



CITY OF  
**FOLSOM**  
DISTINCTIVE BY NATURE

## **REQUEST FOR BID PROPOSALS**

The City of Folsom Environmental & Water Resources Department  
is soliciting qualified bid proposals for:

City of Folsom Water Meter Replacement Program

### **BID CLOSING**

**November 4, 2022**

**at 10:00 A.M.**

Public Bid Opening immediately following in the  
City Council Chambers, 50 Natoma St. Folsom, CA 95630

**CITY OF FOLSOM**  
**REQUEST FOR BIDS FOR**  
**CITY OF FOLSOM WATER METER REPLACEMENT PROGRAM**  
**TABLE OF CONTENTS**

**NOTICE TO BIDDERS AND PROPOSAL FORMS**

NOTICE TO BIDDERS

SEALED PROPOSAL

CERTIFICATE OF AUTHORIZATION

NONCOLLUSION AFFIDAVIT

CALIFORNIA CODE SECTIONS

RESOLUTION OF DISPUTES REGARDING THE BIDDING PROCESS

**AGREEMENT**

SAMPLE CONTRACT FOR SUPPLIES/SERVICES

**SPECIAL PROVISIONS**

SP-1 TERMS OF CONTRACT

SP-2 DELIVERY

SP-3 BID PROPOSAL SUBMITTALS

**PROJECT SPECIFICATIONS**

5/8" – 2" POSITIVE DISPLACEMENT METER SPECIFICATION

1-1/2" – 10" TURBINE METER SPECIFICATION

2" – 8" COMPOUND METER SPECIFICATION

# **CITY OF FOLSOM**

## **NOTICE TO BIDDERS**

Sealed Proposals will be received by the Office of City Clerk for the City of Folsom at 50 Natoma Street, Folsom, CA 95630 up to the hour of **10:00 A.M. on November 4, 2022** and opened at **10:05 A.M.**, or as soon thereafter as business allows, at Folsom City Hall in the City Council Chambers for purchase of:

### **CITY OF FOLSOM WATER METER REPLACEMENT PROGRAM**

In accordance with the Specifications issued by the City of Folsom, bids must be submitted on printed forms supplied by the Environmental & Water Resources Department, enclosed in an envelope marked:

### **SEALED PROPOSALS FOR:**

### **CITY OF FOLSOM WATER METER REPLACEMENT PROGRAM**

The vendor must fill out cost information for each table on the bid form with a final bid price summing the costs of all three tables. Copies of the Sealed Proposal forms and accompanying documents (specifications) will be available starting **Friday October 7, 2022 at 2:00 P.M.** on the City of Folsom's website and at [www.CIPList.com](http://www.CIPList.com). Each Bidder must be added to the plan holder's list for the Bid, to receive addenda, and be eligible to bid the Project.

The Bid Proposal will provide the City of Folsom with meter sizes ranging from 5/8" to 10" in various configurations as outlined in the project bid documents for the City's potable water system for a time period of 3 years. It is anticipated that there will be up to approximately 175 meters of various types and sizes each year.

Written questions by potential bidders must be received by the City's representative by Wednesday, October 19 at 4:00 P.M. Email questions to Nathan Stites, City of Folsom EWR at [nstites@folsom.ca.us](mailto:nstites@folsom.ca.us).

The Contract will be awarded to the lowest responsive responsible bidder. This process is conducted by City in a "blind selection" format, i.e., without knowledge of the identity of any of the bidders before ranking of all bidders from lowest to highest has been determined. All awards will be made in City's best interest.

The right to reject any and all bids, or waive any informality in any bid received is reserved by the City Council.

Marcus Yasutake  
Environmental & Water Resources Dept. Director

**CITY OF FOLSOM**  
**SEALED PROPOSAL**

(MUST BE SIGNED BY BIDDER)

Sealed Proposals will be received not later than **10:00 A.M. on Friday November 4, 2022** at the Office of City Clerk, 50 Natoma Street, Folsom, California and opened at **10:05 A.M.**, or as soon thereafter as business allows at Folsom City Hall in the City Council Chambers, 50 Natoma Street, Folsom, California.

TO THE HONORABLE CITY COUNCIL:

The undersigned hereby proposes and agrees to furnish any and all required labor, material, transportation, and services for

**CITY OF FOLSOM WATER METER REPLACEMENT PROGRAM**

in the City of Folsom, County of Sacramento, California.

The work is to be done in strict conformity with the Contract Documents, at the following Lump Sum and/or Unit Prices:

**Table 1: 2022/23 Bid Form**

<b>ITEM NO.</b>	<b>ITEM</b>	<b>EST. QTY</b>	<b>UNIT</b>	<b>UNIT PRICE</b>	<b>TOTAL</b>
1	5/8" Positive Displacement Meter	10	EA		
2	3/4" Positive Displacement Meter	10	EA		
3	1-1/2" Positive Displacement Meter	10	EA		
4	2" Positive Displacement Meter	40	EA		
5	2" Compound Meter	5	EA		
6	3" Compound Meter	10	EA		
7	4" Compound Meter	10	EA		
8	6" Compound Meter	4	EA		
9	8" Compound Meter	2	EA		
10	1-1/2" Turbine Meter	20	EA		
11	2" Turbine Meter	35	EA		
12	3" Turbine Meter	8	EA		
13	4" Turbine Meter	5	EA		

ITEM NO.	ITEM	EST. QTY	UNIT	UNIT PRICE	TOTAL
14	6" Turbine Meter	2	EA		
15	8" Turbine Meter	1	EA		
16	10" Turbine Meter	1	EA		
<b>Table 1 Total:</b>					

**Table 2: 2023/24 Bid Form**

ITEM NO.	ITEM	EST. QTY	UNIT	UNIT PRICE	TOTAL
1	5/8" Positive Displacement Meter	10	EA		
2	3/4" Positive Displacement Meter	10	EA		
3	1-1/2" Positive Displacement Meter	10	EA		
4	2" Positive Displacement Meter	40	EA		
5	2" Compound Meter	5	EA		
6	3" Compound Meter	10	EA		
7	4" Compound Meter	10	EA		
8	6" Compound Meter	4	EA		
9	8" Compound Meter	2	EA		
10	1-1/2" Turbine Meter	20	EA		
11	2" Turbine Meter	35	EA		
12	3" Turbine Meter	8	EA		
13	4" Turbine Meter	5	EA		
14	6" Turbine Meter	2	EA		
15	8" Turbine Meter	1	EA		
16	10" Turbine Meter	1	EA		
<b>Table 2 Total:</b>					

**Table 3: 2024/25 Bid Form**

ITEM NO.	ITEM	EST. QTY	UNIT	UNIT PRICE	TOTAL
1	5/8" Positive Displacement Meter	10	EA		
2	3/4" Positive Displacement Meter	10	EA		
3	1-1/2" Positive Displacement Meter	10	EA		
4	2" Positive Displacement Meter	40	EA		
5	2" Compound Meter	5	EA		
6	3" Compound Meter	10	EA		
7	4" Compound Meter	10	EA		
8	6" Compound Meter	4	EA		
9	8" Compound Meter	1	EA		
10	1-1/2" Turbine Meter	20	EA		
11	2" Turbine Meter	35	EA		
12	3" Turbine Meter	8	EA		
13	4" Turbine Meter	5	EA		
14	6" Turbine Meter	2	EA		
15	8" Turbine Meter	1	EA		
16	10" Turbine Meter	1	EA		
<b>Table 3 Total:</b>					

Total Project Bid (Item Nos. 1 through 16) **OF ALL THREE TABLES** shall be: \$\_\_\_\_\_ Dollars.  
(spell out)\_\_\_\_\_

In determining the amount bid by each bidder, the City of Folsom (City) shall disregard mathematical errors in addition, subtraction, multiplication, and division that appear obvious on the face of the Proposal. When such a mathematical error appears on the Proposal, the City shall have the right to correct such error and to compute the total amount bid by said bidder on the basis of the corrected figure or figures. In the event of a discrepancy between the unit price and the calculated total bid amount, the unit price amount will take precedence over the calculated total bid amount.

