

9/29/2020

Committee Members:

- Bud Haas, Ward 1
- Dennis Hellmann, Ward 2
- Beth Warnecke, Ward 3
- James Slough, Ward 4
- Randy Greeno, Ward 5
- James Niemeyer, Ward 6
- Josh Palmer, Ward 7
- Grant Russel, at large
- Thomas Shindledecker, at large
- Jeff Wobser, at large

Staff:

- James Staschiak, City Auditor
- Christina Muryn, Mayor
- Paul Schmelzer, Safety Director
- Brian Thomas, City Engineer
- Donald Rasmussen, Law Director

Meeting Start Time: 5:30

Meeting End Time: 6:27

Guests:

ASON PHILLIPS WATER DET.
(1) GUESTS

Agenda:

- Call to Order
- Roll Call
- Approval of Minutes *NR*
- New Items

1. water meter transmitter project via Ordinance No. 2020-092

Adjournment




John Harrington, President of Council

COMMITTEE REPORT

THE CITY COUNCIL OF THE CITY OF FINDLAY, OHIO

A COMMITTEE OF THE WHOLE meeting was held on Tuesday, September 29, 2020 to discuss the water/meter transmitter project via Ordinance No. 2020-092. The WATER AND SEWER COMMITTEE previously met on July 30, 2020, July 16, 2020, May 21, 2020, and March 11, 2020 to discuss the project.

DISCUSSION HELD CONCERNING ORDINANCE NO: 2020-092. FURTHER DISCUSSION WAS NOT REQUESTED BY COUNCIL. MAYOR AND AUDITOR DISAGREED ON PROCEDURES FOLLOWED FROM BEGINNING OF PROJECT.



John Harrington, President of Council

COMMITTEE OF THE WHOLE

DATED: September 29, 2020



**OFFICE OF
THE MAYOR
CHRISTINA M. MURYN**

Paul E. Schmelzer, P.E., P.S.
Safety Director

September 29th, 2020

Dear Honorable Members of Council,

This summary is in relation to the replacement and upgrade of City of Findlay water transmitters, meters, and correlating infrastructure. It is my belief that after your review of the included information it will be clear that extensive time, expertise, and research has been put into this project to ensure the best short and long term investment is made for the citizens of Findlay. This document is simply a summary of two years of diligent work by our City of Findlay team members.

Additionally, it will be clear that all actions related to this project were completed with the highest level of integrity and statutory compliance as is the standard for our City of Findlay team. I will specifically address the accusations made by the Auditor that he believes:

- 1) That the bid was not released as a design-build project.
- 2) Including specs as recommended by industry standard but received via Suez representative is inappropriate.
- 3) Working with selected contractor to discuss project details prior to executing a contract is inappropriate.
- 4) That not allowing unsecured frequencies to be submitted as an option in the RFQ is prejudicial.

Background

This project is being completed to update the City of Findlay water distribution infrastructure from a 2G system to be compatible with a 5G system. The current 2G system will not be replaced once it is discontinued, which could leave the City without a functioning communication system for our water transmitters/meters. By updating our advanced metering infrastructure (AMI) system, we will be able to update our transmitters and meters over time and run parallel 2G & 5G systems as we transition the system assuming 2G does not disappear in that timeframe.

Specific Concerns

1. Design-Build Compliance

- Ohio Revised Code Chapter 153: Public Improvements was followed. See letter from Law Director Rasmussen.
- Please see RFQ Bid Specs which were released on October 12th, 2018. RFQ specifically discusses Design-Build format.

2. Spec Development

- **Standards from Suez:** The specs received from Suez were a consolidation of the American Water Works Association (AWWA) Manual M6 specs. All proposals submitted met all of these standards.

Note: The Badger product also met the AWWA standards but was not submitted by Badger.

- **Frequency Standards:** The RFQ released by the city stated that the system shall operate in the 450-470 MHz range. This was requested because of two primary factors 1) lower frequencies can travel farther distance with less power. Which means less data collection units (DCU's) will be needed and less load on the batteries of the transmitter so the batteries will last longer 2) The 450-470 MHz range provides a licensed frequency which would be dedicated to our transmitters. This will be a dedicated City of Findlay frequency, which will allow a higher level of security and reduce possible interference.

Note: Though not part of the original rationale for requiring dedicated frequencies, it was subsequently determined that use of the non-licensed cellular frequencies would require an ongoing annual fee per transmitter of approximately \$1 leading to approximately \$20,000 in additional annual fees with the Badger system.

- **Badger Communication:** In RFQ Scope of Work “i. “All inquiries pertaining to the Request for Qualification are to be directed to: 1. Brian Thomas – bthomas@findlayohio.com 2. Jason Phillips – jphillips@findlayohio.com.” The City of Findlay did not receive any communication from Badger except for the included letter which was received on the day the RFQ was due. Submitting communication regarding a bid on the day the bid is due, is an indication that the bid was not taken seriously.
- The City of Findlay did receive questions from some of the other vendors who asked if other frequencies would be considered. Findlay stated that they could be discussed as part of the project if the vendor was selected following review of qualifications. Even though the specification did spell out the desire for a dedicated frequency the question was asked during the process if the City would be open to discuss the 900 MHz system. At that time we were open to the discussion and allowed the vendors to submit qualifications so that we could find the best team.

3. Refining Scope of Work with Selected Contractor

- Following the RFQ review and scoring Suez was selected as the intended contractor. A letter of Intent was executed and sent on November 26th, 2018. Contract negotiations and project discussions then occurred. The

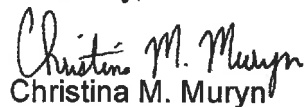
RFQ was scored by Utility Billing Supervisor, Distribution Supervisor, Water Superintendent, and the Service Director. The Auditor was notified at the end of January/beginning of February of 2019 when we requested information for Suez to look into the financing part of the project.

