or converted to R.F. A.M.R. System.
7) Project completion period.

City of Florence may request that Vendors make one formal presentation to City of Florence staff and one formal Proposal to City of Florence Board of Directors. These presentations are considered an integral, yet cost incidental, element of the Proposal submitted.

Except as otherwise provided by law, City of Florence President and Board of Directors reserves the right to reject any or all Proposals and to waive any informality in the Proposals received.

1.0 - System Technical Requirements:

A meter-reading route shall be provided from the Utility's existing host billing software package to a route management program supplied as part of the selected reading system. The Utility shall provide the interface file from the billing system in the proper file format to facilitate technical assistance and standardize the interface. Since the utility has a working relationship with the billing software provider, it shall be the utility's responsibility to facilitate the interface and provide it to the operating software provider. If the billing software provider is unable to complete the interface in the proper format, the route management software provider will have the interface completed at an additional charge to be specified at that time.

Once in the route management software, the meter-reading route shall be downloaded into collection devices used for collecting the meter readings via radio frequency signal.

The collection equipment shall consist of a laptop computer that may be temporarily mounted in a vehicle, a radio receiver/transmitter and a rooftop antenna. A dedicated vehicle shall not be required.

Each meter shall be supplied complete with a meter interface unit (MIU) that shall output encoded meter reading, small and large leak, backflow, tamper data and duration codes for each status via radio frequency (RF) signal. The MIU modules shall be programmed in one-way mode only. One-way (bubble-up) communication transmits readings automatically every 3 seconds in the unlicensed 902-928 MHz band without the need of a wake-up call. MIU transmissions to the receiver shall occur in the unlicensed 902-928 MHz band. MIU modules shall transmit hourly profile consumption data for a minimum of 170 days when initialized to provide an historic usage profile for the meter.

The utility shall be able to collect the transmitted data via mobile drive-by collection equipment. The collection device (RF receiver/transmitter) shall receive the data by RF signal and then transfer the data to a computer database to the laptop computer for storage during the reading process. At the end of the

reading process, the collected data shall be uploaded from the mobile drive-by collection equipment into the route management software.

Once the readings have been collected and uploaded into the route management software, the system operator shall be able to view or print route statistics and create system management reports. The collected readings shall then be transferred from the route management software to the host billing system.

All software and hardware required to complete this process, except for the host billing software and interface file from the billing system, shall be supplied as part of this proposal.

All system components must be manufactured by one and the same manufacturer.

2.0 - Route Management Software:

The host billing system will supply all route information such as account number, current reading, high/low range and other data elements. This eliminates the need to maintain redundant data files and avoids opportunity for introduction of errors conflicting with the host system. The Meter Reading Route Management Software shall load and unload data into collection devices and allow reporting of collected data. Collected data will then be transferred back to the host billing system.

The software package provided shall meet each of the following provisions:

3.0 - System Overview:

The software and hardware shall…

- Provide a standard interface for utility billing systems as well as the ability to adapt to existing billing system interfaces as stipulated in section 1.0
- Output this route data for reading to Laptop Computer with radio receiver for mobile radio reading.
- Mobile (drive by) radio read equipment shall be supported in separate routes.
- Support radio frequency data collection from one-way open architecture radio modules that are compatible with current style remote meters from the following meter manufacturers: AMCO/Elster, Badger, Hersey, Neptune and Sensus.

4.0 - Computer Platform:

The software and hardware shall…

- Be designed to operate within any of the following operating systems: Windows 7.
- Be a Microsoft™ Windows application, which is designed meeting the Open Systems Foundation goals. The data utilized in the application shall be compatible with a host of other management and office applications such as spreadsheet and database tools.
- Be capable of running on a computer that meets or exceeds the following minimum requirements: 1.6 GHz Processor or faster, 512 MB of RAM, 2GB of free available hard disk space, 17" SVGA monitor, CD-ROM drive, mouse, and standard COM1 and COM2 serial ports and USB 2.0 for handheld communications.

5.0 – Communications:

PC to Laptop Computer

- Permit the transfer of data and generation of reports.
- All communications during upload and download of laptop computer shall be extensively error checked to ensure data integrity.
- The system shall load/unload reading data from mobile laptop computer by flash card or serial connection.