If the Proposal contains neither the item price nor the total price for the item, then it shall be deemed incomplete and the Proposal shall be disregarded.

The undersigned represents and warrants that the undersigned has examined the proposal and the undersigned has reviewed and understands the specifications and other contract documents.

The undersigned has carefully checked all of the above figures and understands that the City of Folsom will not be responsible for any errors or omissions on the part of the undersigned in making up this bid.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

The bidder shall initial below that he has received the appropriate addenda and has incorporated the addenda into his bid.

Addenda

Received and Acknowledged

No. 1

\_\_\_\_\_

No. 2

\_\_\_\_\_

No. 3

\_\_\_\_\_

# CERTIFICATE OF AUTHORIZATION

(If Bidder is a Corporation or a Limited Liability Corporation)

STATE OF CALIFORNIA

COUNTY OF \_\_\_\_\_

I HEREBY CERTIFY that at a meeting of the Board of Directors of the \_\_\_\_\_, a corporation existing under the laws of the State of California, held on \_\_\_\_\_, 20\_\_\_\_, the following resolution was duly passed and adopted:

“RESOLVED, that \_\_\_\_\_,  
as \_\_\_\_\_ President of the Corporation, be and is hereby  
authorized to execute the Bid dated \_\_\_\_\_, 20\_\_\_\_, to the City of  
Folsom and this Corporation and that his/her execution thereof, attested by the  
Secretary of the Corporation, and with the Corporate seal fixed, shall be the  
official act and deed of this Corporation.”

I further Certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the Corporation this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Secretary

\_\_\_\_\_  
Corporate Officer

\_\_\_\_\_  
Corporate Address

(seal)



# CERTIFICATE OF AUTHORIZATION

(If Bidder is a Partnership)

STATE OF CALIFORNIA

COUNTY OF \_\_\_\_\_

I HEREBY CERTIFY that at a meeting of the Partners of the \_\_\_\_\_, a partnership existing under the laws of the State of California, held on \_\_\_\_\_, 20\_\_\_\_, the following resolution was duly passed and adopted:

“RESOLVED, that \_\_\_\_\_, as \_\_\_\_\_ of the Partnership, be and is hereby authorized to execute the Bid dated \_\_\_\_\_, 20\_\_\_\_, to the City of Folsom and this Partnership and that his/her execution thereof, attested by the \_\_\_\_\_ shall be the official act and deed of this Partnership.”

I further Certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Managing Partner

\_\_\_\_\_  
Partnership Address

# CERTIFICATE OF AUTHORIZATION

(If Bidder is a Joint Venture)

STATE OF CALIFORNIA

COUNTY OF \_\_\_\_\_

I HEREBY CERTIFY that at a meeting of the Principals of the \_\_\_\_\_, a joint venture existing under the laws of the State of California, held on \_\_\_\_\_, 20\_\_\_\_, the following resolution was duly passed and adopted:

“RESOLVED, that \_\_\_\_\_, as \_\_\_\_\_ of the Joint Venture, be and is hereby authorized to execute the Bid dated \_\_\_\_\_, 20\_\_\_\_, to the City of Folsom and this Joint Venture and that his/her execution thereof, attested by the \_\_\_\_\_ shall be the official act and deed of this Joint Venture.”

I further Certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the Joint Venture this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Managing Principal

(seal)

\_\_\_\_\_  
Joint Venture Address

# NONCOLLUSION AFFIDAVIT

To be Executed by Bidder and Submitted with Bid

STATE OF CALIFORNIA

COUNTY OF \_\_\_\_\_

\_\_\_\_\_, being first duly shown, deposes and says that he or she is \_\_\_\_\_ of \_\_\_\_\_, the party making the forgoing Bid that the Bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the Bid is genuine and not collusive or sham; that the Bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham Bid, or that anyone shall refrain from bidding; that Bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the Bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the Bid are true; and further, that the Bidder has not, directly or indirectly, submitted his or her Bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham Bid.

Signed: \_\_\_\_\_

Title: \_\_\_\_\_

Subscribed and sworn to before me this

\_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_\_

(seal)

\_\_\_\_\_  
*Notary Public*

# CALIFORNIA CODE SECTIONS

## **Public Contracts Code §7103.5. Unfair business practices claim; assignment by contractor to awarding body**

(a) As used in this section:

(1) “Public works contract” means a contract awarded through competitive bids by the state or any of its political subdivisions or public agencies, on whose behalf the Attorney General may bring an action pursuant to subdivision (c) of Section 16750 of the Business and Professions Code, for the erection, construction, alteration, repair, or improvement of any structure, building, road, or other improvement of any kind.

(2) “Awarding body” means the state or the subdivision or agency awarding a public works contract.

(b) In entering into a public works contract or subcontract to supply goods, services, or materials pursuant to a public works contract, the contractor or subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the contractor, without further acknowledgment by the parties.

(c) Subdivision (b) shall be included in full in the specifications for the public works contract or in the general provisions incorporated therein and shall be included in full in the public works contract or in the general provisions incorporated therein.

Added Stats 1978 Ch 414 § 1.

## **Government Code §4552. Assignment by bidder to purchasing body of rights under federal law arising from purchases pursuant to bid**

In submitting a bid to a public purchasing body, the bidder offers and agrees that if the bid is accepted, it will assign to the purchasing body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, materials, or services by the bidder for sale to the purchasing body pursuant to the bid, Such assignment shall be made and become effective at the time the purchasing body tenders final payment to the bidder.

The preceding provisions of this section shall be included in full in any specifications for the public purchase and shall be included in full in the bid agreement or general provisions incorporated into the bid agreement.

Added Stats 1978 Ch 414 § 1.

# **RESOLUTION OF DISPUTES REGARDING THE BIDDING PROCESS**

The lack of a prompt procedure to resolve disputes regarding the bidding process would impair the City's ability to carry out its purpose of constructing this project in a timely manner. Therefore, to the maximum extent authorized by law and notwithstanding any other procedures specified in documents referenced herein, all disputes and/or protests regarding the bidding process shall be subject to the following procedure. In submitting a bid to the City for this project, the bidder agrees to comply with and to be bound by this procedure.

1. Within five days after the opening of bids, bidder shall provide a written notice to the City of any and all mistakes regarding the bid for which a bidder requests relief. The City shall not consider any requests for relief due to mistake if notice is not received within the specified time period.
2. All bidders shall be provided with notice of the date and time of the City Council meeting at which the award of the contract for this project shall be considered. All bidders will be provided with an opportunity to bring to the City Council's attention disputes and/or protests regarding the bidding process. No bidder may bring any action or proceeding challenging the bidding process unless the alleged grounds for the dispute and/or protest are presented to the City Council before or during the meeting referenced above, and before action by the City Council on award of the contract.
3. Any bidder complying with the above procedure may bring an action within sixty (60) days from the action of the City Council, in accordance with Section 860 of the California Code of Civil Procedure, to determine the validity of the City Council's action on the award of the contract. The City shall be a defendant and shall be served with the summons and complaint in the action in the manner provided by law for the service of a summons in a civil action. In any such action the summons shall be in the form prescribed in Section 861.1 of the California Code of Civil Procedure except that in addition to being directed to "all persons interested in the matter of [specifying the matter]," it shall also be directed to the City. If the bidder bringing such action fails to complete the publication and such other notice as may be prescribed by the court in accordance with Section 861 of the California Code of Civil Procedure and to file proof thereof in the action within 60 days from the filing of his complaint, the action shall be dismissed on the motion of the City unless good cause for such failure is shown by the bidder.

