

INSTALLATION SPECIFICATIONS

WATER METER INSTALLATION

Scope :

(Utility Name) is searching for an experienced water meter installation firm to complete the exchange of water meters equipped with AMR radio transmitters where an old water meter is being removed as described below.

Provided by utility:

- Work schedule provided electronically in normal route/cycle order to allow seamless flow of work with no stoppages other than designated holidays and weather days.
- Electronic work schedule to include all pertinent customer data, i.e. location/address, old meter serial number, customer name, etc.
- Written purchase order for specific quantities by item and work schedule requested.
- Advance notice to customers informing them of impending meter exchange project.
- Appropriate inventory location for new and used material to be safely stored and for contractor personnel to have access to during working hours.
- All materials for the standard exchange of water meters shall be provided by the utility either through this contract or another source at the utility's discretion.

Standard Installation:

The following description is the standard installation for the utility.

- Installation is for meters in sizes 2" and below only.
- All meters are equipped with a working curb stop or shut off valve.
- Residential meters sizes 1" and below are in an accessible water meter box less than 30" deep.
- Commercial meters up to size 2" are either above ground or in an accessible water meter box less than 30" deep.
- Meters are installed with meter couplings on both sides of the meter allowing for easy removal and installation of the meter.

- There is adequate room within the meter box for a contractor to easily work around and remove meter.
- Meter boxes may be filled with dirt which must be removed by contractor in order to access necessary components.

Water Meter Exchange:

For standard installations as described above, it shall be the responsibility of the contractor to complete the following work.

- Safely remove meter box cover and verify meter number.
- Attempt to notify customer if they are home. If there is no answer, check to see if meter is turning. If turning, come back later or wait a few moments to see if meter stops turning.
- Turn curb stop off.
- Record final reading from old meter.
- Remove old meter.
- Install new meter and washers.
- Open customer spigot(s) to flush air and debris from house line.
- Turn curb stop on.
- Verify the new meter is turning.
- Turn spigot(s) off after air and debris have cleared.
- Record new meter serial number and initial reading.
- Record GPS location of meter box.
- Replace meter box cover.
- When a meter exchange is completed the contractor shall leave the premises in a clean manner as close as possible to the manner in which it was found with no tools, trash, large dirt piles, or other debris either on the customer's property or within the meter box.

- When a meter exchange is completed all components within the meter box shall be in working order with no leaking components and the meter turning as designed. Meter box shall be free of debris or trash.
- Meter box cover shall fit snugly and securely without pressing on the radio transmitter and without presenting any danger to pedestrians.
- For route completion all meters must be verified by reading with the utility's receiving equipment.

Non Standard Installations:

In the event that a current meter installation is found to be in non-conformance with the standard installation as described above or is in need of additional repairs before the meter exchange can be completed or in order to provide a safe workplace for the contractor or to complete the installation leaving a safe premises for the customer, the contractor shall (examples may include non-working curb stops, broken or leaking pipes, collapsed meter boxes, etc):

- Notify a designated utility employee before conducting any work on the premises or proceeding with any work once a problem is identified.
- If the designated employee cannot be reached the contractor shall return the site to, or leave the site in its original condition and continue to the next exchange. The problem and site location shall be noted in order to inform the utility as soon as possible.
- Once notified, the utility may choose to complete the work at that site using its own personnel or request the contractor to make the necessary repairs at the discretion of both parties.
- All materials for work not associated with meter exchange shall be provided by the utility unless otherwise requested.
- For all meter boxes in restricted access areas or back yards which do not allow easy access for installers (fenced in areas), the utility may choose to conduct the exchange using its own personnel or request the contractor to complete.

RETROFIT INSTALLATION

Scope:

In addition to the meter exchanges above, the utility may also require the contractor to conduct AMR retrofits to existing meters. These meters may range in size from 1-1/2 inch up to 12 inch. The purpose of the retrofit is utilize existing meters which are either newly installed or represent a large investment on the part of the utility and are still in good working order. Unless otherwise stated, all conditions and requirements listed in

the water meter installation section shall still apply. There are two types of retrofits requested. The first involves the replacement of a direct reading type register with a new encoder register and radio transmitter. The second involves a meter which already has an encoder register which must be connected to a new radio transmitter. The utility will provide all registers and radio transmitters and other material necessary.

Standard Installation:

- All meters are installed either above ground in a shallow and readily accessible meter vault.
- There are no confined space requirements.

