CASHMERE CITY COUNCIL MEETING
MONDAY, APRIL 11, 2022, 6:00 P.M., CITY HALL

THE PUBLIC CAN ATTEND IN PERSON, CALL-IN OR LOG-IN TO ZOOM TO PARTICIPATE IN THE CITY COUNCIL MEETING. PLEASE CALL-IN OR LOGIN 5 MINUTES PRIOR TO MEETING.
To Join the Meeting Go To https://zoom.us
Meeting ID: 882 719 9871 Passcode: 788276
Audio Only: PH# 1-(253)-215-8782

AGENDA

CALL TO ORDER - ROLL CALL – FLAG SALUTE

PROCLAMATION
Proclaiming Friday, April 29, 2022 as Arbor Day

ANNOUNCEMENTS

PUBLIC COMMENT PERIOD (For Items Not on the Agenda)

APPROVAL OF AGENDA

CONSENT AGENDA
1. Minutes of March 28, 2022, Regular Council Meeting
2. Payroll and Claims Packet Dated April 11, 2022

BUSINESS ITEMS
1. JC Baldwin and Jim Kuntz – Update on Port District projects
2. Agreement for Kamstrup ALD Water Meter Purchase and Installation

PROGRESS REPORTS

ADJOURNMENT

TO ADDRESS THE COUNCIL, PLEASE BE RECOGNIZED BY THE MAYOR AND STATE YOUR NAME WHEN YOU BEGIN YOUR COMMENTS
Americans with Disabilities Act (ADA) accommodations provided upon request (48-hour notice required)

TREE CITY USA
An Arbor Day Foundation Program

★★★ OFFICIAL PROCLAMATION ★★★

WHEREAS in 1872, the Nebraska Board of Agriculture established a special day to be set aside for the planting of trees, ***and***

WHEREAS this holiday, called Arbor Day, was first observed with the planting of more than a million trees in Nebraska, ***and***

WHEREAS Arbor Day is now observed throughout the nation and the world, ***and***

WHEREAS trees can be a solution to combating climate change by reducing the erosion of our precious topsoil by wind and water, cutting heating and cooling costs, moderating the temperature, cleaning the air, producing life-giving oxygen, and providing habitat for wildlife, ***and***

WHEREAS trees are a renewable resource giving us paper, wood for our homes, fuel for our fires, and countless other wood products, ***and***

WHEREAS trees in our city increase property values, enhance the economic vitality of business areas, and beautify our community, ***and***

WHEREAS trees — wherever they are planted — are a source of joy and spiritual renewal.

NOW, THEREFORE, I, James Fletcher, Mayor of the City of Cashmere, do hereby proclaim April 29, 2022 as **ARBOR DAY** In the City of Cashmere, and I urge all citizens to celebrate Arbor Day and to support efforts to protect our trees and woodlands, ***and***

FURTHER, I urge all citizens to plant trees to gladden the heart and promote the well-being of this and future generations.

DATED THIS 11th day of April, 2022

Mayor _____

Arbor Day Foundation

MINUTES OF THE CASHMERE CITY COUNCIL MEETING
MONDAY MARCH 28, 2022, AT CASHMERE CITY HALL – In Person and Digital

OPENING
Mayor Jim Fletcher opened the regular City Council meeting at 6:00 p.m. at City Hall. Clerk-Treasurer Kay Jones took minutes.

Public can attend the council meeting in person, by phone or by digital conference.

ATTENDANCE

	Present	Not Present
Mayor:	Jim Fletcher	
Council:	John Perry Chris Carlson Shela Pistoresi - Digital Jayne Stephenson	Derrick Pratt
Staff:	Kay Jones, Clerk-Treasurer Steve Croci, Director of Operations	Chuck Zimmerman, City Attorney

APPROVAL OF AGENDA
MOVED by Councilor Carlson and seconded by Councilor Perry to approve the agenda as submitted. Motion carried unanimously.

CONSENT AGENDA
Minutes of March 14, 2022, Regular Council Meeting
Minutes of March 16, 2022, Special Council Meeting
Payroll and Claims Packet Dated March 28, 2022
Claims Direct Pay and Check #41803 through #41825 totaling $79,036.30

MOVED by Councilor Perry and seconded by Councilor Carlson to approve the items on the Consent Agenda. Motion carried unanimously.

PUBLIC HEARING ON PETITION FOR ANNEXATION OF 5701 EVERGREEN DR. (FURNESS ANNEXATION)
Mayor Fletcher opened the Public Hearing at 6:02 p.m. to receive public comment on the petition for annexation. With no public present the hearing was closed at 6:03 p.m.

Permit Specialist Tammy Miller gave a brief explanation of the Direct Petition Method process for annexation into the incorporated city limits of Cashmere. The proposed annexation is two parcels, 2.7 acres, located at 5701 Evergreen Drive, known as the Furniss annexation. The property is connected to the city's water and sewer utilities.

Annexations in Chelan County now require the approval of the Boundary Review Board, a new process this year. The City will need to submit a Notice of Intention application with the Boundary Review Board.

MOVED by Councilor Perry and seconded by Councilor Carlson to declare the intent of the City Council to approve the Furness annexation consistent with the provisions in the proposed annexation Ordinance and to direct City staff to process the Chelan County Boundary Review Board annexation application.

ORDINANCE NO. 1310 AUTHORIZING THE FURNISS ANNEXATION PURSUANT TO THE PETITION METHOD

After the Boundary Review Board process has been completed, the proposed Ordinance may be approved by the City Council.

PROGRESS REPORTS

The Mayor asked the City Council if they wanted to go back to public council meetings or continue with the Hybrid meetings. The consensus of the council was to continue with the Hybrid meetings, allowing the option to meet in person or zoom in if needed.

Mayor Fletcher reported that the Regional Library is interested in moving the City Library to Riverside Center. The Regional Library has funding to invest in capital improvements and they are working on a ten-year capital improvement plan. The Library will need to send a formal letter of interest.

The Mayor and Council discussed the results of the Community Forum. The three highest interest categories were multi-use trails, City pool and river access.

The Planning Commission will use the information from the Forum and the survey results to update the City's Comprehensive Park plan.

ADJOURNMENT

Mayor Fletcher adjourned the meeting at 6:35 p.m.