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Contractor

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Date

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Signature



CITY OF  
**FOLSOM**  
DISTINCTIVE BY NATURE

## **CITY OF FOLSOM**

### **Environmental and Water Resources Department**

### **PURCHASE AGREEMENT**

This Agreement is entered into as of \_\_\_\_\_ (“Effective Date”) by and between the City of Folsom, a Municipal Corporation, hereinafter referred to as "City" and \_\_\_\_\_, hereinafter referred to as "SELLER."  
(Sole Proprietorship, Partnership, Corporation, Limited Liability Company)

#### WITNESSETH:

WHEREAS, City desires to purchase various types and sizes of Cold Water Meters; and,

WHEREAS, Seller has proposed to sell the requested products.

NOW, THEREFORE, in consideration of the mutual promises hereinafter set forth, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged and agreed, City and Seller agree as follows:

#### **1. Products**

A. Seller agrees to sell and City agrees to buy the products specified in Exhibits A, in strict accordance with all of the terms and conditions specified in Exhibit A.

B. Seller agrees to sell and City agrees to buy the products specified in Exhibit A in the quantities specified in Exhibit A.

#### **2. Term of Agreement**

The term of this Agreement shall commence on the Effective Date and shall continue until all products procured under this Agreement have been delivered, all services provided for in this Agreement have been performed, and all warranties on the products procured have expired.

#### **3. Delivery**

A. All shipments are F.O.B. destination with freight prepaid. Seller assumes full responsibility and all risks of loss for all transportation, transportation scheduling, packing, handling, insurance, and other services associated with delivery of all products and/or services deemed necessary under this Agreement. The City reserves the right to request and receive a copy of the freight bill of lading on all purchases.

B. All products procured through this Agreement shall be delivered to the City Water Treatment Plant, 194 Randall Drive, Folsom, CA 95630. An alternate delivery site may be acceptable upon the City's prior written approval.

#### **4. Time for Delivery**

City and Seller agree that time is of the essence in the delivery of products procured through this Agreement. Seller agrees to deliver the products at the time(s) specified in Exhibit A. Deviations from the time schedule stated may only be made with the prior written approval of the Director of the Environmental and Water Resources Department, or his authorized representative.

#### **5. Compensation**

A. Compensation for the products procured through this Agreement shall be paid as specified in Exhibit A, on a not-to-exceed basis. The maximum compensation for the products specified in Exhibit A, including any and all costs or expenses, is \$ [REDACTED]. No additional charges shall be allowed unless specified in this Agreement, including but not limited to: equipment, options, charges for transportation, fuel surcharges, containers, packing, or delivery, federal, state, and local taxes, regulatory fees or charges, dealer preparation expenses, insurance, trainings, or pre-sale and post-sale services associated with the products procured through this Agreement.

B. Payment terms are Net 30 days unless otherwise stated in this Agreement. All cash discounts shall be taken and computed from the date of delivery or acceptance of the products, or from the date of receipt of the invoice, whichever is later.

C. The City shall have the right to review all books and records kept by the Seller and any subcontractors or agents in connection with the products procured under this Agreement. The City shall withhold payment for any expenditure not substantiated by Seller's or subcontractor's or agent's books and records. In the event the City has made payment for expenditures that are not allowed, as determined by the City's audit, the Seller shall reimburse the City for the amount of the disallowed expenditures within 10 calendar days of notice from City. City shall make no payment for any products not specified in Exhibit A of this Agreement unless such additional products and the price thereof is agreed to in writing and approved by the City prior to the time that such additional products is delivered.

#### **6. Excise Tax**

The City of Folsom, as a government entity, is exempt from the payment of federal excise tax. An exemption certificate will be issued upon request. If federal excise tax is applicable to the transaction, it shall be so stated and excluded from the price.

**7. Sales and Use Tax**

The City of Folsom is not exempt from paying sales tax. Sales tax shall be shown on the invoice as a separate line item. On out-of-state purchases, Seller shall list their Use Tax Permit Number issued by the California Board of Equalization, which authorizes the Seller to charge and collect California sales tax.

**8. Invoicing, Payment, Notices**

A. Seller shall submit an invoice for the products procured under this Agreement. Invoices shall include the following information: description of products procured; item numbers; sizes; quantities; unit prices; sales tax; credits, if any; and extended totals. Bill of lading number and weight of the shipment shall be shown for all shipments on Government Bills of Lading. Unless otherwise specified, payment will be made on partial deliveries accepted by the City when the City determines, in its sole discretion, that the amount due on such partial deliveries so warrants.

B. Seller shall transmit invoices and any notices required by this Agreement, to City as follows:

Email address: [apinvoices@folsom.ca.us](mailto:apinvoices@folsom.ca.us)

Attn: Environmental and Water Resources.

C. City shall transmit payments on invoiced amounts, and any notices required by this Agreement to Seller as follows:

[Redacted]  
[Redacted]  
[Redacted]  
[Redacted]  
Telephone:

**9. Inspection and Acceptance**

Inspection and acceptance shall be at the destination (the "Ship To" address as stated in section 3(B), above), unless otherwise stated. All risks of loss shall be borne by the Seller until delivery and acceptance by the City. City reserves all rights to reject any nonconforming products and/or services delivered under this Agreement, in the City's sole and complete discretion, and Seller shall impose no charge for the rejected products and/or services. Notwithstanding the requirements for any City inspection and test contained in specifications applicable to this Agreement, except where specialized inspections or tests are specified to be performed solely by the City, Seller shall perform or have performed the inspections or tests required to substantiate that the products and services provided pursuant to this Agreement conform to the drawings, specifications, and other contract requirements, including, if applicable, the technical requirements for the manufacturer's part number(s) specified herein. The cost of storing rejected material and the cost for shipping rejected material back to the point of origin shall be borne by Seller.



**10. Warranty**

- A. Seller agrees that the products and/or services provided pursuant to this Agreement shall be covered by the most favorable commercial warranties Seller gives to any customer for such products and/or services, and that the rights and remedies provided herein are in addition to and do not limit any rights afforded to the City at law or in equity or by any other clause of this Agreement.
- B. Subject to the foregoing provisions, Seller's commercial warranty information for the products provided pursuant to this Agreement is attached as Exhibit C.
- C. Notwithstanding any provision to the contrary, all products sold under this Agreement shall, at minimum, be warranted free from manufacturing and material defects for a period of one year after delivery. Any product that becomes defective during this period shall be repaired or replaced at Seller's sole cost and expense. The determination of whether to have the defective product(s) repaired or replaced shall be at City's sole discretion.

**11. Variations in Quantity**

No variation in quantity of any item called for by this Agreement will be accepted unless such variation has been approved in advance by the City in writing.

**12. Default by Seller**

In the case of default by Seller, the City reserves the right to procure the products or services from other sources and may deduct from any monies due, or that may hereafter become due to Seller, the difference between the price named in this Agreement and the actual cost thereof to the City. Prices paid by the City shall be considered the prevailing market price at the time such purchase is made. City reserves all rights to pursue a defaulting Seller for all increased expenses and damages resulting from procurement of replacement products due to the Seller's default.