4. Overall Project /Items of Note

- Over the last 19 months we have evaluated nearly every configuration possible with Suez.
- Suez evaluated various products, including the Badger system, and recommended the combination of Aclara Transmitters with Neptune Meters. The Aclara transmitters were chosen for many reasons but one major reason was the compatibility with multiple meter brands ability to work on various meters. This is vital to allow the City to continue use of existing meters while transitioning over time to a more reliable and accurate meter brand.
- As of 09/28/2020 we have 1,035 transmitters that are not working
- As of 09/28/2020 we have only 181 replacement meters (All Sizes)
- Suez provides a 100% technology guarantee for 15 years, meaning that regardless of technological updates Suez must ensure our system works for 15 years. For example, if 5G suddenly becomes obsolete they would be responsible for updating our system accordingly. Considering the transition we are being forced to make now, this is an additional warranty feature that cannot be ignored. The City replaced its transmitters and meters in 2007 with Badger LP Meters and it is now necessary to work through this expensive process again.
- Suez provides a 15 year warranty vs a 10 year warranty that comes with the meter manufacturer. This additional warranty is a result of the buying power that Suez possesses as one of the largest municipal infrastructure providers in the world/US.

I appreciate your time and attention to this information. Please do not hesitate to reach out with any other questions.

Sincerely,


Christina M. Muryn

Mayor/Acting Service Director

Office of the Director of Law

Donald J. Rasmussen

318 Dorney Plaza, Rm 310

Findlay, Ohio 45840

Telephone: 419-429-7338 • Fax: 419-424-7245

drasmussen@findlayohio.com

September 29, 2020

Honorable City Council
Findlay, OH 45840

RE: water meter/transmitters project
(Ordinance No. 2020-092)

Dear Council Members:

This letter is to clarify that all policies and procedures required by law were followed for the advertising and design-build process for the water meter/transmitter replacement project per Ohio Revised Code (ORC) 153.01-153.70 that is before City Council via Ordinance No. 2020-092. A Request for Qualifications (RFQ) was advertised on October 12, 2018 and October 19, 2018 with Suez being selected from the RFQs submitted.

Please let me know if you have any questions or concerns on this matter.

Very truly yours,



Donald J. Rasmussen
Director of Law

Office of the Mayor

Lydia L. Mihalik

318 Dorney Plaza, Room 310

Findlay, OH 45840

Telephone: 419-424-7137 • Fax: 419-424-7245

www.findlayohio.com

Paul E. Schmelzer, P.E., P.S.
Safety Director

Brian A. Thomas, P.E., P.S.
Service Director

Suez Advanced Solutions/Utility Service Co. Inc.
Attn: Daryl Bowling
1230 Peachtree Street NE, Suite 1100 – Promenade
Atlanta, Georgia 30309

November 26, 2018

RE: Notice of Intent to Award
City of Findlay Water Meter Replacement Project
Project Number 35783300

Dear Mr. Bowling:

The City of Findlay announces its intent to award the contract for the City of Findlay Water Meter Replacement Project, Project Number 35783300 to Suez Advanced Solutions/Utility Service Co. Inc.

As provided in the RFQ, this Notice of Intent of Award is subject to execution of a written contract and, as a result, this Notice does NOT constitute the formation of a contract between the City of Findlay and the apparent successful vendor. The vendor shall not acquire any legal or equitable rights relative to the contract services until a contract containing terms and conditions acceptable to the City of Findlay is executed. If the apparent successful vendor fails to negotiate and execute a contract with the City of Findlay, the City of Findlay may revoke the award and award the contract to the next highest ranked vendor or withdraw the RFQ. The City of Findlay further reserves the right to cancel this Notice of Award at any time prior to the execution of a written contract.

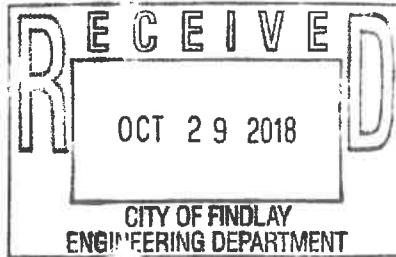
Thank you for participating in the competitive selection process. If you have any questions, please feel free to contact Jason or myself.

Sincerely,

Brian A. Thomas

Brian Thomas
Service Director/Acting City Engineer

pc: Jason Philips -- Water Superintendent
file



4545 W Brown Deer Road
PO Box 245036
Milwaukee, Wisconsin 53224-9536
414-355-0400 | 800-876-3837
www.badgermeter.com

October 26, 2018

City of Findlay
Engineering Department
318 Dorney Plaza
Room 304 Municipal Building
Findlay OH 45840

RE: **Water Meter System Replacement**
Due: Monday, October 29, 2018 at 2:00 PM

Dear City of Findlay:

This correspondence acknowledges receipt of the above-referenced bid. Please be advised, however, Badger Meter, Inc. ("Badger Meter") respectfully declines to participate in the above-referenced bid at this time, due to the restrictive nature of the bid.

A copy of the bid tabulation for our records is appreciated. Enclosed is a self-addressed stamped envelope for return of the Bid Tabulation. Electronic results can be emailed to bids@badgermeter.com.

Please retain Badger Meter's name on your distribution list for future inquiries.

In the event that you have any questions regarding this correspondence, we can be reached by telephone at (800)876-3837 ext. 15735 or via email at bids@badgermeter.com.

Sincerely,

Badger Meter, Inc.