_____

James Fletcher, Mayor

Attest:

_____

Kay Jones, Clerk-Treasurer

AGREEMENT FOR KAMSTRUP ALD WATER METER PURCHASE AND INSTALLATION

THIS AGREEMENT FOR KAMSTRUP ALD WATER METER PURCHASE AND INSTALLATION ("Agreement") is entered into as of the Effective Date by and between the City of Cashmere, a Washington municipal corporation (the "City") and Correct Equipment, Inc., a Washington corporation (the "Contractor"), sometimes each individually referred to herein as a "Party" or collectively as the "Parties".

RECITALS

A. The City desires to update the water meters within the City water system to meters that can quickly detect leaks within the aging City water lines.

B. Contractor supplies and installs Kamstrup water meters that have acoustic leak detection ("ALD") which enables water meters to detect leaks within the City owned water system water lines.

C. The Kamstrup water meters meet the desired needs of the City.

D. On March 14, 2022, following significant research, the City Council declared Kamstrup to be the sole source provider of ALD meters that can detect leaks in the City water system and the City Council passed Resolution 02-2022 and authorized the Mayor and City staff to negotiate the terms of this Agreement for the purchase of Kamstrup ALD water meters from the Contractor, the exclusive provider of the Kamstrup ALD meters, to replace all meters within the City water system.

In consideration of the terms and conditions contained herein, the City and Contractor agree as follows:

AGREEMENT

1. RECITALS. The Recitals set forth above are incorporated herein by this reference as if set forth in full.

2. WATER METER INSTALLATION. Contractor shall replace all existing City water meters within the City water system with Kamstrup ALD Water Meters (the "Work"). The Work shall include labor and installation of all associated meter technology and components, including, but not limited to, AMI starter kit, leak detector subscription, AMI RF Collector Set, and antenna(s).

3. WSDOT STANDARD SPECIFICATIONS

3.1 Except as may be otherwise specifically provided in this Agreement, the definitions of terms used in this Agreement and the other provisions set forth in the Washington State Department of Transportation Standard Specifications for Road, Bridge, and Municipal Construction, Current Edition in effect at the time of approval of this Agreement by the City (hereinafter "WSDOT Standard Specifications"), shall apply to the standard of construction of the Work by the Contractor and shall apply with respect to all other matters not otherwise specifically identified in this Agreement.

3.2 The City is the Contracting Agency.

4. WORK, PAYMENT, GUARANTEE

4.1 The Contractor shall perform all Work and furnish all tools, materials and equipment for the construction for the Work in accordance with and as described in the April 4, 2022 quote provided by Contractor to the City via email entitled "flowIQ* RF meters with AMI system components with ALD" and all other plans and specifications on file with the City, including but not limited to the "Meter Installation Responsibilities," "Meter installation sample specification," and "AMI Specification with flowiQ 2200," which were sent to the City via email on April 4, 2022 are the "Scope of Work." The aforementioned documents are kept on file with the City and are by this reference incorporated herein and made a part of this Agreement. The quote amount is inclusive of all applicable taxes, including Washington State Sales taxes and is: $ 699,383.90 Reprinted copy on Monday JF

4.2 The City shall pay the Contractor for performance of the Work after the Work has been completed in accordance with the quote and specifications on file with the City and any changes approved by the Parties thereto. In no event shall the City pay for equipment not installed as part of the Work, even if Contractor ordered said extra equipment on behalf of the City. In the event only one (1) Ready Collector Set, Kamstrup AMI RF Collector Set, is determined to be needed by the City and Contractor, then Contractor shall not charge the City for the additional, quoted, Ready Collector Set, including installation thereto which shall result in a total quote amount reduction of $10,830.00 (including tax). In the event any other work is not needed or performed as described in the April 4, 2022 quote, the Parties shall agree in writing to a revised cost for the Work reducing the quote.

4.3 The City shall be responsible for locating all meter boxes within the City and uncovering the same, if necessary. All outdoor meters (whether residential or commercial) shall be flagged and marked by paint in the right-of-way adjacent to the meter indicating the meter location. The City shall provide to Contractor with direction on how to locate all meters in the City. If the City fails to notify the Contractor of a meter location and mark the same prior to the completion for the Work, Contractor shall not be responsible for installing that meter. In the event a meter is located in a City right-of-way, it shall be the sole responsibility of the City to coordinate and staff traffic control for the replacement of such meters until the replacement is complete.

4.3.1 The City shall advise citizens of the City of the Work and that water to each residence impacted by the Work will be turned off temporarily to complete the meter replacement.

4.4 The Work shall begin as soon as possible after execution of this Agreement and the issuance of a notice to proceed by the City. The Work shall be completed within 90 calendar/working days from the date of issuance of the notice to proceed by the City.

4.4.1 If the Parties hereafter agree in writing to allow Contractor more than sixty (60) days to complete the Work, the City shall make payments to Contractor in monthly installments beginning after the first ninety (90) days not to exceed the cost of labor and materials used during each month. To accomplish installment payments, the Contractor shall invoice the City for the labor and materials used during the month of Work. The City shall pay all Contractor invoices for installment payments within thirty (30) days of receipt.

4.5 The Contractor shall provide and pay for all equipment and labor required to construct and complete the Work. The Contractor and the manufacturer of the water meters, Kamstrup Water Metering, LLC ("Kamstrup"), shall warranty the completed Work for all parts and labor for a period of ten (10) years following the Completion Date of the Work, except as may be otherwise specifically modified by the City Mayor. In the event the City invokes the warranty described in this Section 4.5, Contractor shall be responsible for coordinating fixing, and installing all defective Work. Prior to issuance of a notice to proceed with the Work by the City to the Contractor, Contractor shall provide the City with the warranty written commitment of Kamstrup to honor the warranty provided in this Section 4.5. The specific warranties as provided by Kamstrup, as stated in the "AMI Specification with flowiQ 2200" document, which may be longer than ten (10) years shall apply when those warranties provide more coverage or are lengthier than ten (10) years.

4.6 Contractor shall be responsible for all temporary functions associated with the Work, including but not limited to, lighting, wiring protection, hoisting, scaffolding, rigging, flaggers, drinking water, dust control, storage, ventilation, and heating.