**13. Professional Quality**

All products procured pursuant to this Agreement shall be manufactured, prepared, shipped, and delivered in a professional manner and such products shall conform to the standards of quality and all other professional standards observed by a competent retailer of such products. The products procured pursuant to this Agreement shall comply with all current federal, state, and local laws and all other applicable laws or regulations.

**14. Licenses, Permits, Etc.**

Seller represents and warrants to City that it has all licenses, permits, qualifications and approvals of whatsoever nature legally required for Seller to furnish the products procured under this Agreement. Without limiting the generality of the foregoing, if Seller is an out-of-state corporation, Seller represents and warrants that it possesses a valid certificate to transact business in the State of California issued by the California Secretary of State pursuant to Section 2105 of

the California Corporations Code. Seller represents and warrants to City that Seller shall, at its sole cost and expense, obtain and/or keep in effect at all times during the term of this Agreement any licenses, permits, and approvals which are legally required for Seller to furnish the products procured under this Agreement.

**15. Indemnification**

Seller shall defend, indemnify, protect, and hold harmless the City, its officers, employees, and agents, from and against any and all claims, actions, causes of action, costs, proceedings, damages, and other liabilities, including attorney's fees, including but not limited to claims for death or injury to persons, or damage to property caused or allegedly caused by any defect(s) in the product(s) procured under this Agreement, or otherwise resulting from intentional or negligent acts, errors, or omissions of Seller or Seller's officers, employees, volunteers, and agents during performance of this Agreement, or from any violation of any federal, state, or municipal law or ordinance, to the extent caused, in whole or in part, by the willful misconduct, negligent acts, or omissions of Seller or its employees, subcontractors, or agents, or by the quality or character of Seller's work, or resulting from the Seller's or the City's use of any copyrighted, or non-copyrighted composition, process, patented, or non-patented invention, article, or appliance furnished or used in association with this Agreement, and Seller agrees to defend, at Seller's sole expense, any and all actions brought against the City and/or Seller because of the unauthorized use of any such composition, process, invention, article, or appliance. It is understood that the duty of Seller to indemnify and hold harmless includes the duty to defend as set forth in Section 2778 of the California Civil Code.

**16. Funding Availability**

- A. This Agreement is subject to the budget and fiscal provisions of the Charter and Municipal Code of the City of Folsom.
- B. This Agreement is subject to the City's availability of funds.
- C. Notwithstanding any provision to the contrary, the City's payment obligation under this Agreement shall not at any time exceed the amount of funds appropriated and approved for such purpose by the Folsom City Council.

**17. Termination**

Either party may terminate this Agreement by providing 30 days' prior written notice to the other party that the Agreement is terminated.

**18. Conflict of Interest**

Seller certifies that it has disclosed to City any actual, apparent, or potential conflicts of interest that may exist relative to the services to be provided pursuant to this Agreement. Seller agrees to advise City of any actual, apparent or potential conflicts of interest that may develop subsequent to the date of execution of this Agreement. Seller further agrees to complete any statements of economic interest required by either City ordinance or State law.

Neither this Agreement, any duties or obligations under this Agreement, nor the intention or expectations of the City will cause the Seller to be a “public official” as that term is used in California Government Code section 87100. The City and Seller agree that the Seller is not a “public official” or “participating in governmental decisions” as those terms are used in section 87100. The City and Seller also agree that no actions and opinions necessary for the performance of duties under this Agreement will cause the Seller to be a “public official” or “participating in a governmental decision” as those terms are used in section 87100. Nothing in this Agreement shall be construed to be inconsistent with the Seller’s status as an independent contractor.

**19. Records**

Seller shall maintain records, books, documents and other evidence directly pertinent to the performance of work under this Agreement in accordance with generally accepted accounting principles and practices.

**20. California Public Records Act**

Both parties recognize that the City is a public entity subject to the requirements of the California Public Records Act (“PRA”). Seller understands that the release of any written, printed, graphic, or electronically recorded information or documents delivered by Seller to the City will be governed by the PRA and agrees that the release of such material pursuant to the PRA shall not require Seller’s prior consent or approval.

**21. Counteroffers and Different Terms and Conditions**

The City’s subsequent performance shall not be construed as either acceptance of additional and/or different terms and conditions or a counteroffer by Seller, nor shall the City’s subsequent performance be viewed as acceptance of any provision of the Uniform Commercial Code, as adopted by any state, that is contrary to the terms of this Agreement. All products supplied by Seller shall conform to the applicable requirements of the Folsom City Charter, the Folsom Municipal Code, and all applicable state and federal laws, as well as the requirements contained herein. The California Commercial Code shall apply except as otherwise provided in this Agreement.

**22. Most Favored Customer**

Seller represents that the prices charged to the City in this Agreement do not exceed existing selling prices to other customers for the same or substantially similar items or services for comparable quantities under similar terms and conditions.

**23. Amendments**

Any modification or amendment of any provision of this agreement shall be in writing and must be executed by both parties hereto.

## **24. Miscellaneous Provisions**

A. **Attorneys' Fees:** In the event an action or proceeding is instituted by either party for the breach or enforcement of any provision of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees.

B. **Governing Law and Venue:** This Agreement shall be deemed to be made in, and the rights and liabilities of the parties, and the interpretation and construction of the Agreement governed by and construed in accordance with the laws of the State of California. Any legal action arising out of this Agreement shall be filed in and adjudicated by a state court in the County of Sacramento, State of California, and the parties to this Agreement consent to jurisdiction over their persons and over the subject matter or any such litigation in such court, and consent to service of process issued by such court.

C. **Severability:** If any term or provision of this Agreement, or the application thereof to any person or circumstance, is found to be void, voidable, invalid, or unenforceable by a court of competent jurisdiction under the laws of the State of California, any and all of the remaining terms and provisions of this Agreement shall remain binding and shall be enforced to the greatest extent permitted by law.

D. **Time:** All times stated herein or in any other contract documents are of the essence.

E. **Binding:** This Agreement shall bind and inure to the heirs, devisees, assignees and successors in interest of Seller and to the successors in interest of City in the same manner as if such parties had been expressly named herein.

F. **Survivorship:** Any responsibility of Seller for warranties, insurance, indemnity, record keeping or compliance with laws with respect to this Agreement shall not be invalidated due to the expiration, termination or cancellation of this Agreement.

G. **Waiver:** In the event that either City or Seller shall at any time or times waive any breach of this Agreement by the other, such waiver shall not constitute a waiver of any other or succeeding breach of this Agreement, whether of the same or any other covenant, condition or obligation. Waiver shall not be deemed effective until and unless signed by the waiving party.

H. **Compliance with Laws:** Seller shall be responsible for strict compliance with all applicable laws, regulations, court orders, and other legal requirements applicable to the products to be procured, the services to be performed, and/or the work to be accomplished pursuant to this Agreement.

I. **Conflicts:** In the event of a conflict between the terms and conditions in this Agreement and the terms and conditions in Exhibit A, Exhibit B, or Exhibit C, the terms and conditions set forth in this Agreement shall prevail.

**25. Entire Agreement**

This instrument and any attachments hereto constitute the entire Agreement between the City and Seller concerning the subject matter hereof and supersedes any and all prior oral and written communications between the parties regarding the subject matter hereof.

