

# Request for Proposals

---



**City of Minneapolis  
Department of Public Works  
Division of Water Treatment & Distribution Services**

## **ADVANCED METER INFRASTRUCTURE**

**RFP 2016-123 Issue Date: September 13, 2016**

**Proposals Due by: Tuesday, November 17, 2016 (4:00 PM CT)**

September 9, 2016

To Whom It May Concern:

Attached is a Request for Proposal (RFP) for the purchase and installation of an Advanced Meter Infrastructure (AMI) system including endpoints, AMI software and interfaces into other systems. These products and services are needed to replace and improve the automated meter reading system utilized by the Water Treatment and Distribution Services Division of Public Works for accurately billing water usage.

It is the City's intent to award a single contract for a term of approximately twenty (20) years with the following temporal elements:

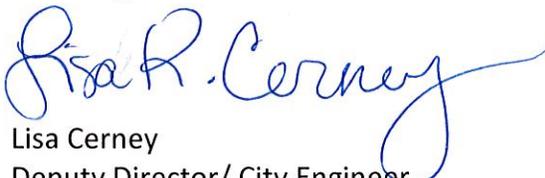
- Vendor/installer building out the infrastructure for 3 years with an option to extend.
- An Endpoint device price guarantee for 8 years.
- AMI software maintenance and support for 20 years concurrent with the buildout.
- Endpoint battery will be warranted for 20 years (10 full/10 limited) concurrent with the buildout.
- Network management and support for 20 years concurrent with the buildout.

The selected proposal, along with the RFP and any counter proposal will be incorporated into a formal agreement after negotiations. Please consider submitting a proposal for providing these products and services if your firm meets the qualifications and is available to complete the project. Please review the RFP for details.

Proposals are due by November 17, 2016. A pre-proposal conference will be held via Web Ex at 2:00 PM CT on Monday, September 26, 2016.

Thank you for your consideration.

Sincerely,



Lisa Cerney  
Deputy Director/ City Engineer  
Department of Public Works

# Table of Contents

<b>RFP General Information</b>	<b>Page</b>
1. INVITATION.....	1
2. PRE-PROPOSAL CONFERENCE .....	1
3. PROPOSAL DUE-DATE AND LOCATION.....	1
4. PROPOSAL FORMAT .....	1
5. EVALUATION OF PROPOSALS – VENDOR SELECTION .....	2
6. SCHEDULE.....	3
7. CONTRACT.....	3
8. DEPARTMENT CONTACT/REQUEST FOR CLARIFICATION .....	4
9. REJECTION OF PROPOSALS .....	4
10. ADDENDA TO THE RFP.....	4
<b>Attachment A – RFP Terms and Conditions.....</b>	<b>5-15</b>
1. CITY’S RIGHTS .....	5
2. EQUAL OPPORTUNITY STATEMENT.....	5
3. INSURANCE.....	5
4. HOLD HARMLESS .....	6
5. SUBCONTRACTING .....	6
6. ASSIGNMENT OR TRANSFER OF INTEREST .....	6
7. GENERAL COMPLIANCE .....	7
8. PERFORMANCE MONITORING .....	7
9. PRIOR UNCURED DEFAULTS .....	7
10. INDEPENDENT VENDOR .....	7
11. ACCOUNTING STANDARDS.....	7
12. RETENTION OF RECORDS.....	7
13. DATA PRACTICES .....	8
14. INSPECTION OF RECORDS.....	8
15. LIVING WAGE ORDINANCE.....	8
16. APPLICABLE LAW .....	8
17. CONFLICT AND PRIORITY .....	8
18. TRAVEL .....	8
19. BILLBOARD ADVERTISING.....	8
20. CONFLICT OF INTEREST / CODE OF ETHICS .....	9
21. TERMINATION, DEFAULT AND REMEDIES .....	9
22. OWNERSHIP OF MATERIALS.....	9
23. INTELLECTUAL PROPERTY.....	9
24. EQUAL BENEFITS ORDINANCE .....	10
25. CITY OWNERSHIP AND USE OF DATA .....	10
26. CARDHOLDER DATA SECURITY STANDARDS .....	10
27. AUDIT REQUIREMENTS FOR CLOUD-BASED STORAGE OF CITY DATA.....	11
28. SMALL & UNDERUTILIZED BUSINESS PROGRAM (SUBP) REQUIREMENTS.....	11
29. CLICK WRAP .....	12
30. SOFTWARE AUDIT RIGHTS.....	12
31. WARRANTY.....	13
32. TRANSFER RIGHTS .....	13
33. THIRD PARTY SOFTWARE .....	13
34. MULTIPLE INSTANCES OF LICENSES UNDER ONE LICENSE .....	13
35. CITY DATA OWNERSHIP AND ACCESS.....	13
36. VENDOR ACCESS TO CITY DATA .....	13
37. SITE TO SITE VPN .....	14
38. CLOUD DATA STORAGE .....	15

<b>Attachment B – Scope of Services</b> .....	<b>16-25</b>
1. PROJECT OVERVIEW .....	16
2. PROJECT PHASES .....	16
3. COORDINATION WITH WORKBY OTHERS.....	17
4. PROJECT ADMINISTRATION.....	18
5. PROJECT SCHEDULE.....	18
6. PROJECT COMPLETION.....	19
7. ACCEPTANCE OF PRODUCTS, SOFTWARE AND SERVICES .....	19
8. MANUFACTURER’S REPRESENTATIVE .....	20
9. OPERATIONS AND MAINTENANCE DOCUMENTATION .....	20
10. WARRANTIES .....	21
11. QUALITY MANAGEMENT .....	21
12. AMI SYSTEM (GENERAL).....	21
13. ADVANCED METERING INFRASTRUCTURE (AMI) REQUIREMENTS .....	22
14. USER ACCEPTANCE TESTING .....	22
15. METER INVENTORY AND INSTALLATION DATA MANAGEMENT .....	22
16. CUSTOMER OUTREACH .....	23
17. TRAINING REQUIREMENTS.....	24
18. SUPPORT AND MAINTENANCE.....	24
<b>Attachment C – Detailed Submittal Requirements</b> .....	<b>26-28</b>
FORM OF PROPOSALS .....	26
1. EXECUTIVE SUMMARY.....	26
2. VENDOR QUALIFICATIONS .....	28
3. COMPANY FINANCIAL INFORMATION (PROOF OF FINANANCIAL RESPONSIBILITY .....	28
<b>Attachment D – Proposal Form No. 1</b> .....	<b>29</b>
<b>Attachment E – Proposal Questionnaire No. 1: Technical Information</b> .....	<b>30-33</b>
<b>Attachment F – Price Schedule</b> .....	<b>34-43</b>
<b>Attachment G – Proposal Form No. 3 (Software Requirements)</b> .....	<b>44-121</b>
<b>Attachment H – As-is Technology Environment for On-Premise Solutions</b> .....	<b>122</b>

**REQUEST FOR PROPOSALS**  
**Advanced Meter Infrastructure**  
**RFP General Information**

**1. INVITATION**

It is the intention of the City to solicit proposals from Advanced Meter Infrastructure (AMI) system vendors qualified to provide a turnkey project to furnish and install a new AMI system, including hardware, software and services. A combination of Wi-Fi, fixed area network and cellular architecture capable of remotely reading water meters for service areas within the City will be designed and built. Also included in the scope is the procurement of up to 100,000 endpoints over an eight-year period and the replacement of 17,000 water meters and endpoints in a three-year period.

The City of Minneapolis (hereinafter referred to as the City) makes this Request for Proposals (hereinafter referred to as the RFP) in order to select a qualified Vendor (hereinafter referred to as the Vendor) for providing and installing an Advanced Meter Infrastructure including endpoints, data collectors, AMI software and integrations. (hereinafter called the Project). The Project is generally described in the "Scope of Services" (Attachment B), contained within this RFP, including descriptions of roles, responsibilities and relationship of the Vendor, City, and other parties involved in the Project.

**2. PRE-PROPOSAL CONFERENCE:**

A pre-proposal conference will be held at 2:00 PM, **(Minneapolis Time), September 26, 2016** via WebEx. All potential Vendors are encouraged to attend this conference.

**3. PROPOSAL DUE DATE AND LOCATION**

The Vendor shall submit **ten (10) hard copies** and three (3) electronic copies (thumb drive or DVD) of their proposals to the City of Minneapolis Procurement Office, labeled:

City of Minneapolis - Procurement  
Request for Proposals for:  
Advanced Meter Infrastructure  
330 2<sup>nd</sup> Avenue South, Suite 552  
Minneapolis, MN 55401

The submittal shall be made at or before **4:00 P.M. (Minneapolis Time), November 17, 2016** **NOTE: Late Proposals may not be accepted.**

**4. PROPOSAL FORMAT**

The Vendor shall provide the appropriate information in sufficient detail to demonstrate that the evaluation criteria has been satisfied as specified in Section 5 – "EVALUATION OF PROPOSALS – VENDOR SELECTION".

The Vendor shall refer to "Detailed Submittal Requirements" (Attachment C) contained within this RFP, for further information related to the proposal content and format.

To allow for easier comparison of proposals during evaluation, proposals should contain the following sections and attachments, arranged in consecutive order.