5. PREVAILING WAGE REQUIREMENT

5.1 The Contractor shall pay prevailing wages for all Work and shall comply with Chapters 39.12 and 49.28 RCW. Notice of intent to pay prevailing wages and prevailing wage rates for the Work must be posted for the benefit of workers. At the completion of the Work the Contractor shall submit Affidavits of Wages Paid to the Department of Labor and Industries. Final payment on the Agreement shall be withheld until the City receives a release from Department of Labor and Industries, Department of Revenue and the Employment Security Department.

6. CONTRACT BOND

6.1 The Contractor shall provide a Contract Bond, in a form acceptable to the City, for the faithful performance and payment of all its obligation under this Agreement. The Contract Bond

shall remain in effect for the repair and replacement of defective equipment, materials, and workmanship and payment of damages sustained by the City on account of any such defects, discovered within two (2) years after the Completion Date. The limited time the Contract Bond is required shall not limit the ten (10) year warranty work as described above in this Agreement.

7. PERMITS AND TAXES

7.1 Contractor shall secure and pay for all permits, fees and licenses necessary for the performance of the Work. Contractor shall pay any and all applicable federal, state and municipal taxes, including sales taxes associated with performance of the Work.

8. INDEMNIFICATION

8.1 Contractor shall defend, indemnify, and hold harmless the City, its elected officials, officers, employees, engineers, agents, and volunteers from and against all demands, claims, losses, injuries, damages, liabilities, suits, judgments, attorneys' fees and costs, and other expenses of any kind incurred by the City on account of, relating to, or arising out of Contractor's Work under this Contract (including all warranty Work), except to the extent such injuries or damages are caused by the negligence of the City.

9. INSURANCE

9.1 The Contractor shall procure and maintain for the duration of the Work, and for a period of three (3) years thereafter, insurance against claims for injuries to persons or damage to property which may arise from or in connection with the performance of the Work by the Contractor, its agents, representatives, employees, or subcontractors.

9.2 Contractor's maintenance of insurance as required by this Agreement shall not be construed to limit the liability of the Contractor to the coverage provided by such insurance, or otherwise limit the City's recourse to any remedy available at law or in equity.

9.3 Contractor shall maintain insurance of the types described below:

9.3.1 Automobile Liability insurance covering all owned, non-owned, hired and leased vehicles. Coverage shall be written on Insurance Services Office (ISO) form CA 00 01 or a substitute form providing equivalent liability coverage.

9.3.2 Commercial General Liability insurance shall be written on ISO occurrence form CG 00 01 and shall cover liability arising from premises, operations, stop gap liability, independent contractors, products-completed operations, personal injury and advertising injury, an liability assumed under an insured contract. The Commercial General Liability insurance shall be endorsed to provide the Aggregate Per Project Endorsement ISO form CG 25 03 11 85. There shall be no endorsement or modification of the Commercial General Liability insurance for liability arising from explosion, collapse or underground property damage. The City shall be named as an additional insured under the Contractor's Commercial General Liability insurance

policy. The proof of insurance and identification of the City as an additional insured shall be provided on a form acceptable to the City prior to City issuance of a notice to proceed with the Work.

9.4 Contractor shall maintain the following minimum insurance limit:

9.4.1 Automobile Liability insurance with a minimum combined single limit for bodily injury and property damage of $2,000,000 per accident.

9.4.2 Commercial General Liability insurance shall be written with limits no less than $2,000,000 each occurrence, $2,000,000 general aggregate and a $2,000,000 products-completed operations aggregate limit.

9.5 Insurance shall be placed with insurers acceptable to the City.

10. GENERAL PROVISIONS

10.1 Venue for any legal action arising out of the existence of this Agreement shall be in Chelan County Superior Court. Except as specifically provided otherwise herein in Section 8.1 of this Agreement, in any legal action commenced by either Party to this Agreement, each Party shall pay its own attorney's fees and costs, regardless or the outcome.

10.2 This Agreement contains the entire agreement between the Parties with respect to the subject matter hereof and supersedes all prior agreements or understandings between the Parties with respect thereto. This Agreement may be amended only by an agreement in writing signed by both Parties.

10.3 In the event the terms of this Agreement and the terms of any document provided by Contractor (and made a part herein by reference) conflict, the terms of this Agreement shall control.

10.4 The Effective Date of this Agreement shall be the date this Agreement is approved by the City Council.

[Remainder left intentionally blank]

10.5 This Agreement may be signed in counterparts, each of which shall be an original but all of which shall constitute one and the same document. Signatures transmitted by facsimile or PDF e-mail shall be deemed valid execution of this Agreement, binding on the Parties. Photocopies of this signed Agreement shall be considered originals of this Agreement for all purposes.

APPROVED by the City Council of the City of Cashmere, Washington at an Open Public Meeting the 11th day of April, 2022.

_____
James Fletcher, Mayor

APPROVED the _____ day of April, 2022 by the Contractor, Correct Equipment, Inc.

Copy Signed By Contractor on Monday 4/

_____
(Signature)

_____
(print Name and Title)

ADDRESSES FOR GIVING NOTICE:

City of Cashmere
Attn: Mayor
101 Woodring Street
Cashmere, WA 98815
(509) 782-3513

Correct Equipment, Inc.
Attn: _____
14576 NE 95th Street
Redmond, WA 98052
(425) 466-2201

Correct Equipment
14576 NE 95th Street
Redmond, WA 98052

Howard Taub
425-466-2201
howardt@correctequipment.com

Customer: **City of Cashmere**

Date: **April 8, 2022**
Utility: **City of Cashmere**
Project: flowIQ® RF meters with AMI system components with ALD