**26. Authority to Execute**

The person or persons executing this Agreement on behalf of the parties hereto warrants and represents that he/she/they has/have the authority to execute this Agreement on behalf of their entity and has/have the authority to bind their party to the performance of its obligations hereunder.

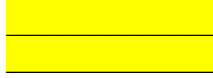
**27. Counterparts**

This agreement may be executed in one or more counterparts, each of which shall be deemed an original, and will become effective and binding upon the parties at such time as all of the signatories hereto have signed a counterpart of this Agreement. All counterparts so executed shall constitute one Agreement binding on all of the parties hereto, notwithstanding that all of the parties are not signatory to the same counterpart.

END OF TEXT - SIGNATURE PAGE FOLLOWS

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed.

**SELLER:**



*(If a corporation, must be signed by two officers of the corporation per Corporations Code section 313.)*

\_\_\_\_\_  
Date

\_\_\_\_\_  
Tax I.D. Number

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

**CITY OF FOLSOM, A Municipal Corporation:**

\_\_\_\_\_  
Date

\_\_\_\_\_  
Elaine Andersen, City Manager

ATTEST:

FUNDING AVAILABLE:

\_\_\_\_\_  
Christa Freemantle, City Clerk                      Date

\_\_\_\_\_  
Stacey Tamagni, Finance Director                      Date

ORIGINAL APPROVED AS TO CONTENT:

ORIGINAL APPROVED AS TO FORM:

\_\_\_\_\_  
Marcus Yasutake,                      Date  
Environmental and Water Resources Director

\_\_\_\_\_  
Steven Wang, City Attorney                      Date

**NOTICE: SIGNATURE(S) ON BEHALF OF SELLER MUST BE NOTARIZED.**

A certificate of acknowledgment in accordance with the provisions of California Civil Code section 1189 must be attached for each person executing this agreement on behalf of Seller. This section provides, at part (b): "Any certificate of acknowledgment taken in another place shall be sufficient in this state if it is taken in accordance with the laws of the place where the acknowledgment is made."

## **EXHIBIT A**

Includes the Bid Proposal, Notice to Bidders, Certificate of Authorization,  
Non-collusion Affidavit, CA Code Sections,  
Resolution of Disputes Regarding the bidding process, and Special Provisions.

## **EXHIBIT B**

**Successful Bidder's Complete Bid Proposal Submittals**



## EXHIBIT C

### Warranty Info

## **SPECIAL PROVISIONS**

### **SP-1 TERMS OF CONTRACT**

The contract period shall be for 3 years commencing upon approval the City of Folsom City Council. The quantities listed in the Sealed Proposal are yearly estimated quantities. The City reserves the right to increase or decrease the quantities of each meter type and size based on the City needs. The prices shall be fixed for the fiscal year outlined in the Bid Form.

### **SP-2 DELIVERY**

Delivery shall be made within 60 Days from receipt of order. All meters shall be delivered to 194 Randall Dr. Folsom, CA. 95630

### **SP-3 BID PROPOSAL SUBMITTALS**

Bidders shall provide the following information as part of the bid package to be considered a responsive bidder:

- SEALED PROPOSAL
- DETAILED METER LITERATURE AND TECHNICAL PERFORMANCE SPECIFICATIONS  
Include physical construction, head loss, low flow accuracy, and accuracy curves.
- MANUFACTURER'S RECOMMENDED ACCURACY TESTING PROCEDURE
- FIXED NETWORK SYSTEM COMPATIBILITY  
List all Fixed Network AMI Systems Meter register is compatible with.  
List all Fixed Network AMI Systems Meter register is not compatible with.
- AFFIDAVIT OF COMPLIANCE WITH CURRENT AWWA STANDARDS

# **CITY OF FOLSOM WATER METER REPLACEMENT PROGRAM**

## **TECHNICAL SPECIFICATIONS**

**COLD WATER METERS – DISPLACEMENT TYPE  
WITH ENCODER TYPE REGISTERS  
METER SIZES 5/8” TO 2”**

**GENERAL**

All cold water positive displacement meters, size 5/8” - 2”, shall be magnetic drive and conform to the Standard Specifications for Cold Water Meters” C700 latest revision issued by AWWA.

**NO/LOW LEAD FREE LEGISLATION**

Meters submitted in this proposal shall be compliant with NSF/ANSI 61 and NSF/ANSI 372. Meters shall be made of “lead free” alloy as defined by NSF/ANSI 61 and NSF/ANSI 372 and the Manufacturer shall provide documentation of compliance with NSF/ANSI 61 and NSF/ANSI 372. In addition, meter manufacturers are to meet all guidelines established by California Bill AB1953 and ANSI/NSF Standard 61 Annex F and Annex G requirements.

**TYPE**

Meters shall be magnetic-driven, positive displacement flat nutating disc or oscillating piston type. Multi-jet and single-jet meters are not acceptable under this specification. Meters shall be designed with a separate metering chamber which can easily be removed from the case.

**SIZE, CAPACITY, LENGTH**

The size, capacity, and meter lengths shall be as specified in AWWA Standard C700 (latest revision). The maximum number of disc nutations or piston oscillations is not to exceed those specified in AWWA C700 latest revision.

**MAINCASES**

The meter maincase and cover shall be cast from NSF/ANSI 61 and NSF/ANSI 372 certified lead free alloy containing a minimum of 75% copper. The serial number should be stamped or engraved on the maincase and the register. Maincase markings shall be cast raised and shall indicate size, model, direction of flow, and NSF/ANSI 61 certification. Plastic maincases are not acceptable. For 1-1/2” and 2” meters, the body shall have a built-in test port that permits inline testing.

Meters shall be provided with bronze bottom plate and held in place with stainless steel bolts with integral washer heads. Cases must be capable of withstanding working pressures of one hundred fifty (150) pound per square inch (psi).

All meters must be adaptable to a field programmable absolute encoder register without interruption of the customer’s service.

**DIRECT READ STANDARD REGISTER**

The register shall be of the straight reading sealed magnetic drive type and shall contain six (6) numeral wheels. Registers must be roll sealed and dry. All direct reading register cups shall be copper to prevent corrosion and be covered with a high-strength, impact-resistant flat glass lens to prevent breakage. The lens shall be positioned above the register box to allow for runoff of debris. The register lid shall overlap the register box to protect the lens. The register retaining ring shall be designed to absorb impact from the register. Register boxes and lids shall be of high-strength synthetic polymer or approved equivalent. All registers shall have the size, model, and date of manufacture stamped on the dial face. The dial shall have a red center sweep hand and shall contain one hundred (100) equally divided graduations at its periphery.

The register must contain a low flow indicator with a 1:1 ratio to disc nutations to provide leak detection.

Registers shall be secured to the maincase by means of a plastic tamperproof seal to allow for inline service

replacement. Register seal screws are only accepted when supplied with attached sealing wire to at least one bottom cap bolt with seal wire holes of not less than 3/32” in diameter.

### REGISTERS AND REGISTER BOXES

Register-box rings and lids shall be made of a copper alloy, engineered thermo plastic, or suitable synthetic polymer in accordance with AWWA C-700, as most recently revised.

Register must conform to AWWA Standard C-707, as most recently revised.

Under no circumstance shall a product contain parts that are not interchangeable with new and replacement/repair parts by meter size, model and manufacturer. All registers of a particular meter size, model and manufacturer shall be identical and completely interchangeable and field replaceable without interruption or service.