**4.1. Executive Summary**

The Executive Summary should include a clear statement of the Vendor's understanding of the RFP including a brief summary of the Scope of Work. Include, at a minimum, an outline of the contents of the proposal, an

identification of the proposed project team, a description of the responsibilities of the project team, and a summary of the proposed services.

#### **4.2. Scope of Services**

Describe in detail how services will be provided. Include a detailed listing and description of tasks and deliverables.

#### **4.3. Experience and Capacity**

Describe background and related experience demonstrating ability to provide required services. Indicate if company expansion is required to provide service.

#### **4.4. References**

List references from contracts similar in size and scope.

#### **4.5. Personnel Listing**

Show involved individuals with resumes and specific applicable experience. Sub-contractors should also be listed, including the identification of any that are certified in the City of Minneapolis Small & Underutilized Business Program.

#### **4.6. Cost/Fees**

Indicate the proposed cost of service including a description of how costs were determined; hourly rates; direct costs and payment billing schedule; list of charges per classification of employee; cost breakdown for each year of service.

#### **4.7. Company Financial Information**

Review company financial information for both the proposing Vendor and any subcontracted Installers. (Proof of Financial Responsibility).

### **5. EVALUATION OF PROPOSALS – VENDOR SELECTION**

Proposals will be reviewed by an Evaluation Panel made up of representatives of the City of Minneapolis, Department of Public Works and other City staff assistance as they might require. The Evaluation Panel may select a "short list" of qualified Vendors who will be formally interviewed as part of the final selection, as deemed necessary by the City. Evaluations will be based on the required criteria listed in Section 4 "PROPOSAL FORMAT", Attachment C "DETAILED SUBMITTAL REQUIREMENTS" and the following:

- 5.1. Quality, thoroughness, and clarity of proposal.
- 5.2. Qualifications and experience of staff (includes a review of references).
- 5.3. How well the Scope of Services offered meets department objectives.
- 5.4. Financial responsibility and capacity of company including whether or not the company, any affiliates, subsidiaries, officers or directors have filed for federal bankruptcy protection within seven years of the date of this RFP.
- 5.5. Organization and management approach and involvement for a successful project.
- 5.6. Small & Underutilized Business participation.
- 5.7. Cost of services proposed.

5.8. Insurance coverage as defined for the services.

A formal Presentation/Demonstration will be requested of the “short list” Vendors. Specifically, the City requests that the Vendor’s Project Manager assigned to the proposed project team lead the Presentation/Demonstration and that actual members of the project team (including any sub-contractors) participate in the formal Presentation/Demonstration.

The Presentation/Demonstration of the “short listed” Vendors will consist of the following elements:

- Demonstration of the proposed Project hardware, software and end user functionality.
- Discussion of the Vendor’s approach to providing services for this Project based upon the Scope of Services described herein.
- Overview of the Vendor’s experience as related to the Scope of Services, including qualifications and experience of assigned staff.
- Discussion of Vendor and City responsibilities necessary to complete the project.
- Discussion of the schedule, tools and integrations to guarantee an efficient, timely and successful Project.

The Evaluation Panel will schedule and arrange for the presentations.

**6. SCHEDULE:** The following is a listing of key Proposal and Project milestones:

RFP Release	September 13, 2016
Pre-Proposal Conference	September 26, 2016
Questions on RFP Due by	October 5, 2016
Responses to Questions Posted By	October 21, 2016
Proposals Due By	November 17, 2016 by 4:00 PM
Estimated Vendor Selection	March 27, 2017
Estimated Services Start Date	March 27, 2017
Estimated Services End Date	March 2020

**7. CONTRACT**

The contracting parties will be the City of Minneapolis and the Vendor selected to provide the services as described herein. The selected proposal, along with the RFP and any counter proposal will be incorporated into a formal agreement after negotiations. It is the intent of the City to award a single contract for a term of approximately twenty (20) years with the following temporal elements:

- 7.1 Vendor/installer building out the infrastructure for 3 years with an option to extend.
- 7.2 An Endpoint device price guarantee for 8 years.
- 7.3 AMI software maintenance and support for 20 years concurrent with the buildout.
- 7.4 Endpoint battery warranted 20 years (10 full/10 limited) concurrent with the buildout.
- 7.5 Network management and support for 20 years concurrent with the buildout.

**8. DEPARTMENT CONTACT/REQUESTS FOR CLARIFICATION**

The Vendor's primary interface with the City will be with the Contract Manager who will act as the City's designated representative for the Project. Prospective responders shall direct inquiries/questions ***in writing only*** to:

Contract Manager:           Brittany Pentek  
  City of Minneapolis  
  Department of Public Works  
  Division of Water Treatment and Distribution Services  
  4300 Marshall St. NE  
  Minneapolis, MN 55421  
  Email ID: [Brittany.Pentek@minneapolismn.gov](mailto:Brittany.Pentek@minneapolismn.gov)

All questions are due no later than 4:00 PM (**Minneapolis Time**), **October 5, 2016**. Responses to the Questions will be posted by October 21, 2016 on City's RFP website at:  
<http://www.minneapolismn.gov/finance/procurement/rfp>

The Contract Manager is the only individual who can be contacted regarding the Project before proposals are submitted. The Contract Manager cannot vary the terms of the RFP.

**9. REJECTION OF PROPOSALS:** The City reserves the right to reject any Vendor on the basis of the proposals submitted. The City reserves the right to reject all proposals or any Vendor on the basis of the proposal submitted.

**10. ADDENDUM TO THE RFP:** If any addendum is issued for this RFP, it will be posted on the City of Minneapolis web site at:  
<http://www.minneapolismn.gov/finance/procurement/rfp>

The City reserves the right to cancel or amend the RFP at any time.

# **ATTACHMENT A**

## **ADVANCED METER INFRASTRUCTURE**

### **RFP Terms & Conditions**

#### **GENERAL CONDITIONS FOR REQUEST FOR PROPOSALS (RFP)**

(Revised: Dec, 2015)

The General Conditions are terms and conditions that the City expects all of its Vendors to meet. The Vendor agrees to be bound by these requirements unless otherwise noted in the Proposal. The Vendor may suggest alternative language to any section at the time it submits its response to this RFP. Some negotiation is possible to accommodate the Vendor's suggestions.

#### **1. CITY'S RIGHTS**

The City reserves the right to reject any or all proposals or parts of proposals, to accept part or all of proposals on the basis of considerations other than lowest cost, and to create a project of lesser or greater expense and reimbursement than described in the Request for Proposal, or the respondent's reply based on the component prices submitted.

#### **2. EQUAL OPPORTUNITY STATEMENT**

The Vendor agrees to comply with applicable provisions of applicable federal, state and city regulations, statutes and ordinances pertaining to the civil rights and non-discrimination in the application for and employment of applicants, employees, subcontractors and suppliers of the Vendor. Among the federal, state and city statutes and ordinances to which the Vendor shall be subject under the terms of this Contract include, without limitation, Minnesota Statutes, section 181.59 and Chapter 363A, Minneapolis Code of Ordinances Chapter 139, 42 U.S.C Section 2000e, et. seq. (Title VII of the Civil Rights Act of 1964), 29 U.S.C Sections 621-624 (the Age Discrimination in Employment Act), 42 U.S.C Sections 12101-12213 (the Americans with Disability Act or ADA), 29 U.S.C Section 206(d) (the Equal Pay Act), 8 U.S.C Section 1324 (the Immigration Reform and Control Act of 1986) and all regulations and policies promulgated to enforce these laws. The Vendor shall have submitted and had an "affirmative action plan" approved by the City prior to entering into a Contract.

#### **3. INSURANCE**

Insurance secured by the Vendor shall be issued by insurance companies acceptable to the City and admitted in Minnesota. The insurance specified may be in a policy or policies of insurance, primary or excess. Such insurance shall be in force on the date of execution of the Contract and shall remain continuously in force for the duration of the Contract.

Acceptance of the insurance by the City shall not relieve, limit or decrease the liability of the Vendor. Any policy deductibles or retention shall be the responsibility of the Vendor. The Vendor shall control any special or unusual hazards and be responsible for any damages that result from those hazards. The City does not represent that the insurance requirements are sufficient to protect the Vendor's interest or provide adequate coverage. Evidence of coverage is to be provided on a current ACORD Form. A thirty (30) day written notice is required if the policy is canceled, not renewed or materially changed. The Vendor shall require any of its subcontractors, if sub-contracting is allowable under this Contract, to comply with these provisions, or the Vendor will assume full liability of the subcontractors.

The Vendor and its subcontractors shall secure and maintain the following insurance:

**3.1 Workers Compensation** insurance that meets the statutory obligations with Coverage B- Employers Liability limits of at least \$100,000 each accident, \$500,000 disease - policy limit and \$100,000 disease each employee.

**3.2 Commercial General Liability** insurance with limits of at least \$2,000,000 general aggregate, \$2,000,000 products - completed operations \$2,000,000 personal and advertising injury, \$100,000 each occurrence fire damage and \$10,000 medical expense any one person. The policy shall be on an "occurrence" basis, shall include contractual liability coverage and the City shall be named an additional insured. The amount of coverage will be automatically increased if the project amount is expected to exceed \$2,000,000 or involves potentially high risk activity.