Item	Type Number	Description	Qty.	Each	Extended
1	02-K-02-D-1-8B-8-UB	flowIQ 2200 25 GPM ⅝" x ¾" x 7½" (1" thread) Composite	298	$315.00	$93,870.00
2	02-L-02-D-1-8D-8-UB	flowIQ 2200 55 GPM 1" x 10¾" (5/4" thread)	769	$399.36	$307,107.84
3	02-L-02-D-1-8F-8-UB	flowIQ 3200 120 GPM 1½" (fl) x 13"	38	$864.00	$32,832.00
4	02-L-02-D-1-8M-8-UB	flowIQ 3200 160 GPM 2" (fl) x 15 ¼"	49	$966.00	$47,334.00
5	6696051	READy Manager Software for AMI(for up to 1,600 metering points) **ONE TIME FEE - until mp overage**	1	$10,924.00	$10,924.00
6	6696451FH	AMI READy Hosting Subscription (for up to 1,600 metering points) **Yearly software & Support Agreement**	1	$4,385.00	$4,385.00
7	692ASXS00001	AMI Starter Kit Rollout includes project management, general support (via phone/email), billing interface and FCC license	1	$14,731.00	$14,731.00
8	BCUS30302.103W	Subscription price, Leak Detector, <1,600 metering points	1	$5,137.00	$5,137.00
9	Ready Collector Set	Kamstrup AMI RF Collector Set. Including installation	2	$10,000.00	$20,000.00
10		Installation of remaining 3/4" and 1" meters	1067	$70.00	$74,690.00
11		Installation of remaining larger meters	87	$160.00	$13,920.00
12	H2O Analytics	Installation software	1	$3,200.00	$3,200.00
13	669640020	READy Converter, US, basic 1 x READy 3 channel Converter including whip antenna, 1 x 110 VAC wall adapter, 1 x micro-USB cable, 1 x quick guide	1	$899.00	$899.00
14	66-97-902	US Pit Antenna II, 6.6 ft cable, AMI connection	10	$48.00	$480.00
15		Refund on 5/8x3/4 encoded	15	-$82.40	-$1,236.00
16		Refund on 1" encoded	28	-$155.00	-$4,340.00
17	Nicor	10" x 16"polymer lid	50	$45.00	$2,250.00
18		Contract Bond	1	$19,600.00	$19,600.00
		Total			**$645,783.84**
	Sales Tax 8.3%				**$53,600.06**
	Grand Total				**$699,383.90**

Comments:

(1) Pricing valid through August 30th, 2022
(2) Delivery schedule TBD
(3) Freight costs are included for orders greater than $25,000.
(4) See General Kamstrup Terms & Conditions of Sale attached.
(5) Terms: Net 30 Days
(6) Maximum operating pressure for meters is 250 PSI

Correct Equipment

Howard Taub

METER INSTALLATION RESPONSIBILITIES

Responsibilities of the Installer (Correct Equipment)

1) Install meters
2) Vacuum pits if necessary
3) Provide precise GPS data, photos of old meter, new meter, and site.
4) Provide old meter flow data and other electronic documentation as detailed below.
5) Provide exchange sheets at the end of each work week.
6) Advise homeowner at the time of installation, if possible.
7) Replacement of any broken or cross threaded meters during the installation.
8) Labor to replace any meters that fail within the first five years

Responsibilities of the Utility

1) Mark meter pits with flags and paint provided by contractor.
2) Assist in locating meter boxes throughout the installation.
3) Door hangers and customer notifications
4) Water for vacuum trailer
5) Disposal of spoils from the meter pit.
6) Staging area and storage for new meters and equipment used for the installation.
7) Repair materials for any utility owned equipment (pipe, valves, fittings) which fail during the installation.
8) Facilitate the Installer working a 5-day work week from 7:00 AM to 5:00 PM. This does not require the presence of Utility staff during these hours.

Exceptions – The Installer will not install, or reserve the right to charge adders, based on time and materials, any meters which meet the following criteria:

1) Meter pits are not accessible (under houses, not locatable, buried, paved over, etc.)
2) Meters which are located too deep to be reached from grade and require excavation.
3) Meters which are not in setters, and not removeable without considerable force that may damage the pipe.
4) Meters that do not have operable shut off valves on the utility side.
5) Meters that are located such as the risk of damage to the existing infrastructure (pipe, valves, fittings) is considered likely.
6) Meters installs 2" and larger will be reviewed and pricing could increase depending on the existing installation.

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(425) 869-1233 Phone
(425) 869-1033 Fax
www.correctequipment.com

Meter installation sample specification

2.2 Water Meter Installation

The supplier and the installing contractor shall be the same entity. Third party installers shall not be acceptable. The Contractor shall have a minimum experience of ten installed projects and 5,000 meters installed.

Contractor shall remove and dispose of existing water meter and install the new water meters and data transmitting nodes as per manufacturer's specifications. Contractor shall provide the following components and aspects of the existing meter removal and new meter installation:

- Detailed schedule and procedure plan
- Overall removal and replacement project management
- Records/data management and transfer plan
- Field procedures plan

2.2.1 General Field Meter Replacement Requirements - Contractor's field meter replacement procedure shall include the following at a minimum:

- Address and meter verification
- Date and time of exchange
- Digital photo of existing meter
- Existing meter final reading and recording
- New meter data recording
- New meter installation
- Digital photo of new meter
- Digital photo of site
- GPS locate
- Contractor to supply all equipment, fittings, materials and labor necessary

Note: Replacement of existing water meter box lids not acceptable for node placement shall be the responsibility of the City. The Contractor will be responsible for notifying the City of the lids in need of replacement and their locations as well as schedule for needed replacement. The Contractor may recommend a style or type of lid that works well with the existing meter box and the AMI system.

2.2.2 Installation Account Data Transfer - Contractor shall coordinate, with City staff, all data transfer of pre-existing and replacement water meters necessary for current billing and for transfer to the AMI system.

The City requires mobile software that will enable the utility to capture complete and accurate data related to its water meter change-out program. The mobile software must assist meter installers in quickly capturing accurate information in the field and it must facilitate project tracking and integration of the captured information back into the utility billing software. Specific software functionality must include:

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- The ability to load the meter change-out information from the utility billing software using meter-reading route files in the <<format name>> format.
- The ability to geo-code location addresses and assist meter installers in navigating to customer locations.
- The ability to perform driving route optimization to minimize the amount of time installation crews spend driving from site to site.
- Data capture of the following information related to each meter installation: meter box geo-coordinates, old meter make/model/size/serial number/radio serial number, old meter final reading, new meter make/model/size serial number/radio serial number, pit type and lid type, field notes and installer name.
- Digital photo capture for the old meter register, new meter and job site; including the ability to transmit, view and share full-resolution digital photos. All digital photos must be retained and retrievable securely from the cloud for at least 24 months after the completion of the installation project.
- Capture details on extra services and inventory items used on each meter installation. For example, track how many meter boxes and lids were replaced, curb-stops replaced, etc.
- The ability to enter free-form notes regarding individual meter installations.
- The software must be cloud-based and must not require the utility to setup or maintain its own web server, application servers or other dedicated hardware or software.
- The overall system design and development lifecycle supporting the software must adhere to secure software standards, and the hosting infrastructure must be based on a secure architecture including data center(s) which pass regular ISO 27001 audits.
- The software must require strong passwords and allow for customer password self-resets.
- Utility personnel must be able to view their project data including project overview charts, detailed records and digital photos.
- Must provide the capability to automatically notify project team-members, including utility personnel, when individual work orders cannot be completed or otherwise require attention from the utility.
- The ability to generate "swap files" or "mass meter change-out files" in the format required by the City billing system. These files will facilitate the automated setup of new meter information in the billing software and the posting of the final reading on the old meter.
- The ability to transfer the meter box geo-coordinates to the billing software and export to GIS files.
- Mobile software must support iOS and Android operating systems and be compatible with high-accuracy GPS receivers from multiple vendors (no GPS hardware vendor lock-in).

General Terms: Bid Bonds and Payment Bonds are by others. Any damages occurring on site or in transit (freight) are the responsibility of others. Estimated delivery time-frames are based on written approval and release to production. Changes to equipment may alter overall project timeline and adjustments of this type will not be counted against the equipment release time-frame.

Payment terms

Payment for meters and other accessories shall be due 30 days after shipment. Software and system startup will be due 30 days after installation, training and startup. The City may retain a 10% retainage until completion of the project.

Meter installation services shall be payable 30 days after the meters are installed, billable on a weekly basis.

Delivery

Delivery and installation will begin ___ days after the Notice to Proceed is issued by the City. Job duration is estimated at two weeks for delivery, and thirty days for onsite installation services. Due to the unprecedented supply chain issues, Correct Equipment will expend all efforts possible to assure compliance with the above delivery times. However, Correct cannot accept Liquidated Damages of any type.

Meter installation terms:

Responsibilities of the Installer (Correct Equipment)

1) Install meters
2) Vacuum pits if necessary
3) Provide precise GPS data, photos of old meter, new meter, and site.
4) Provide old meter flow data and other electronic documentation as detailed below.
5) Provide exchange sheets at the end of each work week.
6) Advise homeowner at the time of installation, if possible.
7) Replacement of any broken or cross threaded meters during the installation.
8) Labor to replace any meters that fail within the first five years

Responsibilities of the Utility

1) Mark meter pits with flags and/or paint.
2) Assist in locating meter boxes throughout the installation.
3) Door hangers and customer notifications
4) Water for vacuum trailer
5) Disposal of spoils from the meter pit.
6) Staging area and storage for new meters and equipment used for the installation.

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7) Repair materials for any utility owned equipment (pipe, valves, fittings) which fail during the installation.
8) Facilitate the Installer working a 5-day work week from 7:00 AM to 5:00 PM. This does not require the presence of Utility staff during these hours.

Exceptions – The Installer will not install, or reserve the right to charge adders, based on time and materials, any meters which meet the following criteria:

1) Meter pits are not accessible (under houses, not locatable, buried, paved over, etc.)
2) Meters which are located too deep to be reached from grade and require excavation.
3) Meters which are not in setters, and not removeable without considerable force that may damage the pipe.
4) Meters that do not have operable shut off valves on the utility side.
5) Meters that are located such as the risk of damage to the existing infrastructure (pipe, valves, fittings) is considered likely.
6) Meters installs 2" and larger will be reviewed and pricing could increase depending on the existing installation.
7) Snow will delay meter installations until the ground is clear.

kamstrup

Kamstrup AMI with Acoustic Leak Detection System Specification

1. Executive Summary

Kamstrup is a Danish based technology company founded in 1946. Being a pioneer with a thirty year history solely focusing on ultrasonic measurement, Kamstrup has deployed over 15 million metering points throughout the world. With opening our manufacturing facility in 2018 located in Roswell, GA we are now in our eighth year of market presence in the United States. In this short time, we have experienced tremendous growth and interest in our metering technology including our recently introduced acoustic leak detection (ALD) solution. Kamstrup's flowiQ® 2200 is the only smart water meter on the market today with integrated acoustic leak detection. With the deployment of more and more systems across the US, we are proud of the client testimonials we have received by helping utilities realize uncaptured revenue and improve their operations.

Kamstrup's proposal is designed to communicate a vision that addresses a simple need; to provide an accurate, reliable, sustainable, future proof, and insightful system solution. We believe this proposal achieves this objective in a way that is superior to other solid state design and traditional technologies. It is our goal to convince (Water Utility XYZ)'s evaluation team that ultrasonic technology is not only field proven, but the future of measurement in the water industry.

Kamstrup believes our solution will maximize the value of your investment. It will do so by providing the following benefits:

Increased revenue growth without the need to raise water rates through sustained measurement accuracy throughout the product lifetime of twenty years. The flowiQ® 2200 water meter provides sustained new meter accuracy levels, and measures at an industry leading low start flow of .01 GPM. Over the lifetime of the system, the incremental revenue allows (Water Utility XYZ) to realize an average of (X.X%) which adds up to a significant return on investment.

Greater operational cost savings by deploying a product that is designed to help identify distribution side leaks which can account to up to fifty percent of non-revenue water. With the water infrastructure in the US being an average age of over forty years, Kamstrup's integrated smart meter with acoustic leak detection can assist with finding leaks by monitoring 24/7, 365 days of the year for twenty years. With integrating acoustic technology in to a smart water meter, no additional devices or infrastructure is required to install or maintain, and no additional resources are needed for data collection. All flowiQ® 2200 ALD smart meters act as acoustic sensors constantly monitoring for anomalies within your entire distribution network. This allows (Water Utility XYZ) to prioritize and focus leak detection efforts where it will make the most impact and reduce the time that distribution side leaks are allowed to run.

To support this lifetime projection, Kamstrup will provide a twenty year warranty on accuracy for residential meter sizes up to 1" with full replacement cost or full refund if the meter accuracy does not perform to C715-18 standards. Additionally battery warranty is a full ten years, and discounted at 75% beginning the eleventh year. Kamstrup globally has a failure rate of less than .5%.