The register must be of the straight reading type and have a minimum of six odometer wheels that read in an active cubic foot (CF) increment, a combination testing pointer and leak detector on the dial face. The register odometer shall have non-contact wheel position sensing by “magnetic field position-sensing” to minimize friction, drag and wear. Encoders with a mechanical contact or optical sensor are not acceptable. The register shall read in cubic feet and be capable of direct visual reading, both at the meter and by remote reading utilizing a Meter Interface Unit (MIU) for remote based Automatic Meter Reading (AMR). Communication will be to a Zenner Stealth Reader MIU or Badger Orion water endpoint communicating through a Sensus protocol. Direct read numeral wheel assembly shall be located in the middle of the dial face with reading obtained from left to right using standard notation (billions, millions, and thousands separators and decimal points). All reduction gearing shall be contained in a permanently hermetically sealed, tamperproof enclosure made of a corrosion resistant material.

The register shall be secured to the main case by means of a tamper resistant locking screw so that non-utility personnel cannot remove the register. The register must be field replaceable by utility personnel with the use of a manufacturer-supplied field tool.

The meter register shall be provided with three terminal connections. The connection between the meter register and the MIU shall be accomplished with the use of all three terminal connections by using a 3-conductor NICOR cable terminated with a NICOR Hydroconn AMR Series III, or equivalent, in-line male connector with female metal contacts. Connector shall be provided with a Hydroconn AMR Series III End Cap. The register cable shall be a minimum of 24” as measured from the surface of the register to the end of the connector. The NICOR wire shall be permanently potted to the meter register in the factory and wired to communicate with a Sensus protocol. To accomplish, this the following wiring convention is required:

<u>Wire Color</u>	<u>Register Output</u>
Black	Ground/common/return
Red	Power/Clock
Green	Encoder Data

Upon interrogation, the register will transmit an odometer reading with a minimum of 6 digits and a register identification number. The register identification number is to be factory set and non-programmable to protect the integrity of the system by eliminating possible programming duplication of the identification number in the field. All registers shall be capable of reading to one (1) cubic foot increments.

## **MAGNETIC COUPLING**

The motion of the measuring device will be transmitted to the sealed register through the use of a direct magnetic drive without any intermediate coupling. Meters with stuffing boxes, spindles, and packing glands will not be acceptable.

## **HEADLOSS**

Meters shall conform to the most recent AWWA C-700 revisions for head loss standards.

## **MEASURING CHAMBER**

The measuring chamber shall be of a two-piece oscillating piston or nutating disc design. Measuring chambers shall be manufactured from an engineered polymer and not be cast as part of the main case. The measuring chamber shall operate against a replaceable control roller, allowing for repair per AWWA C-700. The measuring chamber outlet port shall be sealed to the maincase outlet port by means of an O-ring gasket. All wear prone surfaces shall be reinforced with a nylon material and all measuring chamber assemblies shall operate smoothly and be capable of sustaining long-term accuracy. Piston oscillations or disc nutations must not exceed the figure specified in Table 1 of the latest AWWA C-700 revision for the size of the meter being supplied.

## **MAGNETIC COUPLING**

The motion of the measuring device readings will be transferred to the sealed register through the use of a direct magnetic drive without any intermediate coupling. Meters with stuffing boxes, spindles, and packing glands will not be acceptable.

## **STRAINERS**

All meters shall contain a removable, corrosion resistant strainer screen. Strainer screen shall be rigid, easily removable by field staff, and have an effective straining area of at two times that of the main case inlet.

## **PERFORMANCE**

To ensure accuracy, each meter must be accompanied by a factory test tag certifying the accuracy at the flows required by AWWA C700.

## **PRESSURE CAPABILITY**

Meters shall operate up to a working pressure of 150 psi without damage or leakage. Accuracy shall not be affected by pressure variation up to 150 psi.

## **PERFORMANCE WARRANTIES**

All bidders are required to submit their most current nationally published warranty statements for water metered maincases, registers, and measuring chambers.

## **PERFORMANCE WARRANTIES**

All bidders are required to submit their most current nationally published warranty statements for water metered maincases, registers, and measuring chambers.

## **REMOTE CAPABILITY OPTIONS**

All meters shall be equipped with encoder remote registers per AWWA C-707 and meet all AWWA C-700 performance standards.

## **PERFORMANCE WARRANTIES**

All bidders are required to submit their most current nationally published warranty statements for water meter maincases, registers, and measuring chambers.

**COLD WATER METERS – COMPOUND TYPE  
WITH ENCODER TYPE REGISTERS  
METER SIZES 2” TO 8”**

**GENERAL**

All cold water compound meters furnished, size 2” -8”, shall be new, magnetic drive with a sealed register and comply with AWWA Standard C-702 latest revision and the minimum specification herein.

**NO/LOW LEAD FREE LEGISLATION**

Meters submitted in this proposal shall be compliant with NSF/ANSI 61 and NSF/ANSI 372. Meters shall be made of “lead free” alloy as defined by NSF/ANSI 61 and NSF/ANSI 372 and the Manufacturer shall provide documentation of compliance with NSF/ANSI 61 and NSF/ANSI 372. In addition, meter manufacturers are to meet all guidelines established by California Bill AB1953 and ANSI/NSF Standard 61 Annex F and Annex G requirements.

**TYPE**

The meter must conform to American Water Works Standard C-702, as most recently revised, except as modified herein.

Meters shall be of the two register compound type with each register reporting flow through connected interacting measuring chambers. One chamber shall be of the turbine type for measuring high flows; the other a displacement chamber type for measuring low flows. An automatic valve mechanism shall direct the flows through the chambers so as to have them function within their normal designed limits. All flows shall first pass through the turbine chamber prior to passing through the displacement measuring chamber so as to ensure continuous registration during low flow to high flow measurement.

Meters shall be designed for the easy removal of internal parts so as to not disturb the connections to the pipeline, and for removal of the meter.

A tapped boss shall be provided near the outlet of the meter to provide for field testing without removal of the meter. The outlet shall be plugged with a bronze plug.

Components in contact with potable water shall be certified to comply with NSF/ANSI 61, NSF/ANSI 61 Annex G, and NSF/ANSI 372.

**SIZE**

The meter size must conform to American Water Works Standard C-702, as most recently revised.

**LENGTH**

The meter length must conform to American Water Works Association Standard C-702, as most recently revised.

**CAPACITY**

All meters supplied shall meet the minimum specifications listed for nominal meter capacities and head loss identified in AWWA C-702, Table 1 – Class II – compound meters.

**PERFORMANCE**

Meters shall have performance capabilities of continuous operation up to the maximum rate for continuous duty as

identified in AWWA – C-702 without affecting long-term meter accuracy caused by undue wear. Meters shall also be rated for 25% flow capacity in excess of the maximum rate for continuous duty for intermittent high flow capacity only.

### **STRAINERS**

External body strainers may be specified as part of the meter assembly package. When specified, the strainer body shall be constructed of material similar to the compound meter body. The strainer body shall contain a cover plate which is removable for inspection and debris removal. The strainer screen shall be externally accessible and easily removed without disturbing the pipeline setting of the meter assembly package. Use of or lack of a strainer shall not affect the meter warranty.

### **EXTERNAL FASTENERS**

All external fasteners on the meter shall be of stainless steel or non-ferrous material.

### **FLANGES**

Flanges on 2" size meters shall be oval faced in accordance with AWWA C-702 and drilled on the horizontal axis with a bolt circle diameter of 4-1/2". Flanges shall be an integral part of the main case and composed of the same material; flanges shall not be removable from the main case and shall not have slotted holes. Thickness shall be as required for Class 150 bronze round flanges.