**3.3 Commercial Automobile Liability** insurance covering all owned, non-owned and hired automobiles with limits of at least \$1,000,000 per accident.

**3.4 Professional Liability** Insurance or Errors & Omissions Insurance providing coverage for 1) the claims that arise from the errors or omissions of the Vendor or its subcontractors and 2) the negligence or failure to render a professional service by the Vendor or its subcontractors. The insurance policy should provide coverage in the amount of \$2,000,000 each claim and \$2,000,000 annual aggregate. The insurance policy must provide the protection stated for two years after completion of the work.

**3.5 Network Security and Privacy Liability** for the duration of this agreement providing coverage for, but not limited to, Technology and Internet Errors & Omissions, Security and Privacy Liability, and Media Liability. Insurance will provide coverage against claims that arise from the disclosure of private information from files including but not limited to: 1) Intentional, fraudulent or criminal acts of the Vendor, its agents or employees. 2) Breach of the City's private data, whether electronic or otherwise. The insurance policy should provide minimum coverage in the amount of \$1,000,000 per occurrence and \$2,000,000 annual aggregate. If written on a Claims-Made basis, the policy must remain in continuous effect for at least 3 years after the service is provided or include a 3 year extended reporting period.

#### **4. HOLD HARMLESS**

The Vendor will defend, indemnify and hold harmless the City and its officers and employees from all liabilities, claims, damages, costs, judgments, lawsuits and expenses, including court costs and reasonable attorney's fees regardless of the Vendor's insurance coverage, arising directly from any negligent act or omission of the Vendor, its employees, agents, by any sub-contractor or sub-consultant, and by any employees of the sub-contractors and sub-consultants of the Vendor, in the performance of work and delivery of services provided by or through this Contract or by reason of the failure of the Vendor to perform, in any respect, any of its obligations under this Contract.

The City will defend, indemnify and hold harmless the Vendor and its employees from all liabilities, claims, damages, costs, judgments, lawsuits and expenses including court costs and reasonable attorney's fees arising directly from the negligent acts and omissions of the City by reason of the failure of the City to perform its obligations under this Contract. The provisions of the Minnesota Statutes, Chapter 466 shall apply to any tort claims brought against the City as a result of this Contract.

Except as provided in the section titled Data Practices, neither party will be responsible for or be required to defend any consequential, indirect or punitive damage claims brought against the other party.

#### **5. SUBCONTRACTING**

The Vendor shall provide written notice to the City and obtain the City's authorization to sub-contract any work or services to be provided to the City pursuant to this Contract. As required by Minnesota Statutes, Section 471.425, the Vendor shall pay all subcontractors for subcontractor's undisputed, completed work, within ten (10) days after the Vendor has received payment from the City.

#### **6. ASSIGNMENT OR TRANSFER OF INTEREST**

The Vendor shall not assign any interest in the Contract, and shall not transfer any interest in the same either by assignment or novation without the prior written approval of the City. The Vendor shall not subcontract

any services under this Contract without prior written approval of the City Department Contract Manager designated herein.

**7. GENERAL COMPLIANCE**

The Vendor agrees to comply with all applicable Federal, State and local laws and regulations governing funds provided under the Contract.

**8. PERFORMANCE MONITORING**

The City will monitor the performance of the Vendor against goals and performance standards required herein. Substandard performance as determined by the City will constitute non-compliance with this Contract. If action to correct such substandard performance is not taken by the Vendor within a reasonable period of time to cure such substantial performance after being notified by the City, Contract termination procedures will be initiated. All work submitted by Vendor shall be subject to the approval and acceptance by the City Department Contract Manager designated herein. The City Department Contract Manager designated herein shall review each portion of the work when certified as complete and submitted by the Vendor and shall inform the Vendor of any apparent deficiencies, defects, or incomplete work, at any stage of the project.

**9. PRIOR UNCURED DEFAULTS**

Pursuant to Section 18.115 of the City's Code of Ordinances, the City may not contract with persons or entities that have defaulted under a previous contract or agreement with the City and have failed to cure the default.

**10. INDEPENDENT VENDOR**

Nothing contained in this Contract is intended to, or shall be construed in any manner, as creating or establishing the relationship of employer/employee between the parties. The Vendor shall at all times remain an independent Vendor with respect to the work and/or services to be performed under this Contract. Any and all employees of Vendor or other persons engaged in the performance of any work or services required by Vendor under this Contract shall be considered employees or subcontractors of the Vendor only and not of the City; and any and all claims that might arise, including Worker's Compensation claims under the Worker's Compensation Act of the State of Minnesota or any other state, on behalf of said employees or other persons while so engaged in any of the work or services to be rendered or provided herein, shall be the sole obligation and responsibility of the Vendor.

**11. ACCOUNTING STANDARDS**

The Vendor agrees to maintain the necessary source documentation and enforce sufficient internal controls as dictated by generally accepted accounting practices (GAAP) to properly account for expenses incurred under this Contract.

**12. RETENTION OF RECORDS**

The Vendor shall retain all records pertinent to expenditures incurred under this Contract in a legible form for a period of six years commencing after the later of contract close-out or resolution of all audit findings. Records for non-expendable property acquired with funds under this Contract shall be retained for six years after final disposition of such property.

**13. DATA PRACTICES**

The Vendor agrees to comply with the Minnesota Government Data Practices Act (Minnesota Statutes, Chapter 13) and all other applicable state and federal laws relating to data privacy or confidentiality. The Vendor and any of the Vendor's sub-consultants or sub-contractors retained to provide services under this Contract shall comply with the Act and be subject to penalties for non-compliance as though they were a

“governmental entity.” The Vendor must immediately report to the City any requests from third parties for information relating to this Contract. The City agrees to promptly respond to inquiries from the Vendor concerning data requests. The Vendor agrees to hold the City, its officers, and employees harmless from any claims resulting from the Vendor’s unlawful disclosure or use of data protected under state and federal laws.

All Proposals shall be treated as non-public information until the Proposals are opened for review by the City. At that time, the names of the responders become public data. All other data is private or non-public until the City has completed negotiating the Contract with the selected Vendor(s). At that time, the proposals and their contents become public data under the provisions of the Minnesota Government Data Practices Act, Minnesota Statutes, Chapter 13 and as such are open for public review.

#### **14. INSPECTION OF RECORDS**

Pursuant to Minnesota Statutes, Section 16C.05, all Vendor payroll and expense records with respect to any matters covered by this Contract shall be made available to the City and the State of Minnesota, Office of the State Auditor, or their designees upon notice, at any time during normal business hours, as often as the City deems necessary, to audit, examine, and make excerpts or transcripts of all relevant data.

#### **15. LIVING WAGE ORDINANCE**

The Vendor may be required to comply with the “Minneapolis Living Wage and Responsible Public Spending Ordinance”:

([http://www.minneapolismn.gov/www/groups/public/@finance/documents/webcontent/convert\\_255695.pdf](http://www.minneapolismn.gov/www/groups/public/@finance/documents/webcontent/convert_255695.pdf) ), Chapter 38 of the City’s Code of Ordinances (the “Ordinance”). Unless otherwise exempt from the ordinance as provided in Section 38.40 (c), any City contract for services valued at \$100,000 or more or any City financial assistance or subsidy valued at \$100,000 or more will be subject to the Ordinance’s requirement that the Vendor and its subcontractors pay their employees a “living wage” as defined and provided for in the Ordinance.

#### **16. APPLICABLE LAW**

The laws of the State of Minnesota shall govern all interpretations of this Contract, and the appropriate venue and jurisdiction for any litigation which may arise hereunder will be in those courts located within the County of Hennepin, State of Minnesota, regardless of the place of business, residence or incorporation of the Vendor.

#### **17. CONFLICT AND PRIORITY**

In the event that a conflict is found between provisions in this Contract, the Vendor's Proposal or the City's Request for Proposals, the provisions in the following rank order shall take precedence: 1) Contract; 2) Proposal; and last 3) Request for Proposals (only for Contracts awarded using RFP).

#### **18. TRAVEL**

If travel by the Vendor is allowable and approved for this Contract, then Vendor travel expenses shall be reimbursed in accordance with the City’s Vendor Travel Reimbursement Conditions (<http://www.minneapolismn.gov/www/groups/public/@finance/documents/webcontent/wcms1p-096175.pdf> ).

#### **19. BILLBOARD ADVERTISING**

City Code of Ordinance 544.120, prohibits the use of City and City-derived funds to pay for billboard advertising as a part of a City project or undertaking.

## **20. CONFLICT OF INTEREST/CODE OF ETHICS**

Pursuant to Section 15.250 of the City's Code of Ordinances, both the City and the Vendor are required to comply with the City's Code of Ethics. Chapter 15 of the Code of Ordinances requires City officials and the Vendor to avoid any situation that may give rise to a "conflict of interest." A "conflict of interest" will arise if Vendor represents any other party or other client whose interests are adverse to the interests of the City.

As it applies to the Vendor, the City's Code of Ethics will also apply to the Vendor in its role as an "interested person" since Vendor has a direct financial interest in this Agreement. The City's Code of Ethics prevents "interested persons" from giving certain gifts to employees and elected officials.