Having access to the intelligence of Kamstrup's AMI System and ALD Solution, provides for the opportunity to service your customers better, recover lost revenue, minimize waste, better preserve our water resource through conservation, reduce operational and energy expenses through less water treatment and pumping, and reduce upfront system costs.

2. Proposal Objective

It is the intent of the enclosed specifications to provide (Water Utility XYZ) with a Fixed Network Advanced Metering Infrastructure (AMI) System.

It is (Water Utility XYZ)'s desire to procure a turn-key solution for ultrasonic metering including AMI data collection and an integrated acoustic leak detection solution from a single source provider.

The AMI solution must be state-of-the-art, user-friendly, and include features and tools that will simplify daily operations and provide real time alarms to enhance service to its customers. Additionally, the solution must help achieve the maximum revenue potential in terms of measurement accuracy and also provide the means to reduce non-revenue water.

The proposed AMI solution shall include advanced utility tools that will help achieve these objectives:

- Optimize revenue and improve water accountability through sustained long term meter accuracy, improved low flow performance and other solutions such as integrated acoustic leak detection on utility service lines and distribution mains and district metering.
- Provide timely and accurate usage information and meter alerts that can be used to improve customer service and reduce adjustments on water bills.
- Proactive water management abilities to improve operational efficiency, reduce service calls and truck rolls through a remote fixed network.
- Reduce the total deployment period, installation time and complexity by having integrated components for both meter reading and acoustic leak detection without having to install additional devices or retrofitting endpoints.
- Lower the total cost of ownership including labor maintenance costs using a reliable product with industry lowest failure rates that are covered under a single warranty from one provider.

3. Utility Overview

3.1 Utility Background

3.1.1. Service line connections and area

(Water Utility XYZ) provides potable water to residential and commercial customers having approximately (xx,xxx) residential water meters and (xxx) commercial/industrial/institutional water meters spread out over a (xxx) square mile area. A map of the service area is included as **Appendix A**.

3.1.2. Infrastructure

Meters – The meter size breakdown is as follows:

Meter Size	Total Qty
5/8"	xxx
3/4"	xxx
1"	xxx
1.5"	xx
2"	xx
3"	xx
4"	xx
6"	xx
8"	xx
10"	xx
Above 10"	x

City Owned Assets – A list of owned assets is included as **Appendix B**.

Service Addresses – A list of the service addresses are included as **Appendix C**.

Distribution main lines - (Water Utility XYZ) covers XXXX miles of distribution lines.

Average age of main lines: xx years.

Breakdown of pipe material of main lines consist of % metal, % polyethylene, %AC

Average age of service lines: xx years.

Breakdown of pipe material of service lines consist of % metal, % polyethylene, % PVC

3.1.3 Current Reading Technology

Current system being utilized for meter reading is [name of Vendor/reading system].

Reading Method	Approximate number of meters
Manual	xxx
AMR Drive By	xxx
AMI	xxx

3.1.4 Customer Information (Billing) System

The proposed AMI system must be readily compatible with the current billing system [name of CIS provider] without additional development required by the CIS. The interface should support formats utilizing fixed width fields or delimited such as CSV.

3.1.4 Utility Personnel

Position	Number of Employees
Meter Technicians (meter reading and repairs)	xx
Crew Leaders/Managers	x
Distribution Side/Leak Detection	xx
Utility Customer Service	xx

3.1.5 Water Loss and Control Measures

The current non-revenue water level for (Water Utility XYZ) is XX %
Describe current processes, controls and systems utilized to address water loss.

3.16 Project Timeline

The project should be completed within this time frame:

Phase	Time Frame
Feasibility/Planning	
Pilot (optional)	
Installation and Deployment Phase 1	
Installation and Deployment Phase 2	
Installation and Deployment Phase 3	
Training	
System Acceptance	
Post Deployment Follow Up	

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4.0 Scope of Work

The proposal includes; [indicate general scope of project] .

4.1 Furnishing of approximately [xx,xxx] IP68 rated water meters with integrated radio and acoustic leak detection for easy installation, reduced labor cost/time/maintenance and minimize tampering.

4.2 Supply AMI network infrastructure hardware and software.

4.3 Integration of the CIS utility billing system to the MDM software for billing purposes.

4.4 Network deployment management until system acceptance.

4.5 System training on both installation, hardware and software for all utility personnel.

4.6 Proposed solution components must provide tight end to end integration and be supplied from a single source manufacturer.

5.0 Vendor Qualifications and Experience

5.1 Technical Experience

The proposed solution provider must have at least ten years of experience in the design and manufacturing of ultrasonic metering technologies. A minimum of at least five years of demonstrated field experience with ultrasonic metering technologies in the United States.

5.2 Qualifications

The proposed solution provider should have ISO 17025 accreditation or similar standard for their meter testing facility.

5.3 References

Include a minimum of three utility references who have deployed the proposed solution in the past five years.

6.0 Technical Specifications

6.1 Meter Specification

6.1.1 Acoustic Leak Detection

The meter must offer the capability to monitor and record acoustic noise to enable leak detection on residential meter sizes up to 1 inch. The acoustic leak detection sensor and electronics must be integral to the meter, requiring no external hardware or wired connections.

The acoustic data will be captured regardless of reading method (AMR or AMI).

The acoustic functionality may be activated immediately at time of purchase or offered as an upgrade without requiring a field visit or reprogramming of the meter or affecting the warranty or battery life.

The design of the acoustic leak detection feature must minimize the impact of sensitivity to acoustic noise generated across different pipe materials including metal and plastic pipes. Describe how the proposed solution fulfills this requirement.

The vendor must provide information on expected life cycle and replacement costs associated with acoustic leak detection to assist with return-on-investment calculations.

6.1.2 Meter Construction

All water meters must use solid state measuring technology with no moving parts to ensure accuracy over the life time of the meter. The meter should be resistant to wear and impurities in the water. All sensors and electronics should be designed so that they are fully protected against internal and external penetration of fluid. The meters should be hermetically and vacuum-sealed to prevent humidity from entering the electronics and avoid condensation between the glass and display.

6.1.3 Materials

Meters must be made available in both composite and metal bodied housings that incorporate design features that help prevent cross-threading during installation.