6.0 -Functions & Features – Mobile RF reading:

The software and hardware shall…

- Function with minimal required interaction by the operator to ensure safety while driving. Allow easy viewing of read or unread accounts.
- Show route status including number of meters read, unread and percentage complete. Allow reading of multiple routes at one time.
- Stamp meter readings with time and date of read. Time/date information shall be passed to the host billing system in the format requested by the host billing system.
- Allow for standard reporting through built in reports.
- Verify data integrity in every message.
- Have the capability to connect to the utility network to upload/down load meter reading routes.
- Support Windows 7.0 or 8.0 or 10.0 software with a notebook computer supplied by the utility.
- Be capable of reading up to 50,000 accounts a day when reading multiple routes at one time.
- The system must indicate visually to the operator if the laptop computer loses communications with the radio receiver during operation.
- Have a light weight (less than one pound) receiver in a case built for durability and ruggedness.
- Have mapping capabilities. Mapping screens must distinguish completed portions of a route from those yet to be read, for example with the use of color or icon removal.
- Be updated dynamically, identifying the remaining portion of the route to be read. Sorting of the remaining modules by street and route sequence number is required.
- Operate as a receiver only (one-way unlicensed mode, 902-928MHz. In bubble up mode, the collection device must operate in one-way radio transmission mode and continually receive meter readings without transmitting a wake-up call. The collection device will receive encoded meter readings, leak detection, backflow, no flow, tamper information and duration for events on a radio frequency that does not require an FCC license.
- Have mobile collection components that are lightweight and portable. They must mount temporarily in the meter reading vehicle. No dedicated vehicle(s) must be required.
- Power connections must be furnished from an auxiliary power supply (cigarette lighter) to the mobile collector and the antenna must be magnetically mounted on the roof of the vehicle for ease in transport from vehicle to vehicle.

7.0 - Functions & Features - RF Meter Interface Units:

- MIU modules shall transmit hourly profile consumption data for a minimum of 170 days when initialized to provide an historic usage profile for the meter. **MIU models unable to store and transmit consumption data will not be considered.**

- The proposed radio MIU system must have at least 100 utilities currently using the proposed meter/radio system combination in the United States. Manufacturers must provide a list of these utilities as well as contact information upon request of the City
- The proposed radio MIU shall be designed to encode water consumption, leak detection (small and large leaks), backflow, no flow, wire tampering and the duration of these events at the meter, store this data, and transmit this data to the data collection device. This information must be instantly available for viewing by the meter reader as soon as the meter is read by the drive-by system.
- The Utility is committed to selecting the technology that provides the most efficient, cost effective and flexible solution. Proposed radio MIU modules must be of an open architecture design and be compatible for use with water meters that utilize positional encoded registers manufactured by a major meter manufacturer. Proprietary systems will not be considered.
- The MIU units must transmit the encoded reading and event/duration data via radio frequency signal. The MIU units must be capable of operating in bubble-up (one way) mode only. The signal must be continually transmitted at a predetermined 3-second time interval in bubble-up mode to provide high performance meter reading.
- The meter module must last in the field without need for servicing for a minimum of 20 years.
- MIU modules must be programmed at the manufacturer and should require no additional field programming.
- The MIU modules must operate with one-way radio transmissions and continually transmit meter readings at the pre-selected 3-second interval without need of a wake-up call. MIU modules must transmit encoded meter data information on a radio frequency (902-928MHz) that does not require an FCC license.
- All wiring and connections for MIUs with replacement meters must be installed and potted by the manufacturer for protection against moisture.