Christie Collins
Assistant Secretary

Meter and Transmitter Options		2020		2021		2022		2023		2024		2025		Project Total		
		Per Unit Cost	Units	Cost	Units	Cost	Units	Cost	Units	Cost	Units	Cost	Units	Cost	Units	Cost
Infrastructure & Support																
	11 DCU's Integration			\$317,160											\$ 317,160	
	Software, Network Support, etc.			\$125,000	\$125,000	\$125,000	\$125,000	\$125,000	\$125,000	\$125,000	\$125,000	\$125,000	\$125,000		\$ 750,000	
	Leak Detection				\$ 15,000										\$ 15,000	
	Infrastructure Total			\$442,160	\$140,000										\$1,082,160	
Transmitters																
	Standard Transmitters	\$ 152.00	328	\$ 49,856	4200	\$638,400	4200	\$638,400	4200	\$638,400	4200	\$638,400	4200	\$638,400	21328	\$3,241,856
	Dual Transmitters	\$ 195.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -	0	\$ -	0	\$ -	0	\$ -
	Transmitters Total		328	\$ 49,856	4200	\$638,400	4200	\$638,400	4200	\$638,400	4200	\$638,400	4200	\$638,400	21328	\$3,241,856
Meters																
	5/8" Neptune Meter	\$ 137.00	0	\$ -	400	\$ 54,800	400	\$ 54,800	400	\$ 54,800	400	\$ 54,800	400	\$ 54,800	2000	\$ 274,000
	3/4" Neptune Meter	\$ 170.00	0	\$ -	100	\$ 17,000	100	\$ 17,000	100	\$ 17,000	100	\$ 17,000	100	\$ 17,000	500	\$ 85,000
	1" Neptune Meter	\$ 247.50	0	\$ -	50	\$ 12,375	50	\$ 12,375	50	\$ 12,375	50	\$ 12,375	50	\$ 12,375	250	\$ 61,875
	Meter with Auto Shut Off	\$ 550.00	10	\$ 5,500	100	\$ 55,000	100	\$ 55,000	100	\$ 55,000	100	\$ 55,000	100	\$ 55,000	510	\$ 280,500
	Meter Total		10	\$ 5,500	650	\$139,175	650	\$139,175	650	\$139,175	650	\$139,175	650	\$139,175	3260	\$ 701,375
Total Cost				\$497,516	\$917,575	\$777,575	\$777,575	\$777,575	\$777,575	\$777,575	\$777,575	\$777,575	\$777,575		\$5,025,391	

Previous Appropriation from Water Fund \$250,000

Requested Appropriation via ORD 2020-092, from Sewer Fund \$250,000

*Needed annual replacement will vary. The above scenario is "worst case" and shows all transmitters being replaced in 6 years.

LEGAL NOTICE

The City of Findlay (the "City") invites interested firms to submit a sealed Statement of Qualifications (SOQ) for the following:

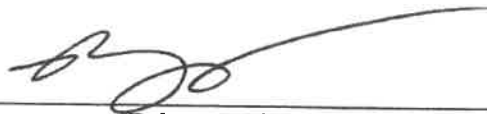
**SERVICES FOR
WATER METER SYSTEM REPLACEMENT
PROJECT NO. 35783300**

Interested parties may submit Qualifications for an Advanced Metering Infrastructure (AMI) Full Service Implementation and Maintenance Program in order to improve the process of collecting monthly water utility meter data to enhance the level of service offered to customers.

The AMI Full Service Program will be implemented system wide in a short time frame, in order to maximize the benefits of the system. Interested parties are to submit qualifications for a turnkey deployment of approximately 20,000 metered accounts, followed by an ongoing maintenance program that includes network, AMI endpoints, and software maintenance as well as full service data hosting and delivery to the City.

The requirements for Qualifications including instructions, requirements, and formatting for the SOQ may be secured at the City of Findlay Engineering Department, 318 Dorney Plaza, Room 304 Municipal Building, Findlay, Ohio 45840, 419-424-7121, (fax) 419-424-7120 or www.findlayohio.com.

Firms interested in being considered for selection should respond by submitting one original and three copies of the SOQ in a sealed envelope marked "Water Meter System Replacement" to **Engineering Department, City of Findlay, 318 Dorney Plaza, Room 304 Municipal Building, Findlay, OH 45840 by 2:00 p.m. on Monday, October 29, 2018.** Responses received after the specified due date and time will not be considered.



Brian A. Thomas, P.E., P.S.
Service Director/Acting City Engineer

TO BE ADVERTISED: **October 12 and 19, 2018 - Courier (Acct#18657)**

RFQ Scope of Work for City of Findlay Water Meter Replacement Project

- I. Overview of Project
 - a. Interested parties to submit Qualifications for an Advanced Metering Infrastructure (AMI) Full Service Implementation and Maintenance Program in order to improve the process of collecting monthly water utility meter data and subsequent billing in order to enhance the level of service offered to its customers
 - b. The AMI Full Service Program will be implemented system wide in a short time frame, in order to maximize the benefits of the system. Interested parties are to submit qualifications for a turnkey deployment of approximately 20,000 metered accounts, followed by an ongoing maintenance program that includes network, AMI endpoints, and software maintenance as well as full service data hosting and delivery to the City.
 - c. The submitter shall be the single point of responsibility on all components of the Full Service Program (included but not limited to services, equipment, hardware, software, and warranties.
 - d. The Full Service Program shall run for a term of 15 years.
 - i. Provide and perform the initial replacement of all existing water meters.
 - ii. Provide and install radio transponder endpoints with two-way licensed communications at the 450-470 MHz frequency.
 - iii. Install a fixed based data collection system to collect readings and information from AMI modules and transmit to a hosted server.
 - iv. Install all hardware and software that will receive meter readings, prepare reports, and interface with the Utility's billing system.
 - v. Provide equipment, training, and implementation to migrate from the current system to the fixed base Full Service Program.
 - vi. Secure hosting of meter readings that can be accessed by the Utility at any time.
 - vii. A Maintenance Program that provides replacement of failed components.
 - e. **Submitters are encouraged to carefully review all the materials contained herein and prepare their Qualifications accordingly.** The detailed requirements set forth below will be used to score the Qualifications and failure of the Submitter to provide the information requested for a specific requirement may render their Qualifications as non-responsive and may result in being rejected.
 - f. Submitters shall carefully study and compare the information and documents presented in this Request for Qualifications to ensure there are no conflicts, shall examine the site and local conditions, if applicable, and shall at once report to the Contact Person any errors, inconsistencies or ambiguities discovered
 - g. The Utility shall not be liable for any costs incurred by a Submitter in preparing or producing its Qualifications or for any Services provided before execution of an Agreement.
 - h. All terms and conditions outlined in this Request for Qualifications and any associated Addenda, shall become a part of the Agreement entered into between the Utility and the Successful Submitter.
 - i. Questions
 - i. Submitters shall submit all questions about the meaning or intent of the Request for Qualifications to the Contact Person in **written format only**. It will be at the Utility's discretion whether questions received after the date for "deadlines for questions" as