For composite bodied meters the meter housing and measuring tube must be constructed of durable, environmentally friendly, lead-free thermoplastic polyphenylene sulfide (PPS) reinforced with fiberglass. The composite meters must offer exceptional mechanical strength, high temperature resistance, chemical resistances, electrical insulation, and flame resistance.

6.1.4 Battery

The battery must last twenty years to minimize maintenance visits and ensure the IP class as the battery should not need to be replaced. The meter will provide a low battery warning on the display in accordance with C715 operating guidelines and transmitted as an alert to the AMI system. The vendor must provide life expectancy information including a fifteen year total cost of ownership calculation.

6.1.5 Measurement

Maximum permissible error should fall in accordance to AWWA C715-18 operating guidelines ± 1.5% in normal flow range and ± 3% for low flow ranges, ± 5% for extended low flow ranges. Starting flows on 5/8" meters will start measuring as low as 0.01 GPM.

Water meters must be able to measure log and transmit the temperature of the water.

The water meter must also measure, log and transmit the ambient temperature. Providing information of the actual installation condition like extreme temperatures ensures proactive measures may be taken.

6.1.6 Flow Validation

All meters should have the ability to log a total of historic volumes by flow rates to validate flows as a tool for right sizing and realization of how much low flow was captured at various flow rates.

6.1.7 Approvals, Certifications, Standards and Ratings

The meter should be approved according to Drinking Water Standards in multiple countries and certified to NSF/ANSI 61.

The meter should fully comply with AWWA C715-18 guidelines.

The meter must be able to be fully submerged and IP68 type tested.

The manufacturing and testing process should be highly automated and only use materials approved for drinking water. Meters should be disinfected before dispatch and hygienically controlled by frequent audits from external accredited laboratories.

The meter should document high reusability and low environmental impact, including recycling of meters. The vendor should meet the environmental management ISO 14001 standard.

The vendor should be ISO 9001 certified.

All radio communications should comply with relevant FCC rules, including Part 15. Meters must have been tested by FCC to ensure that they meet requirements regarding EMC emissions and FCC ID must be laser printed or permanently engraved on each meter.

6.1.7 Verification and Calibration

All meters should be verified and calibrated by an ISO 17025 accredited laboratory during production.

6 1.8 RF communications module

The meter and RF communication module should be one single integrated unit hermetically sealed for easy installation reducing labor cost and time. The meter must be IP68 rated and submersible suited for installation in flooded meter pits, vaults and basement installations.

The meter should be capable of two communication modes operating within an unlicensed frequency in the 902-928 MHz band for mobile drive-by operation and support a licensed frequency within the 450-470 MHz band to provide wide ranging radio coverage and propagation.

6.1.9 Data Logging

The meter data will store data loggers in the EEPROM, easily retrievable via mobile app and Bluetooth. Data logs will provide 460 days of daily readings, 100 days of hourly readings and the last 50 info codes such as leak, burst, dry, reverse, tamper, overflow and battery capacity. Logged hourly and daily usage data should be available on the mobile device or on the headend system.

6.1.10 Data options

To support configuration changes to leak, burst, temperature thresholds and transmission intervals the meter should allow reprogramming over the air. Firmware updates should be permissible over RF without having to gain physical access to the meter and allow deployment in groups.

Standard data communication intervals will be every three hours (eight times per day) delivering hourly values.

The meter shall be capable of delivering near real time events such as;

Leak: Continuous flow for the past 24 hours based on a configurable limit of greater than 0.1%, 0.25%, 0.5%, 1.0% and 2.0% of maximum flow for meter size.

Burst: Indicating 30 minutes of flow based on a configurable limit of 5.0%, 10.0% or 20.0% of maximum flow.

Dry: Indication of air in the pipe, no fluid or a frozen meter.

Reverse Flow: Indicating water is running in the opposite direction of normal flow. Reverse flow should be logged in a separate internal register.

Tamper: Indication that electronics or meter has been compromised.

Overflow: Indicating the flow exceeded the rated maximum flow rate for the meter size.

6.1.11 Display

The meter should include an easily readable LCD display including nine digit resolution, unit of measure, billable digits for reference, all active alarm codes (leak, burst, dry, reverse, tamper, low battery) radio off, visual flow indicator and flow rate. Display resolution shall be configurable upon order and may be changed after shipment. Display resolution will have no effect on digits provided for billing however billing digits are referenced on the display. Meter serial number will be barcoded and numerically visible on the register face, as well as meter size, FCC identification, NSF compliance, production year, and maximum operating pressure. The option for a laser printed customized label such as company logo to indicate what utility owns the meter.

6.1.12 Security

Data sent from the meter to the collector or receiving device must always be encrypted. Only authorized devices will be able to decrypt messages from the meter.

6.1.13 Installation

The meter may be installed at any angle and position with no minimum straight pipe to meet applicable AWWA accuracy standards. The meter should allow an external antenna to be mounted when required.

When the meter is installed, the use of a mobile application should confirm that the meters signal is being received by one or more data collectors and verify the signal strength to determine whether the installation is good before leaving the installation site.

6.1.14 Operation

The meter should be able to operate accurately under a maximum pressure of 250 PSI for meter sizes 1" and smaller (5/8" and ¾") and 300 PSI for meter sizes above 1.5" to 4".

6.2 Data Collectors Specification

Data collectors should consist of a base box and top box to maximize performance based on link budget. The bottom base box provides the network backhaul communication method whether cellular modem or Ethernet and supplies power to the top box. The base box should allow up to four top box connections for maximum performance if the collector site installation requires.

6.2.1 Installation and Configuration

The collector should be plug and play without requiring programming of the base box alleviating the necessity of IT resources. All firmware upgrades will be performed automatically over the network without the need for user intervention.

6.2.2 Built in Network Intelligence

The AMI system should automatically monitor and adjust the output power of the meter to allow the optimal radio performance of the system and extend battery life on the meter. The system will select the optimal collector to read the meter, but in the event the collector is taken out of operation, other collectors will provide redundancy.

6.2.3 Data Storage

The collector must support up to 25,000 meters and be able to store 10 days of hourly data.

6.2.4 Communication

Collector communication backhaul options should include either cellular modem or Ethernet network.

6.2.5 Security

The data collector will follow TLS 1.2 protocol with AES 256 bit encryption to the head end system.

6.2.6 Physical

Collector must be rugged, high enclosure class with built-in lightning protection.