8.0 – Water Meters

- **Multi-Jet and Single-Jet meters will not be considered. Manufacturers must have a minimum 25-year history of manufacturing positive displacement type meters in the United States.**
- All Meters shall meet or exceed the latest version of the American Water Works Association Standard C710 for Cold Water Meters - Displacement Type, Plastic Main Case.
- All Meters equipped with encoder registers shall meet or exceed the American Water Works Association Standard C707 for Encoder-Type Remote-Registration systems for Cold Water Meters when equipped with an open architecture radio MIU or similar device.
- All Meters shall comply with the latest NSF-61, ANSI and EPA requirements.
- Main case shall incorporate stainless steel male threads to prevent crossed or stripped threads during installation when utilizing existing bronze couplings and to facilitate ease of installation
- The meter case must utilize an external male thread to accommodate the internally threaded bottom plate to provide structural stability and prevent leaks.
- The bottom plate shall utilize an o-ring seal.
- The register shall be a true absolute encoder register that providing direct electronic transfer of meter reading information to Radio MIU device. The encoder register shall be permanently factory sealed with an epoxy coating of all terminal connections.
- The register shall provide for visual registration at the meter.
- Registers shall incorporate a center sweep test hand and a low flow indicator.
- The register shall be secured to the meter main case by a tamper resistant bayonet-style locking mechanism protecting against unauthorized removal of the register.
- No special tools shall be required to remove the register.

9.0 – Features and Functions: RF - Mobile Remote Disconnect Meter System

- The RF Mobile Remote Disconnect Meter System shall be a simple handheld application that enables water utilities to remotely connect or disconnect water services from the safety of their vehicles using 2-way radio communication.
- The application and maintenance radio shall remotely connect, disconnect, and obtain diagnostics while parked within 1,000 feet of a service connection fitted with a remote disconnect meter.

Hardware shall include -

- Field-friendly Android handheld device which is waterproof, dust-proof, snow-proof, drop-proof and has a long-lasting battery life.
- Maintenance radio which communicates with Android handheld device via Bluetooth connection, and communication with remote disconnect meters (RDM) via radio frequency (902-928MHz) that does not require an FCC license.
- **Remote Disconnect Meters (RDM)** shall be low lead body, cold-water, positive displacement meters that employ an integral remote disconnect valve which is compatible with open architecture radio read equipment, in 5/8"x3/4" size (7.5" lay length) and the materials employed in their fabrication. The integral pilot valve and transceiver shall allow the utility to remotely turn on/turn off water supply to a residence as required through a simple handheld application.
    - All Meters shall meet or exceed the latest version of the American Water Works Association Standard C700 for Cold Water Meters - Displacement Type, Bronze Main Case.
    - All Meters equipped with encoder registers shall meet or exceed the American Water Works Association Standard C707 for Encoder-Type Remote-Registration systems for Cold Water Meters equipped with an open architecture radio MIU or similar device.
    - All Meters shall comply with the latest NSF-61 requirements including Annex G, F, 372 and all EPA requirements.
    - All Meters shall comply with the latest state low lead initiatives due to their unique design, which incorporates low lead bronze for all wetted surfaces in the meter.
    - Meters shall not exceed the C-700 pressure loss specification at AWWA safe maximum operating capacity.

    Main Case:

    - Main cases shall be composed of low lead bronze that meet the latest NSF requirements and EPA requirements.
    - All materials used in the construction of the main cases shall have sufficient dimensional stability to retain operating clearances at working temperature up to 105 degrees F.
    - The main case must incorporate the measuring element and a remote disconnect valve inside the standard 7-1/2" laying length specified by the AWWA C-700 standard.
    - The meter design must incorporate a pilot valve as the means of turning on/turning off the water.
    - Pilot valves are more efficient in design than ball valves and consume less energy during activation and as such are preferable.
    - Pilot valves have been utilized extensively in irrigation systems and have a proven track record in domestic water systems for reliability. As a result this design is the preferred solution.
    - The manufacturer shall warranty the main case for a period of 25 years from the date of shipment.
    - The meter serial number shall be stamped on the main case of the meter.
    - Bottom plates shall be made of engineered plastic only.

    Valve Assembly:

    - The valve assembly must be of a pilot valve design.

- A replacement valve kit shall be offered for the ongoing maintenance of the valve.
- A dual strainer shall be utilized in the valve diaphragm.