## **21. TERMINATION, DEFAULT AND REMEDIES**

The City may cancel this Contract for any reason without cause upon thirty (30) days' written notice. Both the City and the Vendor may terminate this Contract upon sixty (60) days' written notice if either party fails to fulfill its obligations under the Contract in a proper and timely manner, or otherwise violates the terms of this Contract. The non-defaulting party shall have the right to terminate this Contract, if the default has not been cured after ten (10) days' written notice or such other reasonable time period to cure the default has been provided. If termination shall be without cause, the City shall pay Vendor all compensation earned to the date of termination. If the termination shall be for breach of this Contract by Vendor, the City shall pay Vendor all compensation earned prior to the date of termination minus any damages and costs incurred by the City as a result of the breach. If the Contract is canceled or terminated, all finished or unfinished documents, data, studies, surveys, maps, models, photographs, reports or other materials prepared by the Vendor under this Contract shall, at the option of the City, become the property of the City, and the Vendor shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents or materials prior to the termination.

Notwithstanding the above, the Vendor shall not be relieved of liability to the City for damages sustained by the City as a result of any breach of this Contract by the Vendor. The City may, in such event, withhold payments due to the Vendor for the purpose of set-off until such time as the exact amount of damages due to the City is determined. The rights or remedies provided for herein shall not limit the City, in case of any default by the Vendor, from asserting any other right or remedy allowed by law, equity, or by statute. The Vendor has not waived any rights or defenses in seeking any amounts withheld by the City or any damages due the Vendor.

## **22. OWNERSHIP OF MATERIALS**

All finished or unfinished documents, data, studies, surveys, maps, models, photographs, reports or other materials resulting from this Contract shall become the property of the City upon the City's payment for and final approval of the final report or upon payment and request by the City at any time before then. The City at its own risk, may use, extend, or enlarge any document produced under this Contract without the consent, permission of, or further compensation to the Vendor.

## **23. INTELLECTUAL PROPERTY**

All Work produced by the Vendor under this Contract is classified as "work for hire" and upon payment by the City to the Vendor will be the exclusive property of the City and will be surrendered to the City immediately upon completion, expiration, or cancellation of this Contract. "Work" covered includes all reports, notes, studies, photographs, designs, drawings, specifications, materials, tapes or other media and any databases established to store or retain the Work. The Vendor may retain a copy of the work for its files in order to engage in future consultation with the City and to satisfy professional records retention standards. The Vendor represents and warrants that the Work does not and will not infringe upon any intellectual property rights of other persons or entities.

Each party acknowledges and agrees that each party is the sole and exclusive owner of all right, title, and

interest in and to its services, products, software, source and object code, specifications, designs, techniques, concepts, improvements, discoveries and inventions including all intellectual property rights thereto, including without limitations any modifications, improvements, or derivative works thereof, created prior to, or independently, during the terms of this Contract. This Contract does not affect the ownership of each party's pre-existing, intellectual property. Each party further acknowledges that it acquires no rights under this Contract to the other party's pre-existing intellectual property, other than any limited right explicitly granted in this Contract.

#### **24. EQUAL BENEFITS ORDINANCE**

Minneapolis Code of Ordinances, Section 18.200, relating to equal benefits for domestic partners, applies to each Vendor and subcontractor with 21 or more employees that enters into a "contract", as defined by the ordinance that exceeds \$100,000. The categories to which the ordinance applies are personal services; the sale or purchase of supplies, materials, equipment or the rental thereof; and the construction, alteration, repair or maintenance of personal property. The categories to which the ordinance does not apply include real property and development contracts.

Please be aware that if a "contract", as defined by the ordinance, initially does not exceed \$100,000, but is later modified so the Contract does exceed \$100,000, the ordinance will then apply to the Contract. A complete text of the ordinance is available at:

[http://www.minneapolismn.gov/www/groups/public/@finance/documents/webcontent/convert\\_261694.pdf](http://www.minneapolismn.gov/www/groups/public/@finance/documents/webcontent/convert_261694.pdf)

It is the Vendor's and subcontractor's responsibility to review and understand the requirements and applicability of this ordinance.

#### **25. CITY OWNERSHIP AND USE OF DATA**

The City has adopted an Open Data Policy ("Policy"). The City owns all Data Sets as part of its compliance with this Policy. Data Sets means statistical or factual information: (a) contained in structural data sets; and (b) regularly created or maintained by or on behalf of the City or a City department which supports or contributes to the delivery of services, programs, and functions. The City shall not only retain ownership of all City Data Sets, but also all information or data created through the City's use of the software and /or software applications licensed by the Vendor (or any subcontractor of sub-consultant of the Vendor) to the City.

The City shall also retain the right to publish all data, information and Data Sets independently of this Contract with the Vendor and any of Vendor's subcontractors or sub-consultants involved in providing the Services, using whatever means the City deems appropriate.

The City shall have the right to access all data, regardless of which party created the content and for whatever purpose it was created. The Vendor shall provide bulk extracts that meet the public release criteria for use in and within an open data solution. The Vendor shall permit and allow free access to City information and Data Sets by using a method that is automatic and repeatable. The Data Sets shall permit classification at the field level in order to exclude certain data.

#### **26. CARDHOLDER DATA AND SECURITY STANDARDS**

Should the Vendor collect revenue on behalf of the City through the acceptance of credit cards offered by cardholders to pay for services offered under the terms of this Contract, then Vendor represents and acknowledges that the Vendor will comply with Payment Card Industry (PCI) regulatory standards including the Data Security Standards (DSS). Vendor represents that it will protect cardholder data. Vendor will be annually certified as a PCI compliant service provider and agrees to provide evidence of said certification to the City upon request. Vendor agrees at reasonable times to provide to the City or to its assigns, the audit rights contained herein for all physical locations, systems or networks that process credit cards on behalf of the City. Vendor also agrees to provide written notice to the City of any breach of a system owned, operated

or maintained by the Vendor that contains cardholder data or information.

## 27. AUDIT REQUIREMENTS FOR CLOUD-BASED STORAGE OF CITY DATA

If the Vendor's services include the storage of City data using a cloud based solution, then the Vendor agrees to secure the data as though it were "private data" as defined in Minnesota Statutes, Chapter 13. The Vendor shall provide the City with the annual copy of the Federal Standards for the Statement on Standards for Attestation Engagements (SSAE) No. 16 or the International Standard on Assurance Engagements (ISAE) No. 3402. The Vendor agrees to provide a .pdf copy to the City's Contract Manager, upon the Vendor's receipt of the audit results.

## 28. SMALL & UNDERUTILIZED BUSINESS PROGRAM (SUBP) REQUIREMENTS

### 28.1. Overview

The City of Minneapolis policy is to provide equal opportunities to all businesses, with an effort to redress discrimination in the City's marketplace and in public contracting against Minority-owned business enterprises (MBEs) and Women-owned business enterprises (WBEs). Therefore, the City has set SUBP goals to facilitate participation of qualified and available MBEs and WBEs (MBEs/WBEs) on this contract.

**The goals on this contract will be 7% MBE and 3% WBE.**

A list of qualified and available MBEs/WBEs<sup>1</sup> within the scope of services is attached. However, this list is updated periodically and may not be exhaustive. Please visit the Minnesota Uniform Certification Program (MnUCP) directory for more information (<http://mnuccp.metc.state.mn.us/>).<sup>2</sup> This is the only certification accepted by the program.

Vendors must make a Good Faith Effort to meet the SUBP goals prior to submitting their proposal. This means that Vendors must make *every necessary and reasonable effort* to subcontract with MBEs/WBEs<sup>3</sup> prior to submitting their proposal. **Commitment to use MBEs/WBEs, Good Faith Efforts to include MBEs/WBEs participation, and compliance with SUBP will be a factor in the selection of proposal(s).**

### 28.2 Good Faith Efforts Evaluation

If a Vendor does not meet the project SUBP goals, the Vendor shall demonstrate its good faith efforts to do so. To determine if the Vendor solicited MBEs/WBEs in good faith, following list of actions may be considered:

- Soliciting through all reasonable and available means (attendance at pre-proposal meetings, advertising and/or written notices) the interest of all MBEs/WBEs certified in the scopes of work of the contract. The Vendor must solicit MBEs/WBEs in sufficient time prior to proposal submission or to allow MBEs/WBEs to respond to solicitations. The Vendor must determine with reasonable certainty if the MBEs/WBEs are interested by taking appropriate steps to follow up on initial solicitations.
- Selecting portions of the work to be performed by MBEs/WBEs in order to increase the likelihood that the project goals will be achieved. This includes, where appropriate, breaking out contract work into

---

1 The MBE/WBE must be located within the Minnesota counties of Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Ramsey, Scott, Sherburne, Washington, and Wright.

2 If a Vendor identifies a business that is not yet certified, but may qualify for certification as MBE/WBE, the Vendor should encourage the business to immediately begin the application process for certification with the MNUCCP. The Vendor should include this in their Good Faith Efforts.

3 The MBE/WBE must be certified within in the scope of work and must perform a commercially useful function.

smaller units to facilitate MBE/WBE participation, even when a contractor might otherwise prefer to perform these work items with its own forces.