Flanges for 3", 4", 6" and 8" size meters shall be of the Class 150 bronze round type in accordance with AWWA C-702, flat faced and shall conform to ANSI B16.24 for specified diameter. Companion flanges shall not be required for meter installation.

### **LENGTH**

The meter length, with required strainer included, must conform to American Water Works Association Standard C-702, as most recently revised.

### **CASE AND COVER**

All meters shall be made of copper alloy or of cast iron that is protected by corrosion-resistant coating, such as fusion bonded epoxy in accordance with AWWA C-702, as most recently revised.

All meters shall be capable of resisting distortion under pressure up to one hundred fifty (150) psi and shall have identified on them, in raised characters, the size of the meter and direction of water flow through the meter. The manufacturer's serial number must be permanently stamped or engraved on the main case to aid in identification and must be visible so that it can be read from directly above the water meter.

The maincase shall be so constructed as to contain both the turbine and displacement measuring chambers. The measuring chamber must be accessible by removal of a single upper shell assembly. The measuring chamber operation shall not be inhibited by the operation of an external valve. Access to the measuring chamber shall be obtainable without disturbing the maincase as set in the pipeline. All meters shall include flanged ends.

The maincases shall be fitted with drain plugs for ease of removing water or other debris from the bottom of the maincase.

A tapped boss shall be provided near the outlet of the meter to provide for field testing without removal of the meter. The outlet shall be plugged with a bronze plug.



## METER REGISTER

Register must conform to AWWA Standard C-707, as most recently revised.

Under no circumstance shall product contain parts that are not interchangeable with new and replacement/repair parts by meter size, model and manufacturer. All registers of a particular meter size, model and manufacturer shall be identical and completely interchangeable.

The register must be of the straight reading type and have a minimum of eight odometer wheels that read in an active cubic foot (CF) increment and have a full test dial on the face of the register that records one-tenth of the right-most odometer wheel. The register odometer shall have non-contact wheel position sensing by “magnetic field position-sensing” to minimize friction, drag and wear. Encoders with a mechanical contact or optical sensor are not acceptable. The register shall read in cubic feet and be capable of direct visual reading, both at the meter and by remote reading utilizing a Meter Interface Unit (MIU) for remote based Automatic Meter Reading (AMR). Communication will be to a Zenner Stealth Reader MIU or Badger Orion water endpoint communicating through a Sensus protocol. Direct read numeral wheel assembly shall be located in the middle of the dial face with reading obtained from left to right using standard notation (billions, millions, and thousands separators and decimal points). All reduction gearing shall be contained in a permanently hermetically sealed, tamperproof enclosure made of a corrosion resistant material.

The meter register shall be provided with three terminal connections. The connection between the meter register and the MIU shall be accomplished with the use of all three terminal connections by using a 3-conductor NICOR cable terminated with a NICOR Hydroconn AMR Series III, or equivalent, in-line male connector with female metal contacts. Connector shall be provided with a Hydroconn AMR Series III End Cap. The register cable shall measure 24” from the surface of the register to the end of the connector. The NICOR wire shall be permanently potted to the meter register in the factory and wired to communicate with a Sensus protocol. To accomplish this, the following wiring convention is required:

<u>Wire Color</u>	<u>Register Output</u>
Black	Ground/common/return
Red	Power/Clock
Green	Encoder Data

Upon interrogation the register will transmit an odometer reading with a minimum of 6 digits and a register identification number. The register identification number is to be factory set and non-programmable to protect the integrity of the system by eliminating possible programming duplication of the identification number in the field. All registers shall be capable of reading to one (1) cubic foot increments.

## MAGNETIC COUPLING

The motion of the measuring device will be transmitted to the sealed register through the use of a direct magnetic drive without any intermediate coupling.

## REGISTER BOX

The register box shall be made of the same material as the maincase. The register box which encloses the register shall be mounted so as to be oriented for reading in any position.

### **REGISTER BOX SEALING**

The register shall be secured to the main case by means of a tamper resistant locking screw so that non-utility personnel cannot remove the register. The register must be field replaceable by utility personnel with the use of a manufacturer-supplied field tool.

### **DISPLACEMENT MEASURING CHAMBER**

The measuring chamber shall be a self-contained unit including a strainer, which can be firmly seated and removed as a unit. No part of this chamber shall be cast as part of the maincase. The measuring chamber shall be either a nutating disc or oscillating piston type and shall be composed of a suitable synthetic polymer. The piston, piston roller, and division plate shall be of rubber composition or an approved synthetic polymer. All other components of the measuring chamber shall be of corrosion-resistant materials such as stainless steel.

### **TURBINE MEASURING CHAMBER**

The turbine measuring chamber shall be suitable synthetic polymer construction and shall be secured by two stainless steel bolts. The turbine chamber shall be positioned so that water must essentially travel in a straight line path from the meter inlet to the meter outlet during the high flow operation. An adjustable tungsten carbide bearing shall be utilized to take up the turbine shaft end-play tolerance. The turbine shall be made of polypropylene, mounted on a replaceable #316 stainless steel shaft and rotate on roller bearings. The entire propeller assembly weight, while in operation, shall effectively be offset by magnetic suspension so that the rotating turbine components are essentially weightless in water.

### **AUTOMATIC VALVE**

The automatic valve shall be of the weighted, link-mounted, swing type. All moving shafts and linkage shall contain hard rubber bearings and sleeves. The valve and linkage shall be copper alloy; all shafts shall be #316 stainless steel. The valve shall be positioned in the meter so that water passing through it will follow a straight line path in passing from inlet to outlet. The valve will open at a pressure differential of two and one-half (2 ½) pounds per square inch (psi) or less. To gain access to the valve, only the upper portion of the meter's maincase need to be removed. Neither the displacement nor the turbine chamber need to be disturbed when the upper portion of the maincase is removed.

### **VALVE SEAT**

The valve seat assembly shall consist of a trapezoidal shaped rubber gasket, retained by a bronze or synthetic polymer seat. The valve seat assembly shall be secured by #316 stainless steel screws that are accessible from the maincase opening so as to facilitate easy access for inspection and ease of maintenance.

### **REGISTRATION**

The registration shall accurately be recorded through the normal test flow limits at not less than 98.5 percent or more than 101.5 percent of actual throughput. At changeover (the point when measurement transfers from one measuring chamber to the other) the registered rate shall not be less than 90 percent and not more than 103 percent. Span of changeover flow rates and changeover requirements shall be in accordance with the most recent revisions to AWWA C-702.

Accuracy at minimum test flow shall be at least 95 percent at the rate of flow specified in the following table:

Size	Normal Test Flow Limits – GPM	Minimum Test Flow - GPM
2"	1-160	$\frac{1}{4}$
3"	2-350	$\frac{1}{2}$
4"	3-600	$\frac{3}{4}$
6"	5-1,350	1-1/2
8"	16-1,600	2

#### **PRESSURE TEST**

Meters shall be guaranteed to operate successfully at a working pressure of 150 pounds per square inch, without leakage or damage to any component.

#### **REMOTE CAPABILITY OPTIONS**

All meters shall be equipped with encoder remote registers per AWWA C707 and meet all AWWA C701 performance standards.

#### **PERFORMANCE WARRANTIES**

All bidders are required to submit their most current nationally published warranty statements for water metered maincases, registers, and measuring chambers.

**COLD WATER METERS – TURBINE TYPE  
WITH ENCODER TYPE REGISTERS  
METER SIZES 1-1/2” TO 10”**

**GENERAL**

All meters furnished shall be new, first line quality, turbine type for cold-water service. Meter sizes shall be inclusive and comply with the Class II AWWA Standard C-701 latest revision and the minimum specification herein.