10.0 – Installation

- **Procedures approval**. The City will provide the required route sequence for installation. The Contracted Respondent shall then propose detailed scheduling and installation procedures to the City for approval prior to commencing installations. The procedures shall be designed to optimize the work of the Installers, the City inspectors and all other staff working on the project.
- **Site conditions.** A variety of site conditions will be encountered during installation, including meters submerged in water or surrounded by dirt. Before, or at the time of installation, the Contracted Respondent shall inspect the existing water meter setting, including piping and shut-off valves. If the Contracted Respondent determines that conditions are such that damage to the existing piping would result, the Installation Manager shall so inform the City, shall not attempt the installation until the site is inspected by an authorized City representative, and shall postpone installation at that site until the City Project Manager authorizes the Contracted Respondent to proceed with the work.
- **Location of meters.** City personnel will be available to assist in locating meters in the field. Meter locations are not visually marked.
- **Location of MIU.** The MIU shall be installed according the manufacturer recommendations. MIUs shall not be installed in the lid. Depending on the Contracted Respondent's specifications, the MIU may be installed on the sidewall of the vault.
- **Old meter reading disputes.** Contracted Respondent shall provide procedures for ensuring that any dial meter is read properly and for providing evidence of the reading in the case of any customer disputes. Evidence of the reading is required at a minimum for any meter that fails a high/low audit check, or for any meter that shows any signs of a defect. The City requires that evidence be in the form of a digital photo clearly showing the register face.
- **Repairs.** The City authorizes the Contracted Respondent to make any necessary repairs to service lines, valves, or piping. A freezing machine shall be used on all galvanized and copper piping; no crimping. Crimping is only allowed on black poly services as long as a full circle stainless steel repair band is placed over the crimped poly pipe when finished. Only United States made brass and compression fittings are allowed on the City's water system. All new curb stop and angle stops will be brass, ball valve type and have the locking ears on the valves. No glued fitting or PVC fittings are allowed. At any time the water main needs to be shut down to make an emergency repair, the Contracted Respondent will contact the City Inspector who will call City staff to do the shutdown.
    - Repairing old piping. Only when old piping is leaking or deteriorated to a point that damage to it could reasonably be expected by changing the meter will poor piping be accepted as a reason for not replacing the meter during the installation period. Unless the City Project Manager permanently remands the particular installation to the City, Contracted Respondent is still required to install the meter and AMI equipment after the piping has been repaired or replaced at any time during the installation period.
    - Repairing meter shut off valves or replacement of complete meter setters. If the Contracted Respondent cannot shut off the water using the valve at the meter (details must be documented on a work order), the Contracted Respondent shall arrange to do the repair/replacement of the valve with the customer and the City using the above criteria.
    - Service line damage. The Contracted Respondent shall be responsible for the repair of any service lines it damages at its sole cost and expense, unless the Respondent's Installation Manager has reported (prior to commencement of installation) a condition of antiquated or inferior plumbing to the City and the City has authorized the Contracted Respondent to proceed with the work. In the event a service line fails during the installation procedure, the

Contracted Respondent will make necessary repairs using the criteria cited above. If the Contracted Respondent cannot make the repairs using this criteria or the damage is of larger scope, the Contracted Respondent will notify the City, who shall arrange for the repair to be made by the City. Reasonable direct labor and material costs for such repair will be deducted from Contracted Respondent's invoices for repair of service lines.