- Providing interested MBEs/WBEs with adequate information about the scope, specifications, design criteria, and technical requirements of the contract in a timely manner to assist them in responding to a solicitation.
- The Vendor must negotiate in good faith with interested MBEs/WBEs and provide written documentation of such negotiation with each such business. In determining whether the Vendor negotiated in good faith, the Evaluation Panel may consider a number of factors including price, scheduling and capabilities as well as the contract goal.
- The fact that there may be some additional costs involved in finding and using MBEs/WBEs is not itself sufficient reason for a Vendor's failure to meet the project goals as long as such costs are reasonable.
- If requested by a solicited MBE/WBE, the Vendor must make reasonable efforts to assist such MBEs/WBEs in obtaining bonding, lines of credit or insurance as required by the city or by the Vendor, provided that the Vendor need not provide financial assistance toward this effort.
- Effectively using the services of minority/woman community organizations; local, state and federal business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the solicitation and placement of MBEs/WBEs. A list of organizations can be found here: [http://www.ci.minneapolis.mn.us/civilrights/contractcompliance/subp/subp\\_minbusres](http://www.ci.minneapolis.mn.us/civilrights/contractcompliance/subp/subp_minbusres) or [http://www.ci.minneapolis.mn.us/civilrights/contractcompliance/subp/subp\\_wmnbusres](http://www.ci.minneapolis.mn.us/civilrights/contractcompliance/subp/subp_wmnbusres).

Vendors must thoroughly document their efforts to solicit to and include MBEs/WBEs participation. Please completely and accurately fill out the attached forms. The City will monitor compliance of SUBP throughout the contract. Compliance with the MBE/WBE goal and other SUBP requirements will be a material condition of the contract and failure to comply may be deemed a breach of contract.

Please review Minneapolis Code of Ordinances Chapter 423 for more information or the contact the City of Minneapolis Civil Rights Department (612.673.2086).

## **29. CLICK WRAP**

The terms and conditions of any contract resulting from the RFP take precedence over any conflicting Vendor license terms and conditions including those found in Vendor's or a Third Party's Software Click Wrap license, whether presented in writing or electronically; whether presented prior to or subsequent to executing this Contract. City and its users shall not be bound by the terms of a Click Wrap license encountered during installation or at any time thereafter, even if City users click 'Accept' in order to continue using the software.

## **30. SOFTWARE AUDIT RIGHTS**

In lieu of any audit provisions in the license agreement and no more than once annually, Vendor may require City to perform an internal audit and City will use its best efforts to keep full and accurate accounts that may be used to properly ascertain and verify numbers of licenses in use. Vendor shall not impose any fees upon City for this internal audit to be performed. Should City's internal audit reveal that it is out of license compliance, City shall have the right to either, a) de-install the offending software without penalty or fee from Vendor or its third parties, or b) pay to Vendor the fees owed, based upon the rates established in this agreement, to obtain license compliance. No additional fees or penalties shall be applied, either retroactively or otherwise.

### **31. WARRANTY**

The Vendor warrants and implies that the items delivered hereunder are merchantable and fit for use for the particular purpose described in this Contract.

VENDOR WARRANTS FOR ONE (1) YEAR FROM THE DATE ON WHICH THE SOFTWARE SPECIFIED IN A DELIVERY ORDER DOCUMENT IS FIRST USED IN PRODUCTION BY CITY THAT THE SOFTWARE WILL PERFORM IN ALL MATERIAL RESPECTS THE FUNCTIONS DESCRIBED IN THE DOCUMENTATION WHEN OPERATED IN ACCORDANCE WITH (a) THE DOCUMENTATION ON A SUPPORTED PLATFORM [OR] (b) IN THE CITY REQUIREMENTS SPECIFIED IN THE CITY SOLICITATION.

### **32. TRANSFER RIGHTS**

The City shall have the right, without the prior written consent of the software's publisher or its authorized resellers, to assign, reassign, or transfer software licenses or City's rights in the software to an "Affiliate" of City, to include any governmental organization that is managed, operated or controlled by the City.

### **33. THIRD PARTY SOFTWARE**

Vendor has obtained all necessary licenses for City to use any Third Party Materials (including without limitation, all Open Source licenses) provided with Vendor's Software and Managed Services. Vendor complies with and shall continue to comply with all third party licenses (including, without limitation, all Open Source licenses) associated with any Third Party Materials provided with Vendor's Software and Managed Services. To the extent any Third Party Materials are provided with Vendor's Software and Managed Services, City's use of such Vendor's Software and Managed Services as provided by Vendor and in accordance with this Contract or any additional agreements issued hereunder will not be in conflict with any third party license requirements and will satisfy all conditions on use, modification or distribution of any such Third Party Materials without the need for any additional, unanticipated action or license fees on City's part. City does not and will not need to procure any rights or licenses to any patents or other third-party intellectual property rights to use as intended in this Contract or any additional agreements issued hereunder Vendor's Software and Managed Services delivered by Vendor.

### **34. MULTIPLE INSTANCES OF LICENSES UNDER ONE LICENSE**

City shall only pay for licenses in a production environment. Licenses for all other environments shall be included in fees paid for the production environment.

### **35. CITY DATA OWNERSHIP AND ACCESS**

The City owns all "City Data". City Data shall mean any data, information, or other materials of any nature whatsoever, provided to Vendor by City in the course of implementing and/or using the Service. The City shall have unconditional access to City's data.

### **36. VENDOR ACCESS TO CITY DATA**

City grants Vendor the non-exclusive, non-transferable, license to copy, store, record, transmit, maintain, display, view, print or otherwise use City Data solely to the extent necessary to provide the Service to City. City agrees that the license to City Data shall survive termination of the Service for a period of one (1) year solely for the purpose of storing backup City Data at an offsite storage facility. City expressly prohibits the use of Client Data except as expressly provided herein. Any employee of Vendor, its sub-contractors and its third parties that have physical or logical access to criminal justice data contained within the City Data must be a U.S. citizen, permanent resident and/or have been living in the United States for at least five (5) years and shall undergo a background check conducted by the City. The City shall be informed in writing 90 days prior to any proposed change of location of the services performed. The City shall have the right to approve or deny said change of location.

### 37. SITE TO SITE VPN

Should Vendor be provided site-to-site virtual private network (“VPN”) access to perform the services stated in this Contract, Vendor agrees to protect City’s network, systems and data accessible through the site-to-site VPN. This includes but is not limited to, the following:

- 37.1. Ensuring that all devices used to access City’s network, systems and data are fully patched and running professional-grade anti-virus, anti-malware protection that receives daily signature updates.
- 37.2. Ensuring that only Vendor’s authorized employees are provided access to City’s systems, and such access shall be only for those purposes authorized by City.
- 37.3. City shall be notified within twenty-four (24) hours when a Vendor’s employee no longer needs access, and immediately if the Vendor’s employee is involuntarily terminated.
- 37.4. City shall be notified immediately upon discovery that Vendor’s authorized employees have been unintentionally granted access to City systems or data other than what is necessary to perform the services in this Contract.
- 37.5. Notifying City’s IT Service Desk immediately upon learning of an actual or suspected security breach within Vendor’s environment may impact City’s network, systems and data.
- 37.6. Respond within two (2) hours upon notification of a suspected security incident generating from Vendor’s site or from the equipment supported by Vendor on City’s site.

City reserves the right to disable the VPN tunnel at any time to ensure the security of City data and network operations.

Should Vendor be provided a City issued laptop or similar device that allows virtual private network (“VPN”) access to perform the services stated in this Contract, Vendor agrees to the following:

- 37.7. Only authorized employees of the Vendor shall use the device to access City systems. Such access shall be only for those purposes authorized by City.
- 37.8. Each authorized employee of Vendor shall have an individual named account and access credentials and will not be shared with anyone other than the authorized employee.
- 37.9. City shall be notified within twenty-four (24) hours when Vendor’s authorized employee no longer needs access or immediately if Vendor’s authorized employee is involuntarily terminated.
- 37.10. City shall be notified immediately upon discovery that Vendor’s authorized employees have been unintentionally granted access to City systems or data other than what is necessary to provide the services in this Contract.
- 37.11. Vendor’s use of the City issued devices and any resulting access to City’s network shall be used in compliance with City’s policies, procedures, standards and guidelines, including but not limited to, City’s Electronic Communications Policy and Minneapolis IT Network Security Standards.
- 37.12. Vendor’s authorized employees shall not interfere with standard security protections applied to the device by City, including but not limited to, anti-malware, personal firewall, disk encryption, or adding additional user profiles to the device.
- 37.13. No software except that which is expressly authorized by City shall be installed on the device.
- 37.14. Any sign of malware infection or other security breach on the device is reported immediately to City’s IT Service Desk.

37.15. No private or confidential data as defined by the Minnesota Government Data Practices Act (MGDPA) and/or other applicable legal or regulatory requirements shall be stored on the assigned device.

37.16. No nonpublic data (as defined by the MGDPA) accessed on the City's network will be copied from City's network to portable storage (e.g. USB) and/or disclosed to any unauthorized employees of Vendor or third party.