6.2.7 Operation

Collector should operate within -22°-158° F. Power input 110-230 VAC 50/60 Hz. Power output 24 VDC /10A.

6.3 Network

The network should allow for redundancy without the need for repeaters. The network must allow a fallback method of meter reading in the event the meter is not able to transmit successfully to the collector.

6.3.1 Network upgrades

The network will automatically perform required updates such as firmware for the collector infrastructure without user intervention.

6.3.2 System Performance

The system network design should achieve a daily reading performance between 98.5 to 99%.

6.3.3 Network Self-Monitoring

The AMI system shall be self-healing by automatically monitoring reading performance and adjust power output of meter transmissions. This ensures that meters with stronger signal strength can transmit at lower power and meters that have weaker signal strength transmit at higher power to improve reading performance across the entire system.

6.4 AMI System Software

The host software should be an intuitive easy to use solution. It should include online help describing all menus and feature sets with step-by-step tutorials. The software will be a cloud-based solution, alleviating the need for server platform investment and maintenance, providing optimal performance and scalability.

6.4.1 Data Storage

To address billing disputes while maintaining optimal system performance, historical reading data will be kept up to thirteen months for hourly data, five years for daily data, and ten years for monthly data.

6.4.2 CIS Billing Integration

The software interface to and from CIS should be flexible supporting with single record fixed width or delimited (CSV) file formats that can be customized to easily integrate to the CIS system.

6.4.3 Features

The software should have search capabilities to search all or specific fields such as address, meter serial number, account number, customer name, etc. The software should be able to filter on meter rollovers and final readings. The software should provide hourly readings, bar graph chart visualization of average flow per hour to easily identify trends, and anomalies and hourly, daily, monthly, yearly consumption over a user defined date range.

The software should be able to prioritize between high and normal priority codes and be able to schedule the frequency and time when the notifications are delivered, or be able to send notifications when they are detected.

The software should allow the creation of meter groups automatically through imports or manually.

Allow user to perform meter exchanges, so that historical data may be referenced under the account with associated meter data history.

The software should have consumption reporting capabilities by group and custom date range with filters higher or lower than configurable thresholds.

The software should provide meter data set comparisons by a defined date range.

The software should allow import and display of custom fields which also may be exported back to the CIS.

The software should allow the reading to be displayed and exported as read from the meter, or in USgal,ft3, m3, l, Imp gal (Us Gallons, cubic feet, cubic meters, liters and Imperial gallons)

6.4.4 Language Support

The software should support multiple languages including English.

6.4.5 Hybrid system: Mobile drive by reading

The AMI software should include the ability to read meters via mobile drive by without installing additional PC software or add on module components. The mobile application should support Android devices (smart phones or tablets). Data may be synchronized from the mobile app and host software at any time via Wi-Fi or cellular network without the loss of captured data.

In addition, if readings were missed by the fixed network system, it will allow a data log of the meter to be sent back to the head end system so that it may be viewed in the software.

6.4.6 Mapping Visualization

The software should have the ability to import GIS coordinates or be able to geocode by address, city and zip code via Google Maps. The meter may be viewed graphically in the host software and in the mobile application when in the field.

6.4.7 Scheduled jobs

User defined custom data imports and exports should have the ability to be scheduled as automatic jobs to an FTP/FTPS/SFTP server or email.

6.4.8 Performance reporting

The software should provide performance analytics to recognize data collection success of all meters or meter groups on user defined parameters such as daily or hourly reads as a percentage or number to monitor the health of the system.

6.4.9 Data Security and Integrity

Data should be stored in an ISO27001 certified environment in compliance with GDPR legislation including firewalls, antimalware systems and encryption for data protection. Meter encryption keys are assigned to the utility end-user to prevent unauthorized access to meter reading data. Data sent to the host software should use TLS 1.2 protocol with AES 256 bit encryption.

The import of meter data should prevent human data entry errors, prevent duplication of meter serial numbers, and distinguish between meters with integrated or separate endpoints.

The system should allow the utility to assign their own roles and permissions to users and have various levels of users, (Administrators, Super User, and User).

6.5 Water Intelligence Analytics Software

6.5.1 Acoustic Leak Detection Analysis

The software should support the collection of acoustic noise data from integrated acoustic smart meters and automatically prioritize them based on custom defined levels. Must allow for advanced filtering to provide quick identification of critical meters to investigate.

The software should be intuitive, user friendly and accessed via a web or mobile browser such as Google Chrome, Microsoft Edge, Internet Explorer and supported on mobile platforms (iOS, Android and Windows.)

The software should graph acoustic noise trends over time and allow the user to select the desired date range.

The software should visually display meters color coded by noise level geographically in map view and allow customization of which meters are displayed or hidden.

The software should allow for tracking meters of interest, comments, editing, categorization and resolution once the noise levels are investigated in the field.

The software should provide auto-generated reports configurable by custom noise level and number of days.

The software should allow for meters to be ignored.

The software should provide a list view of meters with corresponding data including latest acoustic noise value, maximum value, average value, customer side meter alarms such as leaks, and bursts and latest reading date.

The software must have the ability to correlate active alarms to determine if the leak may be before or after the meter.

The software should provide integration of distribution pipe layer network to know where meters are in relation to distribution main lines and utility service lines.

The software should be able to export data in CSV and PDF formats.

6.5.2 District Metering Software Analysis

The software should allow a geographical map view with color coded districts to easily visualize which zones are normal versus exceeding the custom water loss limit set for the district.

The software should have a list view with meta data for different districts.

The software should display graphical representation of consumed water, supplied water and water loss selectable by user.

The software should have KPI reporting based on water loss during the last 24 hours, week and month.

The software should have an Intuitive drawing tool to create districts.

The software should provide integration of distribution pipe layer network to know where meters are in relation to distribution main lines and utility service lines.

The software should allow the manual inputs for compensated water used such as pipe flushing.

The software should have an alarm system to indicate if a water balance is moving in a wrong direction.

The software should have advanced algorithms to monitor and estimate water balances.

The software should be able to calculate missing consumption data through extrapolation.

The software should be able to integrate with third party district meters from other systems, such as a SCADA.

The software should be able to analyze the correct configuration threshold for larger meters.

The software should be able to show the data performance on district levels.