- **Meter replacement.** Contracted Respondent's installer shall ensure they are at correct location and meter, and shall check for running water prior to commencing meter change-out. If water is running, Installer must notify the customer before commencing meter change out. Contracted Respondent shall then replace the meter, using new gaskets or washers. Contracted Respondent shall put plastic caps on the inlet and outlet of the old meter and handle meter with care in the event of post-removal testing. All conversion bushings or other hardware necessary to install the new water meter in the customer's existing meter setup must be furnished by the Contracted Respondent.
- **Strainers.** If the meter to be replaced has a strainer, Contracted Respondent shall be responsible for replacing the strainer along with the meter, unless conditions prevent such replacement. Contracted Respondent shall otherwise be responsible for repairing or cleaning the strainer to ensure that is in good working order and will not adversely affect meter performance.
- **Verifying service working.** Contracted Respondent shall flush the water line after installing a new meter to ensure the meter is registering properly and verify service restoration to the entire premise.
- **Plumbing irregularities.** The Contracted Respondent shall report to the City Project Manager, prior to the installation of a meter, any meter and/or plumbing irregularities including but not limited to meters installed backwards, registers are disconnected from meters, taps are located before a meter, there are unmetered connections of a customer's plumbing to a service lateral, fire pipe or water main or any other violations of the City's Regulations. In the event of plumbing irregularities, the Contracted Respondent shall not proceed with the installation of a meter until the City Project Manager has authorized such installation.
- **Dirt or water around meter.** Contracted Respondent shall be responsible for removing and properly disposing of any reasonable amount of dirt needed to access a meter in a meter pit or vault. Dirt shall be removed only as necessary to prevent dirt from entering the line during the installation. If a water meter box or vault is flooded so that the meter is fully or partially submerged, the Installer must pump out the box before changing the meter. The Installer must ensure that the water service is not in any way contaminated, even intermittently, by standing water in the meter vault or box. All waste resulting from cleaning the meter pit as well as replacing the ring and lid must be cleaned up and hauled off by the Contracted Respondent and disposed of in a legal manner. The existing ring and lid, if replaced, shall be disposed of by the Contracted Respondent. If grass or shrubbery is damaged by the installation process, the Contracted Respondent must repair the damage to original condition to the satisfaction of the consumer by replanting, re-sodding or reseeding. Notwithstanding the warranties the Contracted Respondent is required to provide the City, and without waiving any rights thereunder, the City reserves the right to inspect any installation and clean-up work within 60 days after payment is made to the Contracted Respondent for said work, and will require the Respondent to repair any noted deficiencies.
- **Returned work orders.** Returned work orders shall include: meter size and meter type, verification or correction of existing meter and account information, old meter serial number, final reading on old meter, new meter number, new meter register number, premises identification number, transmitter ID number, reading on new meter register, date and time of installation, name of installer, notice of any problems encountered or repairs made. All information requested on the work order must be completely filled out for the installation to be considered complete and eligible for payment. An

electronic copy of all the work order information must be provided to the City Project Manager on a daily basis.

Quality control

- The Contracted Respondent shall describe its quality control program for its installation crews, including the parameters and the numbers or percentages of installations to be inspected, minimum acceptable performance and provisions for dealing with unacceptable performance.
- Response to complaints. Should the Contracted Respondent receive a call or complaint from a customer or the City regarding installation, the Contracted Respondent shall immediately log the call, including caller's name, address, account number if available, date and time of call, nature of problem and the action taken. Copies of all call logs shall be forwarded to the City Project Manager Improper installations. The Contracted Respondent shall be responsible for replacing any meter, transmitter or appurtenances improperly set by its Installer. The Contracted Respondent shall correct any damage to couplings, threads, unions or meters by use of improper tools or cross threading by an Installer.
- Leaks after installation. The Contracted Respondent shall be responsible for correcting any leaks at the valves, couplings or service lines that could be attributed to the meter installation if reported by the City or customers within one (1) year of installation.
- Regular meetings with the City. Contract Manager shall meet with City personnel periodically and not less than monthly to update them on progress against the installation schedule.

Pricing Proposal

Radio System Manufacturer and Model: _____

Lead Time required to implement the system: _____

Meter Manufacturer: _____

Hardware, software, training, etc.

Quantity	Description	Unit Price	Total Price
1	Mobile Collection Device with Mapping with accessories, including lap top computer		
1	All Necessary Meter Reading Software for PCs and Mobile Collection Device.		
1	All Communications Cables		
1	Implementation, On-site training (3 days) and documentation manual.		
1	Software and Hardware Installation costs or any other costs not included above.		

Water meters and MIUs

Quantity	Description	Unit Price	Total Price
1,350	3/4"x7.5" LL PD Water Meter with Encoder Register and MIU, factory potted connections to register and MIU		
50	1" PD Water Meter with Encoder Register and MIU, factory potted connections to register and MIU		
5	1½" PD Water Meter with Encoder Register and MIU, factory potted connections to register and MIU		
32	2" PD Water Meter with Encoder Register and MIU, factory potted connections to register and MIU		
6	3" PD Water Meter with Encoder Register and MIU, factory potted connections to register and MIU		
2,593	MIU with 5' wire (retrofit existing meters)		

Total system price **$**_____

Vendor name _____

Signature _____ **Date**_____

Printed name _____