37.17. Lost or stolen devices shall be reported immediately to City's IT Service Desk.

37.18. Devices shall be returned to City within five (5) business days after completion of the services or expiration of the contract, whichever comes first

### **38. CLOUD DATA STORAGE**

If Vendor provides cloud data storage as part of the solution, the Vendor agrees to maintain full security of their data system. The Vendor must agree to supply the City with a copy of the Federal standards for the Statement on Standards for Attestation Engagements (SSAE) No. 16 or International Standard on Assurance Engagements (ISAE) No. 3402. These third party audits will be required annually, and the City will request a copy to be supplied to the Contract Manager as soon as they are released.

## **ATTACHMENT B ADVANCED METER INFRASTRUCTURE Scope of Services**

### **1. PROJECT OVERVIEW**

It is the intention of the City to solicit proposals from Advanced Meter Infrastructure (AMI) system vendors qualified to provide a turnkey project to furnish and install a new AMI system, including hardware, software and services. A combination of Wi-Fi, fixed area network and cellular architecture capable of remotely reading water meters for service areas within the City will be designed and built. Also included in the scope is the procurement of up to 100,000 endpoints over an eight-year period and the replacement of 17,000 water meters and endpoints in a three-year period.

The Vendor shall:

- 1.1 Provide a radio-based AMI system within the City's service area.
- 1.2 Replace designated residential water meters within the City. The City will furnish new water meters and encoder registers to the Vendor for installation under this project.
- 1.3 Provide an AMI system capable of importing, validating, processing, and reporting data, providing long-term data storage and management, and allowing City Users and City water Customers to view and compare their water consumption behavior via a web portal.
- 1.4 Participate in a Customer Outreach program that informs the City's water Customers of the project.
- 1.5 Manage a system for booking appointments and interfacing that system with the City's enQuesta CIS.

### **2. PROJECT PHASES**

This project shall be delivered in three phases; the Start-Up Phase, Proof-of- Concept Phase, and Production Phase

#### **2.1 Start-Up Phase:**

The goal of this phase shall be for the City and the Vendor to plan, prepare, setup, test, and mobilize. The Vendor will document all components to be implemented under this phase. The Vendor shall provide installation services and plan, communicate, and place into operation systems and processes to support the implementation of the AMI system. During this phase the Vendor and the City shall implement business practices, system interfaces, billing and inventory system alterations to support the Project. At a minimum the Start-Up Phase shall include the following tasks:

- 2.1.1 Meter Reading System. The Vendor shall be responsible for the setup, testing, and documentation of, as well as the training for, all meter reading system components.
- 2.1.2 The AMI system shall include all necessary server hardware (City supplied if an on premise solution), storage provisioning, database management, OS software setup, the meter reading software, system interfaces, training, and the supply and deployment of data collection equipment within both the QA and Production Systems (a minimum of one of each type of collector shall be installed in the QA System at the City's meter shop).
- 2.1.3 Installation Services. The Vendor shall define, document, and complete the establishment of all facilities, equipment, systems, processes, and installer training tools necessary to support the Proof-of-Concept and the Production Phases of the project.

2.1.4 Perform Initial User Acceptance Tests for the AMI software.

The City's written acceptance of the User Acceptance Test shall be the milestone that completes this phase.

2.2 Proof of Concept Phase:

The goal of this phase is to prove that the system and installation processes can be successfully implemented on a larger scale. During this phase the Vendor shall:

2.2.1. Install AMI data collection equipment within the City that allows water meters to be read and billed accurately.

2.2.2 Install approximately 17,000 residential water meters and AMI Endpoints within an area approved by the City.

2.2.3 Successfully pass 100% of the installation information back to the City's existing billing system.

2.2.4 Perform Final User Acceptance Tests for the AMI software.

The Vendor shall document and submit to the City all deficiencies found during this phase within five working days and recommend any changes required to resolve them. All deficiencies found in the Proof-of-Concept Phase shall be resolved before the City allows the Vendor to move to the Production Phase. A major deficiency or lack of resolution of all deficiencies within this phase shall be considered a legitimate reason to halt part of, or all of the installations.

The Vendor shall read the installed water meters in the City over a 30-day period after the last meter is installed. All water meter accounts passed to the Vendor must be considered complete (as defined by Section 7. Project Completion) and all installed meters must pass the Read Success Rate (RSR). Where the Vendor can prove that meters installed more than 30 days after the end of this phase are passing RSR, the Vendor can proceed to the Production Phase while waiting for 30-day period elapses for the remaining meters in the proof of concept phase.

**2.3 Production Phase:**

In this phase the Vendor shall install all of the meters, meter components, Endpoints, and data collection equipment not already installed during the Proof-of-Concept Phase. The Production Phase shall progress a Zone at a time. Each Zone shall be considered complete upon written City approval of the Zone System Acceptance.

**3. COORDINATION WITH WORK BY OTHERS**

3.1 The Vendor shall conduct operations so as not to interfere with or injure the work of other vendors or workers performing work for the City. The Vendor shall promptly make good at their own expense, any injury or damage that may be done to such work by the Vendor's employees, agents, or subcontractors.

3.2 The Vendor shall suspend such part of the work, or shall carry on the same in such a manner as may be ordered by the City when necessary to facilitate the work of such other vendors and workers of the City.

3.3 Any difference which may arise between the Vendor and any other vendors or workers of the City in regard to their work shall be determined and adjusted by the City insofar as the City has authority.

3.4 The Vendor shall not claim any extra compensation or damages as a result of delays or hindrances which may be caused by the work of such vendors or City workers.

3.5 Any inconveniences or additional expenses caused to the Vendor due to the lack of such interface by him shall not be the basis for delay claims and/or additional payments.

#### **4. PROJECT ADMINISTRATION**

4.1 The Vendor shall hold a number of regularly scheduled project meetings. These meetings shall be held at the Vendor's office in Minneapolis or where the City requires at one of the City's offices. Meetings will be held between 8:30 AM and 3:00 PM; after-hours meetings may be requested by the City or Vendor on a case-by-case basis.

4.2 The Vendor shall attend all meetings called by the City when given two working days' notice. Upon the City's request the Vendor shall make available, either in person or via teleconference, any personnel within the Vendor's organization up to and including executive level management. The Vendor shall endeavor to make requested personnel available within two (2) working days.

4.3 The Vendor shall participate in the following types of meetings:

4.3.1 Progress Meetings. The Vendor and the City shall hold weekly progress meetings that will discuss: schedule (actual vs. planned production), opening of new Zones, change orders, resolution of general installation deficiencies, quality control issues, data management reports, product ordering requirements, project risks, etc.

4.3.2 AMI Software Meetings. During the Start-Up and Proof-of-Concept Phases the Vendor and the City shall hold software installation status meetings every two weeks to discuss the actions and tasks relating to the specific software installation, testing and training. Once Initial User Acceptance Testing is performed and the specific software is accepted these meetings shall be held monthly or as required by the City.

4.3.3 AMI Data Collector Deployment Meetings. While the Wi-Fi, fixed area and cellular network is being deployed, the Vendor and the City shall meet every two weeks to discuss the status of the data collector deployment. The Vendor shall report on the number of data collectors installed, number of approved sites (not installed), number of collectors communicating with the meter reading software, and the status of any and all repairs required to the collectors. Where required, an updated propagation map shall be provided to better manage placement of data collectors.

4.3.4 Topic Specific Meetings. The City or the Vendor may request a meeting that is related to a specific topic as the project progresses.

4.4 The Vendor shall assign an experienced Project Manager to oversee all aspects of this Project. The Project Manager shall have the authority to make decisions on behalf of the Vendor. The Project Manager shall be the Vendor's main point of contact for the City's management team. The Project Manager shall be on-site full time for the duration of the Project.

4.5 The Vendor shall assign an experienced site superintendent, supervisor, or individual responsible for the main components of the work (residential installations, commercial installations, meter reading software implementation, AMI Data Collector deployment, and data administration). All supervisors or point persons shall be knowledgeable and experienced in their area of responsibility. All personnel working on the project shall report to the Project Manager.

4.6 The Vendor shall provide the City a draft Construction Management Plan within 20 days of the Notice to Proceed. The plan shall detail the Vendor's contract administrative functions, construction operations, job-site management, planning and scheduling, monitoring of construction performance, and management of risk, quality and safety for this project.

#### **5. PROJECT SCHEDULE**

5.1 The City's project manager will use the schedule to evaluate progress and status of the project and to process monthly payment requests. Use the Smartsheet <https://www.smartsheet.com/> project management software package to develop, update, and maintain the progress schedule.

5.2 Once submitted, the City will review and approve the initial schedules within ten working days. Make any changes requested by the City within five working days of notification. Final review and City approval will be provided within two working days of submission.