noted in the Event Timeline will or will not be answered. Interpretations or clarifications considered necessary in response to such questions will be issued by a written Addendum. **Only questions answered by formal written Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect.**

- ii. Questions submitted shall not constitute formal protest of the specifications or of this Request for Qualifications
- iii. All inquiries pertaining to this Request for Qualifications are to be directed to:
 - 1. Brian Thomas - bthomas@findlayohio.com
 - 2. Jason W. Phillips - jphillips@findlayohio.com
- j. Submitters should review and become familiar with the Event Timeline. The dates and times of each activity within the Timeline may be subject to change. It is the responsibility of the Submitter to check for any changes. All changes to the Timeline will be made through an addendum to this Request for Qualifications.

EVENT	DATE	TIME
Issue Request for Qualifications	October 12, 2018	
Deadline for Questions	October 25, 2018	2:00 pm
Qualifications Due Date and Time	October 29, 2018	2:00 pm
Oral Presentations (if applicable) (subject to change)	November 5, 2018	
Approval of Selection and Award (subject to change)	November 9, 2018	

- k. **SEALED** Qualifications are to be submitted on or before October 29, 2018 at 2:00 PM to: City of Findlay Engineering Department, 318 Dorney Plaza, Room 304, Findlay, Ohio 45840
- l. Four (4) copies of the qualifications shall be submitted, sealed and mailed or delivered to be received no later than the above Qualification Due Date and Time.
- m. **The outside of the mailing package must be marked with the following information:**
 - i. The words "SEALED QUALIFICATIONS ENCLOSED - AMI Maintenance Program"
 - ii. Name of the entity submitting the Qualifications
 - iii. If the mailing package is not marked and is opened in error, the Qualifications may be rejected.
- n. The Utility assumes no responsibility for a Qualification received after the due date and time, or at any location other than that specified herein, whether due to mail delays, courier mistakes, mishandling, inclement weather, or any other reason. **Qualifications received after the due date and time shall be returned unopened. There will be no exceptions to this policy.**

II. Submittal Format

To aid in the scoring of the Qualifications, provide the following information in the format as noted. This information will be used as the foundation for scoring the Qualifications. Qualifications are to be submitted in 8½" x 11" size, typed, three (3) hole punched and fastened with a paper clip or binder clip. Lengthy

narratives are discouraged; presentations should be brief and concise and not include extraneous or unnecessarily elaborate promotional material. **The qualifications should not exceed 30 pages in length, excluding appendices.**

Submitters should use the following outline in organizing the contents of their qualifications:

- a. Title Page
- b. Introduction - introduce the firm and briefly state the understanding of the services to be provided and why they should be awarded the contract.
- c. Submitter History:
 - i. Include company contact name, address, e-mail, and phone number of project manager.
 - ii. The Submitter shall have a proven project manager to ensure successful Full Service Program installation. Project managers shall be experienced in managing the design, installation and optimization of systems. Project management experience shall include system integration and training support.
 - iii. The asset management experience and capabilities shall be detailed; preference will be given to long-term asset management experience. Provide a listing of references of similar project scope and complexity with customer contact information, so that the Utility can verify experience.
 - iv. Provide details outlining the ability to service the long-term asset management program from within the state of Ohio, including local offices and service centers as well as the local offices and service centers of technology partners.
 - v. Provide documentation of ISO9001 certification for Asset Maintenance Programs
- d. Financial Stability:
 - i. Provide a summary detailing years in business, number of customers, financial strength, corporate structure and reporting. Demonstrate the ability to self-finance the initial meter infrastructure for up to 5 years by providing three (3) references with contract information. No third party financing references shall be allowed.
 - ii. The Submitter must also be able to delay the first payment of the project for one (1) year or until final completion of the initial installation and testing of the AMI network is complete.
 - iii. Submitter is to complete a financial analysis which will detail the expected financial benefits that the Utility can expect to realize. The Submitter shall project the analysis for a 15-year period. All assumptions used in the financial analysis must be clearly explained.
- e. Full Service Program Capabilities:
 - i. Include a summary of the Submitters capabilities in accordance with the required maintenance program services.
 - ii. Include product descriptions for the proposed AMI system components and software capabilities.
 - iii. Include product descriptions for the proposed meter components and capabilities.
 - iv. Proposals for AMR/Drive-by or Hybrid AMI/AMR Systems shall not be allowed

f. References

- i. Include a list of at least three references for similar asset management projects

III. Maintenance Program

The Submitter shall provide a maintenance program that, at the option of the Utility is renewable on an annual basis. The maintenance program will provide for the operation and long term maintenance of the AMI Full Service Program. The operational component of the Maintenance Program will include:

- a. All costs for operating, maintaining, and updating the backhaul communications system from the data collectors to the hosted software.
 - i. The Submitter will repair or replace any failed component of the data collectors, including but not limited to the battery, power supply, solar panel, communications board and firmware upgrades. Should the communications protocol from the cellular company require updating, it will be at no additional installation costs to the Utility.
 - ii. Ongoing hosting costs. This will include managing the data, server replacement, and back office operations, such as, backups, software upgrades, and installation of software patches.
 - iii. Software upgrades: The Submitter will provide updates to the AMI software upon release by the manufacturer. Submitter will validate proper installation of the upgrade and the integration into the Utility's billing systems.
 1. Submitter will provide on-site training, within 15 days of the upgrade, to Utility staff on the operation of the software, highlighting any changes or enhancements in the new version of the software.
 2. Submitter will provide unlimited on-line and telephone support to address any questions or issues in the use of the software.
 - iv. The repair or replacement of any failed component of the AMI system, for performance reasons including water meters, transmitters, data collection units and software. The maintenance will include replacement hardware to reinstall the failed component(s). The costs will be a lump sum amount that will safeguard the utility in the event of a higher than expected failure rate of any of the metering system components.
 - v. Back office IT operations including backups, disaster recovery and server replacement
- b. System Performance: The Submitter will provide the following level of service to meet or exceed the following criteria:
 - i. The system will deliver at least 98% of all expected reads. The expected number of reads for each endpoint is twenty- four (24) hourly reads daily.
 - ii. The Full Service Program will deliver at least 99.5% of billing reads. Billing reads are defined as readings available to be used for calculation of utility bill.
 - iii. Submitter will be required to take any action to remedy any issue(s) that hamper the AMI Full Service Program from meeting the above criteria. Proposer must have the financial strength to be able to support this requirement for a period of at least 15 years.
- c. Subcontractors: Submitter will provide a list of subcontractors that will be used to execute

the project. Each subcontractor will be identified by name and shall provide the following information: years in business, outline of similar experience and capabilities.

- d. **Wages:** All contractors and subcontractors shall pay the appropriate wage rate (when applicable) to all craftsman, tradesman, laborers and mechanics that work on the project.

IV. Fixed Network Advanced Metering Infrastructure (AMI) System Specifications

- a. It is the intent of the enclosed specifications to provide the City with a Fixed Network Advanced Metering Infrastructure (AMI) System that will work with all major water meters, with an expected reading accuracy of 98% or more for all meters in the system.
- b. The City will not consider technology that has not been field tested. The proposal shall be for new equipment. No used, rebuilt or refurbished equipment will be considered.
- c. When the project is completed, the City will own and operate a functional and upgradeable Fixed Network AMI System capable of utilizing several types of meters and meter manufacturers.
- d. The System shall be two-way and utilize leading technology and an open architecture to ensure compatibility with all identified meter types. System shall operate in the 450-470MHz range.
- e. The Fixed Network shall consist of a series of data collector units (DCU) located strategically throughout the City service area. The locations shall be determined by the Fixed Network AMI System vendor as part of the bid. The DCU units will be powered using either AC/battery or solar/battery to retrieve meter readings and relay them to a hosted server. The DCU units, as well as the corresponding MTU units, must operate on a licensed frequency that is the exclusive property of the City.
- f. All Fixed Network AMI retrieved meter readings will be in a format compatible with the vendor supplied software for the Fixed Network system. The software will prepare and format the meter reading data for the printing of selected management reports and the transfer of the meter reading data to the billing software for customer invoicing. The Fixed Network AMI System shall provide, at minimum, the following:
 - i. Provide for automatic, routine operation of the AMI System, including diagnostic procedures on all hardware, and logging of all known alerts, alarms and exceptions.
 - ii. Provide the ability to view specific account information.
 - iii. Process the readings and add them to the AMI database.
 - iv. The AMI System software shall be capable of providing individual account reports, flagging large usage, system status, detailed history for specific accounts, battery strength, and tamper alarms.
 - v. Allow for the addition of distribution system leak detection.
 - vi. Enable provision of enhanced products and services to customers, such as internet-based information access.

V. AMI System Description

- a. Provide a detailed description of the proposed Fixed Network AMI System. Include a full system architecture diagram. Include a description of your system in response to each of the following sections.
- b. AMI Hardware
 - i. **Meter Transmission Unit (MTU)**
 1. **Housing:** The MTUs will be housed in a molded plastic housing,

hermetically sealed and resistant to rain, moisture and temperature changes from -30 to +70 degrees C. The enclosure must house the complete unit, which includes electronics, battery compartment, antenna and wire connections.

2. **Battery Life:** The MTUs shall have a permanently installed non-field replaceable battery with twenty (20) year life cycle expectancy.
3. **Maintenance:** The MTUs shall be maintenance free. After initial installation, MTU will continue to operate at optimal levels for the entire life of the product.
4. **Read Interval:** The MTUs shall contain a radio that transmits a brief message containing the MTU identification number and port number, the meter reading, and tamper flags at programmed intervals. The two-way water MTUs shall provide top-of-the-hour, time synchronized hourly reads (and, for short durations, fifteen (15) minute reads) to meet high interval reading requirements. The read interval shall be reconfigured over the air from the host server.
5. **Diagnostic Information:** MTUs shall provide diagnostic information, such as battery voltage, and tamper flags with every transmitted reading.
6. **Meter Compatibility/Ports:** MTUs shall be compatible with multiple makes and models of meters and shall be offered as single or dual-port units.
7. **Installation:** MTUs shall be easily installed and provide appropriate provisions to avoid installer mistakes in installation, connection to meters, and programming. The MTUs shall be configured with a Field Programmer that will take the operator through a series of simple steps. Each step shall include error checking and verification, where appropriate. The Field Programmer shall communicate with the MTUs to confirm proper configuration and wiring. The Field Programmer shall also have the ability to initiate communication between an MTU and a DCU to ensure successful communication. A confirmation message shall be received by the Field Programmer approximately one minute after initiation.
8. **FCC Regulation:** All equipment must comply with current Federal Communications Commission (FCC) requirements, which include proper labeling of any system components and compliance with Part 90 of the FCC regulations. The vendor must have supporting documentation available upon request to verify compliance. The system proposed by the vendor must operate on a dedicated, licensed frequency to prevent erroneous reading errors.