Register and Radio Transmitter Retrofit:

- Access water meter and verify meter serial number.
- Remove old register and record final reading and register placement (if multiple registers on a single meter the reading must be associated with a specific register i.e. mainline, bypass, etc.
- Install new encoder register and radio transmitter.
- Verify new register is turning.
- Record new register serial number and register placement.
- Record initial register reading.
- Remove all trash and debris and leave job site in the same condition in which it was found.
- Record GPS location of water meter.
- For completion all meters must be verified by reading with the utility's receiving equipment.

Radio Transmitter Retrofit:

- Access water meter and verify meter serial number.
- Disconnect old AMR device by cutting the wire.
- Install new radio transmitter by connecting wires.
- Remove all trash and debris and leave job site in the same condition in which it was found.

- Record GPS location of water meter.
- For completion all meters must be verified by reading with the utility's receiving equipment.

CONTRACTOR REQUIREMENTS

Scope:

In addition to the work described above it is required that the winning contractor meet the following requirements and provide the following.

General Requirements:

- All pertinent data for meter exchange must be collected electronically using handheld computers in the field. This data must include at a minimum: old meter serial number, final read from old meter, new meter serial number, initial reading from new meter, GPS location of the meter box.
- Pertinent data must be provided to the utility in both a written report format, and an electronic copy.
- Electronic data may be required in a specific format for the utility in order to upload data into the utility billing system for paperless transfers. The utility will be responsible for all costs associated with the interface into utility billing.
- All data will be supplied to the utility weekly or upon completion of each cycle/route as provided by the utility.
- A project manager shall be assigned to interact with the utility and oversee all aspects of the installation for the contractor.
- Project manager will be required to provide, on a reoccurring pre-determined basis, reports which may include but are not limited to number of available installations in a cycle/route, number of completed installations, number of "hard to access" accounts, number and location of non standard installations reported to utility, additional services, performed, activity reports requested by utility, summary of other important issues, projected upcoming work schedule and itinerary, etc.
- Project manager will provide weekly updates for installations performed, completed, and requests new route data in a timely fashion to necessitate smooth work flow.
- All field personnel must have photo ID cards displayed at all times. All vehicles and field employees used during installation must be registered with local police department.

- All employees must be uniformed with magnetic signs on vehicles displaying project logo.
- Winning firm must provide documentation to prove their ability to complete the installation requirements in a time and fashion acceptable to the utility. These documents may include but are not limited to past projects similar in scope and size which have been completed, a history of your firms experience with projects of this manner, references from other utilities, etc. The utility will review this documentation to decide the contractor's ability to complete the work requested in a time and fashion required before pricing is considered.
- Contractor shall be responsible for restoring job site to its original condition and shall be responsible for all repairs of damages directly caused due to improper installation procedures or negligence.
- All costs associated with the care and protection of the work area and all necessary precautions taken to prevent damage to existing lines and contractor personnel shall be considered incidental and included in the unit price provided.
- The utility reserves the right to immediately remove from the site any person felt to be an immediate safety risk. A request of this nature will be handled by a utility representative informing the project manager or contractor supervisor verbally or in writing.
- Any material provided by the contractor for installation must be an approved device, which meets the utility's specifications.
- All project workmanship will be to the satisfaction of the utility as stipulated by this contract and may be inspected by a utility representative before approval.
- All subcontractors to be utilized must be included in the initial bid response along with documentation supporting their ability to complete the work required. Responsibility for the performance of the contract remains with the bidder.

Exceptions/Clarifications:

Any bidder who cannot meet the minimum requirements as listed in this contract shall include on a separate document entitled Exceptions, a detailed list of which requirements they are unable to comply with.

Any bidder wishing to list separate assumptions, conditions, or additional items to be required by the utility shall include these on a separate document entitled Clarifications.

Pricing:

Please complete the following pricing schedule for standard installations. All meter exchanges are considered the be the entire meter. All Retrofit pricing is per register.

Meter Exchanges

Item	Description	Qty	Price (ea)	Total
1	5/8 inch - Standard Meter Exchange			
2	3/4 inch - Standard Meter Exchange			
3	1 inch - Standard Meter Exchange			
4	1-1/2 inch - Standard Meter Exchange			
5	2 inch - Standard Meter Exchange			

Retrofits

Item	Description	Qty	Price (ea)	Total
6	Register & Radio Retrofit			
7	Radio Only Retrofit			

Non Standard Installations

Item	Description	Qty	Price (ea)	Total
8	Hourly Wage Rate for Non Standard Work if requested			