5.3 Vendor shall manage activities in compliance with the project schedule and meet the milestones shown in Table 1.

**Table 1**

<b>MILESTONE</b>	<b>SCHEDULE AFTER NOTICE TO PROCEED</b>
Draft Project Submittal	20 Days
Submittal Schedule	20 Days
Manufacturer’s List	20 Days
Draft Construction Management Plan	20 Days
Final Construction Management Plan	90 Days
Approval Submittals	90 Days
Initial Operations and Maintenance Manuals	6 Months
Initial User Acceptance Test	6 Months
Final User Acceptance Test	12 Months
Final Operations and Maintenance Manuals	Final Completion

<b>MILESTONE</b>	<b>SCHEDULE AFTER NOTICE TO PROCEED</b>
Start Up Phase	6 Months
Proof of Concept Phase	12 Months
Final Completion	By March 2020

**6. PROJECT COMPLETION**

Completion refers to a milestone the Vendor shall achieve in supplying and installing various services, software and products provided. The Vendor shall obtain Acceptance as required for all components of the project prior to anything being considered Complete.

**7. ACCEPTANCE OF PRODUCTS, SOFTWARE AND SERVICES**

7.1 Acceptance is defined as the City' acknowledgment that a component of the Work has been completed. The Vendor shall invoice the City for products, software, and services once the City has accepted them in writing. Acceptance shall be the point of time during which legal title of the products and software passes to the City. The following Acceptance categories reference specific line items within the Attachment F – Price Schedule.

7.1.1 Software - shall be deemed accepted upon Final User Acceptance once the Vendor has successfully configured the components necessary to successfully implement the software within the City's environment. The components include, but are not limited to software licenses, QA environment, Production environment, data storage and interfaces, Initial and Final User Acceptance Tests, and Initial Operations and Maintenance Manual.

7.1.2 Support and Maintenance - The City will provide confirmation they will be requiring support the following year.

7.1.3 Supplied and Installed (S&I) Equipment – The City shall determine acceptance once the Vendor supplies and installs the equipment and provides the City's billing system with accurate installation information. Acceptance shall be requested by group of installations performed on a monthly basis.

7.1.4 For meter and Endpoint installations the Vendor shall provide documentation that verifies the account is able to be read through the AMI system.

7.1.5 For Data Collection Equipment the Vendor shall have tested (verifying Endpoint readings can be collected), confirmed the backhaul is operating and able to transfer readings to the AMI software, and provided City approved as-built data collector installation drawings.

7.1.6 Supplied Equipment - shall be deemed accepted once the Vendor supplies the equipment and the City acknowledges receipt and inspection of the equipment.

7.1.7 Network financial responsibility – Financial responsibility for the Wi-Fi, Fixed Area Network or Cellular service shall be transferred to the City after the data collectors have achieved a 98.5% RSR for more than 30 days.

7.2 The Vendor shall supply an Acceptance Request and Approval ("AR") Form along with documentation that allows the City to properly evaluate whether a service, component or group of components supplied and/or installed has been completed.

## **8. MANUFACTURER'S REPRESENTATIVE**

8.1 The definition of "manufacturer's representative" shall be as follows: a representative from the manufacturer's plant, familiar with the actual problems of manufacturing, installing and operating the particular equipment or product and with enough years of experience in this field to determine the successful operation of the equipment or product. Sales representatives or agents of the manufacturers will not be acceptable.

8.2 As related to obtaining the manufacturers' certificates, the Vendor shall include in the price the cost of furnishing competent and experienced manufacturer's representatives who shall represent the manufacturer or equipment and products furnished and installed under this Contract, to assist the Vendor to install, adjust, start up, and test the equipment and products in conformity with the Contract Documents including this RFP. After the equipment and products have been operated through the trial period for each phase of construction and before being put into permanent service by the Engineer, such equipment and products are in proper and satisfactory operating condition, and meet the requirements for issuing the manufacturer's certificate.

## **9. OPERATIONS AND MAINTENANCE DOCUMENTATION**

9.1 The Vendor shall provide a City customized O&M manual that reflects exactly how the software and system is built specific to the City.

9.2 A detailed list of all interfaces, including the key fields of data being transferred and a detailed description of any business rules that are applied during the transfer of data.

9.3 User Acceptance Tests documentation - One complete and final document on the results of the Initial and Final User Acceptance Test.

## **10. WARRANTIES**

10.1 The Vendor shall be responsible for City accepted work performed and materials supplied and installed or modified under the Agreement for a period of 1 year from the date of installation. The Vendor shall make all necessary repairs to the plumbing or damage that resulted from defective materials or workmanship.

10.2 The Vendor shall be responsible for the integrity of the plumbing system connected to the Vendor's work and any damage caused as a result of the work performed for a period of 30 days after the installation. It shall be presumed that leaks reported to the Vendor or the City within this period of time is the result of the work performed and will need to be investigated by the Vendor. Any repairs that are required as a result of the Vendor's work shall be the responsibility of the Vendor.

10.3 Any pre-existing defects of the plumbing system that are found prior to the installation shall be documented on the work order by the Vendor and the Vendor's representative shall inform the City about these defects before any work is started and cease work at the site until direction from the City.

10.4 AMI warranties provided in the awarded contract shall be with the Vendor until Final Completion. Thereafter the Vendor may transfer the warranty provisions to the AMI Vendor as approved by the City.

10.5 Endpoints shall have a long-lasting lithium battery with a 20 year warranty. The warranty on each Endpoint and battery shall include provision for the full replacement value of the Endpoint and/or battery should either/both of them fail within 10 years from its date of installation and reduced by 10% annually thereafter.

10.6 The Data Collection Equipment (including any batteries) warranty shall be a minimum period of one (1) year from the date of acceptance.

## **11. QUALITY MANAGEMENT**

11.1 The Vendor shall implement a Quality Program. that will include as a minimum an endpoint check, inspection program, deficiency categories, deficiency resolution, deficiency communication,

## **12. AMI SYSTEM (GENERAL)**

12.1 The Vendor will be responsible for implementing an AMI system for all City customers.

12.2 The Vendor shall conduct a propagation study for the City. Based upon the propagation study, the City will confirm the availability of selected public locations for data collector installations. The Vendor shall build a system that best utilizes City building locations, and the Vendor's propagation study shall clearly indicate which locations the Vendor plans to use to mount its data collection equipment. The Vendor shall provide a submittal to the City of the propagation study.

### **12.3 FCC Approval**

12.3.1 All hardware components of the meter reading system shall be FCC-approved. Any hardware components of the system that requires a licensed frequency; the Vendor shall assist the City in obtaining the license on behalf of the City. The AMI System Vendor shall lease the spectrum license to the City for the duration of the life of the system which is not less than 20 years. The Vendor shall disclose all costs associated with obtaining and maintaining the appropriate FCC licenses to operate the AMI system. If these costs are not disclosed with the submitted proposal the Vendor shall be responsible for any additional non-disclosed costs. The City will pay the costs of the license; however these costs shall be included in the Proposal.

12.3.2 For an unlicensed system the system shall operate regardless of other devices operating within

the RF band for the life of the system.

### **13. ADVANCED METERING INFRASTRUCTURE (AMI) REQUIREMENTS**

13.1 The AMI system shall include AMI meter reading software, a web portal allowing customers to access their consumption history, data collection equipment (collectors and repeaters), Wi-Fi, Fixed Area Network and cellular backhaul capabilities, data interfaces between the City's billing system and the AMI software, and training and technical support for the life of the system.

13.2. The AMI system shall support all leak detection, back flow, and tamper flags available from either the Endpoint or the water meter register.

13.3. Read Success Rate (RSR): The minimum acceptable read success rate for each Endpoint installation shall be defined as follows: 90% success rate for all hourly reads from individual endpoints and 98.5% success rate for all daily reads over a 30-day period. A successful reading is one that provides accurate numeric readings to the billing system to ensure accurate billing of the customer for the water used during that period.

13.4 .AMI Endpoints Functional Requirements

13.4.1 Endpoints shall read their associated water meter encoder registers a minimum of 24 times per day.

13.4.2 The Endpoint will transmit register readings to the Data Collection Unit at least once times per day.

13.4.3 The Endpoint shall provide top of the hour, time synchronized readings.

13.4.4 The Endpoint shall be able to receive user commands through the AMI software including any firmware updates.

13.5 Backhaul: The Vendor shall provide a solution that will allow meter readings to be transferred from the AMI data collection equipment to the AMI meter reading software. The solution can be a combination of Wi-Fi, Fixed Network or cellular options.

13.6 The Vendor is responsible to order, install and test all network connectivity. The Vendor will be financially responsible for the network until the Zone Complete, when the Vendor will transfer financial responsibility for the network to the City.

### **14. USER ACCEPTANCE TESTING**

14.1 All software shall be tested and approved using a two-step User Acceptance Test. The Initial Acceptance Test shall validate the software and interfaces are setup correctly and there are no Major deficiencies that will result in incorrect information being passed to the City's billing system or customers.

### **15. METER INVENTORY AND INSTALLATION DATA MANAGEMENT**

15.1 The City will provide the Vendor with all water meters and meter registers on a consignment basis.

15.2 The City will have all products shipped directly to meter shop care of the Vendor. The City will inspect and release products for the Vendor's use. Once released the Vendor shall be responsible to handle and track all water meters and components received and installed.

15.3 The Vendor shall use an automated Meter Installation System (MIS) to plan and track Vendor work processes, document Vendor activities, and track all Project components including at a minimum: meters and register inventory assigned to the Vendor, installation blackout periods, history of contact with customers, appointments, installations, surveys, Task, inventory and customer complaints follow up.