The Vendor must obtain said license on behalf of City including any and all fees.

9. **Labeling:** The MTUs shall be labeled with the Manufacturer's name, ID number, date of manufacture, and required FCC labeling.

10. **Warranty:** The MTUs shall be guaranteed for the entire life of the project (15 years).

c. **Field Programmer / Handheld**

i. The Field Programmer / Handheld unit shall be designed to operate in a harsh reading environment, resistant to dust and moisture, and be able to withstand temperature extremes from -20 degrees F to +140 degrees F. The Programmer shall contain its own software for programming, and be provided with easy instructions for operation. Main and back-up batteries must be readily available from local suppliers. Units shall be provided with any needed communications software, adapters, chargers, or accessories. All software shall be licensed to the City.

d. **Data Collector Units (DCUs)**

i. The Fixed Network shall consist of a series of Data Collector Units (DCUs) located strategically throughout the City distribution system. DCUs must operate in temperature extreme ranges of -40° to 85° C.

ii. **Power Supply:** The DCUs units shall be powered using either AC/battery or solar/battery to retrieve meter readings and relay them to a centralized location at City offices.

iii. **Memory Capacity:** Each DCU shall have the capacity to store approximately 30 days' worth of meter readings.

iv. **Diagnostic Information:** The DCUs shall measure and record battery strength, Radio Frequency (RF) signal strength and time and date stamp each inbound transmission. These records will be included with each transmission.

v. **Transmission Security:** Data transmission between MTUs and the DCUs shall be in a proprietary format and not easily deciphered by outside sources.

vi. **DCU Planned Network:** The DCU locations shall be determined by the Fixed Network AMI vendor as part of the bid based on a propagation study performed by the Fixed Network AMI vendor. The proposed number of DCUs shall provide 100% redundant coverage for the service territory without the need for any repeaters.

vii. **Mounting:** DCUs shall be capable of being mounted on roofs, utility poles, towers, etc., to collect readings from all meters in the coverage area. No special tower construction will be allowed.

- viii. **DCU Network Redundancy:** Redundancy will be incorporated into the DCU placement process to accelerate the reading process and ensure all meters provide a reading. Each DCU, installed at a minimum height of 30 feet, will be able to read at least one (1) square mile of coverage and support not less than one thousand (1,000) MTU units.
 - ix. **Installation:** DCUs shall be automatically recognized and installed onto the System network. DCU behaviors, including connection time, alarm message handling, alternative connection numbers, etc. shall be configurable, over the network.
 - x. **Scalability:** DCU units may be added to the Fixed Network AMI System at any time without need for system reconfiguration.
 - xi. **Electrical Isolation:** All DCU electronics shall be electrically isolated and protected against static discharge and indirect lightning strikes.
 - xii. **Maintenance:** After being installed, DCUs shall require little to no maintenance for the life of the unit.
 - xiii. **WAN Technology:** DCUs shall be easily configured to utilize a variety of WAN technologies to communicate to the head end computer. DCUs shall have optional backhaul communication methods such as cellular, Wi- Fi, Ethernet, IP, and fiber optic and shall be easily upgraded from one WAN technology to another.
 - xiv. **Warranty:** The DCUs shall be guaranteed for the entire life of the project (15 years).
- e. Server Specifications
- i. Managed Hosting Solutions are required, locally hosted data will not be considered.
 - ii. The Host Server shall act as the central collection point for the data within the system. All data hosting and delivery will be cloud based and is the responsibility of the submitter to set up the software, hardware and hosting systems per the City requirements. The server collects data from all of the Collectors and stores the gathered data in a secure database. Once data is stored and analyzed on the server, the data shall be available for display via a web based graphical interface.
 - iii. The Submitter shall offer a Perpetual License for the Host Software. The Host Software solution shall utilize a secure web based application user interface and shall be accessible to the Utility on a continuous basis. The Submitter shall explain the host software security.
 - iv. The Submitter shall provide a managed hosting service, where the Submitter shall own and manage the server hardware and software including monitoring to ensure the server continues to work effectively, provides backup services, installation of security patches and various levels of technical support. The Submitter hosted solution shall utilize a secure web based application.

f. **AMI Software**

- i. **Software must be provided to perform the following functions:**
 1. **The software must be web browser-based and shall have defined applications with standard interfaces to allow for existing and planned software applications.**
 2. **Manage the database of meter readings and other related information about the meters and the AMI system**
 3. **Interface with City's Customer Information System (CIS) and other information systems. If the applications identified above are distinct and separate, Supplier shall respond to this subsection for each application.**
- ii. **The Software must be capable of handling the multiple utility reads simultaneously. The successful vendor shall install access to the hosted server at the City facilities and ensure the system can be accessed by all necessary departments. At a minimum, the AMI software will provide the following pieces of data:**
 1. **Customer account number.**
 2. **Customer address.**
 3. **Meter serial number.**
 4. **Date of system integration.**
 5. **System meter read history.**
 6. **MTU I.D. number.**
 7. **Customer consumption data.**
- iii. **In addition to the required data noted above, as held within the meter reading software itself, the AMI vendor must support an interface with the City billing system. City will provide an input/output file format to the successful vendor. License to use said software will be issued to the City upon delivery of AMI server.**
- iv. **Any Supplier-supplied database used to store and manage meter readings should be non-proprietary, ODBC-compliant, SQL-compliant, or provided by a standard commercial database supplier.**
- v. **The fixed network software solution must offer:**
 1. **Rate information**
 2. **Customer information**
 3. **Service point information**