**NO/LOW LEAD FREE LEGISLATION**

Meters submitted in this proposal shall be compliant with NSF/ANSI 61 and NSF/ANSI 372. Meters shall be made of “lead free” alloy as defined by NSF/ANSI 61 and NSF/ANSI 372 and the Manufacturer shall provide documentation of compliance with NSF/ANSI 61 and NSF/ANSI 372. In addition, meter manufacturers are to meet all guidelines established by California Bill AB1953 and ANSI/NSF Standard 61 Annex F and Annex G requirements.

**TYPE**

The meter shall be a turbine meter, Class II - Inline Type and must conform to AWWA Standard C-701, as most recently revised, except as modified herein. Meters shall be designed with a separate measuring chamber which can easily be removed from the case. Meters shall be of the inline horizontal-axis type per AWWA Class II. Meters shall be certified to NSF/ANSI 61 and NSF/ANSI 372 requirements.

**CAPACITY**

All meters supplied shall meet the minimum specifications listed for nominal meter capacities and head loss identified in AWWA C-701, Table 1 – Class II – Inline (high velocity) type.

**PERFORMANCE**

Meters shall have performance capabilities of continuous operation up to the maximum rate for continuous duty as identified in AWWA – C-701 without affecting long-term meter accuracy caused by undue wear. Meters shall also be rated for 25% flow capacity in excess of the maximum rate for continuous duty for intermittent high flow capacity only.

**STRAINERS**

Meters specified herein of 1-1/2” through 10” shall be provided with a strainer. Internal strainer shall be integral and part of the meter’s maincase, and the strainer screen and cover plate shall be located on the meter’s inlet between the inlet flange and the measuring chamber. The type of strainer shall be acceptable provided the strainer screen is of the V-shaped design, is easily removal and is externally accessible without disturbing the meter’s pipeline setting or measuring chamber assembly for ease of maintenance.

Meters with external strainers shall be provided assembled and mated on the inlet of the meter package. These strainers shall be of V-shaped screen and have a cover plate for inspection and removal of debris without disturbing the pipeline or the meter’s measuring chamber.

**LENGTH**

The meter length, with required strainer included, must conform to American Water Works Association Standard C-701, as most recently revised.

**CASE AND COVER**

All meters shall be made of copper alloy or of cast iron that is protected by corrosion-resistant coating, such as fusion bonded epoxy in accordance with AWWA C-701, as most recently revised.

All meters shall be capable of resisting distortion under pressure up to one hundred fifty (150) psi and shall have

identified on them, in raised characters, the size of the meter and direction of water flow through the meter. The manufacturer's serial number must be permanently stamped or engraved on the main case to aid in identification and must be visible so that it can be read from directly above the water meter.

A tapped boss shall be provided near the outlet of the meter to provide for field testing without removal of the meter. The outlet shall be plugged with a bronze plug.

## **CONNECTIONS**

Maincases shall be flanged. 1-1/2" and 2" sizes shall be 2-bolt, oval flanged configuration. 3" through 10" sizes shall be round flanged, Class 125 type, flat faced per Table 3, AWWA C701.

Meters shall not require companion flanges for installation. All bolts, nuts, and gaskets shall be provided by the manufacturer for connection to the meter only.

## **METER REGISTER**

Registers shall be straight reading, indicating in cubic feet and shall allow for in-line serviceability. The register shall be secured to the main case by means of a tamper resistant locking screw so that non-utility personnel cannot remove the register or be affixed to the top cover by means of a plastic tamperproof seal pin that must be destroyed in order to remove the register. The register must be field replaceable by utility personnel with the use of a manufacturer-supplied field tool.

Register-box rings and lids shall be made of a copper alloy, engineered thermo plastic, or suitable synthetic polymer in accordance with AWWA C-701, as most recently revised.

Register must conform to AWWA Standard C-707, as most recently revised.

Under no circumstance shall product contain parts that are not interchangeable with new and replacement/repair parts by meter size, model and manufacturer. All registers of a particular meter size, model and manufacturer shall be identical and completely interchangeable.

The register must be of the straight reading type and have a minimum of eight odometer wheels that read in an active cubic foot (CF) increment and have a full test dial on the face of the register that records one-tenth of the right-most odometer wheel. The register odometer shall have non-contact wheel position sensing by "magnetic field position-sensing" to minimize friction, drag and wear. Encoders with a mechanical contact or optical sensor are not acceptable. The register shall read in cubic feet and be capable of direct visual reading, both at the meter and by remote reading utilizing a Meter Interface Unit (MIU) for remote based Automatic Meter Reading (AMR). Communication will be to a Zenner Stealth Reader MIU or Badger Orion water endpoint communicating through a Sensus protocol. Direct read numeral wheel assembly shall be located in the middle of the dial face with reading obtained from left to right using standard notation (billions, millions, and thousands separators and decimal points). All reduction gearing shall be contained in a permanently hermetically sealed, tamperproof enclosure made of a corrosion resistant material.

The meter register shall be provided with three terminal connections. The connection between the meter register and the MIU shall be accomplished with the use of all three terminal connections by using a 3-conductor NICOR cable terminated with a NICOR Hydroconn AMR Series III, or equivalent, in-line male connector with female metal contacts. Connector shall be provided with a Hydroconn AMR Series III End Cap. The register cable shall measure 24" from the surface of the register to the end of the connector. The NICOR wire shall be permanently potted to the meter register in the factory and wired to communicate

with a Sensus protocol. To accomplish this, the following wiring convention is required:

<u>Wire Color</u>	<u>Register Output</u>
Black	Ground/common/return
Red	Power/Clock
Green	Encoder Data

Upon interrogation the register will transmit an odometer reading with a minimum of 6 digits and a register identification number. The register identification number is to be factory set and non-programmable to protect the integrity of the system by eliminating possible programming duplication of the identification number in the field. All registers shall be capable of reading to one (1) cubic foot increments.

### **MAGNETIC COUPLING**

The motion of the measuring device will be transmitted to the sealed register through the use of a direct magnetic drive without any intermediate coupling.

### **MEASURING CHAMBER**

The measuring chamber shall be a self-contained unit attached to the cover for easy removal. The complete chamber shall consist of the measuring element, calibration device and totalizing register in one assembly. The measuring chamber shall be capable of operating within the low and normal accuracy limits identified in AWWA C-701 without recalibration when transferred from one maincase to another of same size. The measuring element shall be mounted on a horizontal stationary shaft with sleeve bearings and be designed to be weightless in water.

### **ROTORS**

The measuring impellers, vanes, or rotors for all meters shall be polypropylene, nylon, hard rubber, or engineered polymers and shall be mounted on a horizontal axis in the center of the measuring element with rotations of the turbine transmitted to the register by means of magnets. Straightening vanes of corrosion resistant material, as required, shall precede the rotor.

### **MAXIMUM OPERATING PRESSURE**

All meters shall operate without leakage, damage, or malfunction up to a maximum operating pressure of 150 psi.

### **REGISTRATION ACCURACY**

All meters supplied shall meet the minimum specifications listed for nominal meter accuracies as identified in AWWA C-701, Section 4.2.7 – Registration Accuracy.

### **REMOTE CAPABILITY OPTIONS**

All meters shall be equipped with encoder remote registers per AWWA C707 and meet all AWWA C701 performance standards.

### **PERFORMANCE WARRANTIES**

All bidders are required to submit their most current nationally published warranty statements for water metered maincases, registers, and measuring chambers.