4. Meter data
 5. Tamper data
 6. Event data
- vi. The solution must be able to store and archive multiple types of data for each individual endpoint including but not restricted to:
1. Rate information
 2. Customer information
 3. Service point information
 4. Meter data
 5. Tamper data
 6. Event data
 7. Store/archive a minimum 24 months of data. All data must be easily retrievable.
 8. Accessible by a rich client or Web-browser based interface for the purposes of system administration and diagnostic troubleshooting.
 9. Be designed as a robust and scalable data repository to leverage best practices of data warehousing. The database should support scalability and have a highly flexible data structure to allow new data elements to be created without changes in table structures.

g. Consumer Engagement

- i. The solution must include a customer engagement web portal which includes:
1. Customer login/authentication
 2. Web based customer dashboard with:
 - i. AMI data presentment
 - ii. Bill-to-date
 - iii. Bill analysis
 3. Analysis module for customers to see how their homes compare to similar homes
 4. Customer alerts
 5. Proactive water conservation reports

h. **Interface to Billing System**

- i. The AMI system supplier shall provide the appropriate software to automatically transfer appropriate data to the billing and Customer Information System (CIS) in a standard, nonproprietary format (e.g., fixed field ASCII) compatible with City existing formats. Each record provided to the CIS shall contain at a minimum: account number, MTU ID number, route number, meter ID number, meter readings, date and time for each meter reading, and tamper indications.

i. **Water Capabilities**

- i. **Read Interval:** The solution shall be capable of collecting data in intervals of 15 or 30 minutes as well as hourly reads.
- ii. **Leak Detection:** The system shall monitor water consumption through the meter and indicate when there is an abnormal increase in water consumption, suggesting a leak within the customer's premise. The software must also provide meter reading management reports, usage analysis reports (leak detection, tamper detection and backflow conditions), and system management diagnostics.
- iii. **No Flow Detection:** The system (either through reports or alarms from the MTU) shall indicate when there is an extended period of no flow or a minimum flow through the meter.
- iv. **High Flow Detection:** The system shall provide a report of accounts with abnormally high consumption during any billing period, suggesting a continuous flow condition.
- v. **Constant Consumption:** The system shall provide a constant consumption report to identify locations which a potential leak had occurred by monitoring for constant usage or continuous flow with consecutive reads
- vi. **Time Synchronization:** The system shall provide time synchronized meter reads that allow the City to obtain a snapshot of water consumption. Describe how the system maintains time synchronization across the network. All MTUs on the network must maintain time synchronization within 30 seconds of each other.

j. **AMI Compatible Acoustic Leak Detection System**

- i. The system shall be capable of utilizing acoustic data loggers that connect magnetically to water distribution mains to be upgraded at a later date.

k. **AMI Back-up**

- i. System shall have back-up capabilities and procedures to ensure that system and consumption data is not corrupted or lost.

l. **AMI System Diagnostics**

- i. System diagnostics shall be collected at all levels and transferred on to the host server where several types of diagnostic reports shall be produced. Such reports shall indicate problems ranging from battery voltage to failure to recognize a proper

communication with the meter.

m. AMI System Maintenance

- i. In addition to warranty periods, vendors are required to supply information on required or optional maintenance programs beyond the warranty period for both hardware and software. Features of those programs shall also be included with any additional charges such as hourly rate for on-site and/or remote support. The location of and procedures for obtaining such support shall be stated.

n. AMI Training

- i. The City requires training of all appropriate staff sufficient to enable them to effectively operate and maintain the system. To be effective, the City requires that training curriculum be provided in advance, that training be accompanied by course workbooks and materials, and that training be provided by experienced instructors.
- ii. During the 15 year time period a yearly refresher and or all new employees will be trained as well

VI. Meter specifications

a. The residential and light commercial meters will comply with the following specifications:

- i. All meters shall meet or exceed the latest version of the American Water Works Association (AWWA) Standard C700 or C710 or C750 for cold water meters
- ii. All materials used in the construction of the main cases shall have sufficient dimensional stability to retain operating clearances at working temperature up to 105 degrees Fahrenheit.
- iii. The meter serial number shall be stamped on the main case of the meter.
- iv. The meter main-case shall be cast from NSF/ANSI 61 certified material. The serial number should be displayed in a permanent location on the meter or register. Meter markings shall indicate size, model, direction of flow, and NSF 61 certification
- v. The meter electronic register enclosure shall be constructed of a durable engineered composite designed to last the life of the meter. The meter shall provide a fully potted wire connection for use with AMR/AMI devices.
- vi. The standard, advanced, and enhanced communication protocol for the water meter absolute encoder register shall be fully compatible and available for use with the selected AMI system and software.
- vii. The AWWA C750 solid state meters must feature fully-potted electronics and battery and an IP68 rating for submersion in flooded meter pits.
- viii. All meters shall be 100% factory tested for accuracy and have the factory test results provided with each meter.
- ix. Meters shall be pressure tested to ensure against leakage.

- x. Meters shall be guaranteed accuracy for the 15 year period of the agreement
 - xi. All electrical components and batteries will be guaranteed for 15 year period of the agreement
- b. The commercial meters will comply with the following specifications:
- i. Shall meet or exceed all requirements of ANSI/AWWA Standard C701, C702, C703 and C750 for cold water meters. Each meter assembly shall be performance tested to ensure compliance.
 - ii. The meter main case shall be stainless steel, bronze or epoxy coated ductile iron or epoxy coated fabricated steel composition
 - iii. The meter package shall meet or exceed all requirements of NSF/ANSI Standard 61, Annex F and G.
 - iv. All meters shall be 100% factory tested for accuracy and have the factory test results provided with each meter.
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 - vi. Meters shall be guaranteed accuracy for the 15 year period of the agreement
 - vii. All electrical components and batteries will be guaranteed for 15 year period of the agreement

VII. Modification / Withdrawal of Qualifications

- a. Submitters have the right to modify or withdraw their Qualifications without cause or without liability whatsoever at any time prior to the stipulated submittal date and time. Such requests must be made to Utility in writing. Modified or withdrawn Qualifications may be resubmitted, in accordance with the instructions in this Request for Qualifications prior to the stipulated submittal date and time.
- b. *No Qualifications shall be modified or withdrawn by the Submitter after the Submittal Date.*

VIII. Clarifications

- a. Before contract award, the Utility reserves the right to seek clarification from the Submitter with whom Utility is contemplating award to properly score their Qualifications. Failure to provide requested information may result in not making such award to the Submitter.

IX. Negotiations and Contract Award

- a. The City reserves the right to finalize the negotiations at any point and reserves the right to award a contract based on what is deemed to be in the best interest of the City. The City shall issue a Notice of Intent to Award, if any, to the Successful Submitter, however, no contract shall be formed between Successful Submitter and the City until the City signs the contractual Agreement.

- x. Meters shall be guaranteed accuracy for the 15 year period of the agreement
 - xi. All electrical components and batteries will be guaranteed for 15 year period of the agreement
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X. Minimum Insurance Requirements

- a. Qualifications are to submit a copy of their certificate(s) of insurance evidencing policies and limits of insurance that they currently have in force. If this document is not submitted, the Qualifications may be rejected.
- b. *If, upon Notice of Intent to Award, the Successful Submitter does not currently have the policies and limits specified below, they shall have ten (10) calendar days to provide the Utility with certificate(s) of insurance evidencing that they have procured such and policies and limits.*
- c. Submitter shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees or sub-contractors. The coverage's, limits or endorsements required herein protect the primary interests of the Utility, and these coverage's, limits or endorsements shall in no way be required to be relied upon when assessing the extent or determining appropriate types and limits of coverage to protect the Submitter against any loss exposures, whether as a result of the Project or otherwise. The requirements contained herein, as well as the Utility's review or acknowledgement, is not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by the Submitter under this contract.

XI. Commercial General Liability

- a. The insurance carrier must possess an AM Best rating of A- or Better. Coverage must be afforded under a per occurrence form policy for limits not less than \$2,000,000 each occurrence, \$2,000,000 products / completed operations each occurrence, \$2,000,000 personal and advertising injury liability, \$2,000,000 each occurrence and \$10,000 medical expense. Additionally, all firms shall provide a detailed certificate that indicates they carry Pollution Liability Insurance in the amount of no less than \$2,000,000 of coverage.

XII.

- a. *Submitter's insurance coverage shall be primary insurance* as respects Utility, its officials, employees and volunteers. Any insurance or self-insurance maintained by Utility, its officials, employees or volunteers shall be excess of Submitter's insurance and shall be non-contributory.

XIII. Automobile Liability

- a. Coverage must be afforded including coverage for all Owned vehicles, Hired and Non-Owned vehicles for Bodily Injury and Property Damage of not less than \$2,000,000 combined single limit each accident. In the event Submitter does not own vehicles, Submitter shall maintain coverage for Hired & Non-Owned Auto Liability, which may be satisfied by way of endorsement to the Commercial General Liability policy or separate Business Auto Liability policy.
- b. *Submitter's insurance coverage shall be primary insurance* as respects Utility, its officials, employees and volunteers. Any insurance or self-insurance maintained by Utility, its officials, employees or volunteers shall be excess of Submitter's insurance and shall be non-contributory.

XIV. See attached sheet for scoring criteria

City of Findlay Water Meter Replacement Project

Design-Build Selection Rating Form

Project Number: _____ Proposer Firm: _____
 Project Bid Date: _____ City, State, Zip: _____

Selection Criteria	Value	Score
Primary Firm Qualifications (Maximum 20 points)		
The firm's overall understanding of the project scope	0 - 5	
Experience of the primary firm in the municipal water industry	0 - 5	
Clarity of the firm's responsibility and communication processes	0 - 5	
Proximity to the City of the primary firm and technology partner facilities and resources	0 - 3	
Proven track record with performing services for the City	0 - 2	
Key Technology Qualifications (Maximum 20 points)		
Ability of the proposed AMI Technology to meet the project scope and provide equipment reliability	0 - 5	
Experience of the AMI Technology team in project delivery	0 - 5	
Ability of the proposed Meter Technologies to meet the project scope and provide equipment reliability	0 - 5	
Experience of the Meter Installation team in project delivery	0 - 5	
Project Team Qualifications (Maximum 25 points)		
Ability of the project designer to achieve the City's vision and meet overall project requirements	0 - 3	
Experience of the project manager to manage project scope, budget, schedule and quality	0 - 10	
Experience of the Technology Partners to maintain communication, and coordinate construction documents and schedules	0 - 10	
Experience of the project field representatives to identify and solve issues during construction	0 - 2	
Maintenance Program Qualifications (Maximum 20 points)		
Overall commitment of the firm to the asset management concept	0 - 3	
Capability to meet all requirements of the water meter replacement program	0 - 10	
Experience of the firm and technology partners with water meter asset management projects	0 - 10	
Experience with asset management projects in the state of Ohio	0 - 2	
Financial Stability (Maximum 10 points)		
Financial strength of the primary firm	0 - 3	
Proven capability of the primary firm to provide project self-financing	0 - 3	
Acceptance of delayed initial project payment	0 - 2	
Financial analysis of expected project benefits	0 - 2	
	TOTAL	

Notes:

Evaluation Date: _____

Name: _____

Signature: _____