15.4 The Vendor shall use an integrated digital handheld work order system that will collect all installation information and ensure data validations are occurring in the field. This handheld will automatically transfer collected data into the Vendor's MIS, no manual re-entering of data is to occur.

15.5 The Vendor shall provide integration into EnQuesta to allow Customer Service representatives to have access to appointment and installation notes.

15.6 The Vendor shall provide secure read-only access for City personnel, and representatives as designated by the City, to view forms, reports and digital pictures in the MIS.

15.7 The City will provide, to the extent available, customer information to the Vendor. The City's data provided may be incomplete or may have some inaccuracies, the Vendor is responsible for working with the data provided and where necessary fill in any required data that may be required.

15.8 The Vendor shall collect and store at a minimum the following information for each installation performed. The Vendor and the City will define the type of data that is to be collected and the format in which it will be presented. Where possible, a pre--established list of values will be used.

15.9 The Vendor shall collect and store clear photographs of the water meter, a close up of the existing meter register and pictures of the billable work performed.

15.10 The Vendor shall supply all installers (including City installers) with a digital handheld data collector for installation and work order completion. The Vendor shall provide the people, processes and systems necessary to ensure all data being provided to the City has been checked and confirmed as accurate. In addition to validations done in the field.

15.11 Data Management: The Vendor shall provide comprehensive data management capabilities for all data associated with field activities (including replacement and retrofits). The Vendor (supported by the City) will ensure the different systems (meter reading software, City billing system, MIS) are as closely synchronized as possible given the timing of data transfers.

15.12 Data Ownership:

15.12.1 All data provided or collected during the project shall be retained by the Vendor for three years beyond the end of the project. While the project is running the information must be fully accessible to the City. After the project the information may be archived and provided to the City upon request.

15.12.2 All data provided or collected is owned by the City, the Vendor shall not use any data for any other purposes other than to complete this project. The Vendor must make a written request to use this information for any other purposes. Any unauthorized use of this information will be considered a Major Deficiency and may result in a stop work order on this project.

## **16. CUSTOMER OUTREACH**

16.1 The City will develop the public communication program; the Vendor shall participate and support its development by ensuring it is consistent with its installation practices and processes.

16.2 The Vendor shall be responsible for providing information to property owners/ tenants/ property managers about the project through the distribution of materials and through their call center.

16.3 The Vendor shall perform all customer service functions for the Project, in accordance with protocols approved by the City.

16.4 The Vendor shall establish a call center that will be staffed in the North America, have a toll free telephone number that will be the main phone number for all customer contact on the Project.

16.5 The Vendor shall have a call center with sufficient data and telecommunications technology and personnel to successfully carry out the functions of the call center in accordance with the provisions of this RFP.

16.6 The Vendor shall have a telephone system that allows callers to queue callers so calls can be answered in the sequence they have been received, thus eliminating busy signals and minimizing long wait times (over 2 min). While on hold the call center shall periodically prompt the customer providing an option to leave a message if the wait is too long.

16.7 In addition to answering customer telephone calls, the Vendor shall also make provisions to communicate with customers via e-mail, fax, and web site.

16.8 The call center shall have multi-lingual and interpretive services representatives to field calls.

16.9 The Vendor shall use the Meter Installation System to track inbound and outbound customer contacts, to record the date and time each attempt was made, the type of contact that was attempted, and the outcome of any successful contact. The Vendor will digitally log all call center contact with customers.

## **17. TRAINING REQUIREMENTS**

17.1 The Vendor shall provide full system and software training to the relevant City users. The training shall relate to the AMI, software, Endpoint and data collector installation and maintenance, IT administrative and back up functions, and any other training that allows the City Users to operate and maintain the system properly.

## **18. SUPPORT AND MAINTENANCE**

18.1 The City shall require the Vendor to provide ongoing maintenance and support for the software and the hardware for the life of the system as long as the City is current on maintenance and support.

18.2 The Vendor shall maintain all software and hardware to ensure ongoing compatibility with all other software packages the system is dependent on.

18.3 At the City's sole discretion, the components of the software must remain current and compatible with the Vendor's released and supported products. The Vendor shall provide a software version release plan annually that describes how software supplied to the City can be kept current with related third party software (SQL, OS, MDMS, etc.) and how new functionality can be added. Any charges related to additional features or functionality shall be at the City's option. If the City declines the additional features or functionality, the Vendor shall continue to fully support the existing software. Any mandatory features or functionality upgrades shall be included in the Support and Maintenance agreement annual costs.

18.4 The Vendor will not have administrative rights to the OS or database software. The City will support monitored remote access to the system as they deem necessary.

18.5 The Vendor shall include on-going support and maintenance for the installed software and system for a period of one year following the acceptance as a part of the initial software purchase. After the first year, the City will pay annual software support and maintenance charges as detailed in the Price Schedule.

18.6 The Vendor shall provide hardware maintenance and support for the AMI data collectors for a duration of 20 years.

18.7 The Vendor's software upgrades, fixes, and patches will be supplied, at no additional cost.

18.8 The Vendor shall supply source code in escrow within the United States with an escrow agent with a DUNS rating acceptable to the City under a three party agreement with the City. Vendor shall describe the conditions under which the City can access the source code, including bankruptcy filings by the vendor, failure

to provide maintenance, and any other events that would trigger access to the escrow. A sample of the three-party agreement and indemnification of the proposed escrow agent shall be provided as part of the proposal.

18.9 The Vendor shall provide free loaners for equipment that is out of service due to repairs or upgrades. The costs of loaner equipment will be included in the annual fees.

18.10 In addition to the above equipment support the Vendor shall provide remote access and on-site data collector and repeater monitoring, support and repair. The maintenance includes all data collectors, repeaters, antennas, mount equipment, backhaul, and AC and Ethernet wiring.

# **ATTACHMENT C**

## **ADVANCED METER INFRASTRUCTURE**

### **Detailed Submittal Requirements**

#### **FORM OF PROPOSALS**

The Vendor shall provide the appropriate information in sufficient detail to demonstrate that the evaluation criteria have been satisfied in the Request for Proposal Section V Evaluation of Proposals". Proposals shall contain the following sections and appendices and be arranged in consecutive order, bound, printed double-sided, exclusive of personnel resumes, brochures, and organizational charts.

1. Proposal Form No. 1 – Attachment D
2. Executive Summary
3. Vendor Qualifications
4. Company Financial Information (Proof of Financial Responsibility)
5. Proposal Questionnaire No. 1 – Attachment E
6. Proposal Form No. 2 (Price Schedule) – Attachment F
7. Proposal Form No. 3 (Software Requirements) – Attachment G

Before the award of any contract, each Vendor shall be required to show (to the complete satisfaction of the Proposal Evaluation Panel) that they have the necessary facilities, ability and financial resources to furnish the services specified in a satisfactory manner, and they shall also be required to show past history and references which will enable the Proposal Evaluation Panel to satisfy themselves as to the Vendor's qualifications. Failure to qualify according to the foregoing requirements shall be cause for rejection of the proposal. The following is a detailed description of the specific sections and content required for the Proposal:

The following is a detailed description of the specific sections and content required for the Proposal:

#### **1 EXECUTIVE SUMMARY**

The Vendor shall submit an executive summary, which outlines the contents of its proposal. The executive summary shall, at a minimum, include an identification of the proposed project team, description of the responsibilities of each member of the project team, summary of the proposed services, and general system management philosophy. This section should include a clear statement of the Vendor's understanding of the RFP including a brief summary of the Technical Approach to accomplish the Scope of Services. The executive summary shall not exceed four pages.

#### **2 VENDOR QUALIFICATIONS**

This section of the Proposal shall fully identify the Vendor, and present general information about the Vendor and the key personnel involved. If the Vendor (or joint venture) is a subsidiary of a parent company, provide information about when the subsidiary was formed and its place in the corporate structure of the parent company. If a subsidiary is or will be created for the purposes of responding to this RFP, the reasons for this action shall be fully disclosed. For purposes of the evaluation, the Proposal shall clearly identify the members of the Vendor's team that will serve in roles as they relate to the proposed services. These roles define the Core Project Team, and may be provided entirely by one firm or may be allocated among a number of firms. The Vendor shall recognize that its team, as proposed, will be used as a basis for determining eligibility to provide the Contract Services.

This section shall include the following information:

### **2.1 Previous Similar Experience**

This section should clearly identify similar projects/contracts involving the Vendor, highlighting experience in sorting and processing commingled recyclable materials. A brief description of up to three (3) similar projects shall be provided, including the history of operation, current status, and a description of the Vendor's specific involvement in these projects. References from at least three (3) projects or relevant sources such as a regulator should be provided with appropriate contact information.

### **2.2 Personnel**

This section should indicate the number of staff available within the Vendor's Firm and/or sub-contractors firm, for work on the Project and resumes of all proposed team members should be attached. The resumes should identify discipline, level of expertise, years of experience in areas of specialty and any direct work experience on the projects listed under "Previous Similar Experience" above.

### **2.3 Use of Sub-Contractors**

This section should provide a list of sub-contractors, if any, which the Vendor intends to utilize on the Project. Clear indication of previous associations with those sub-contractors as well as the sub-contractor's experience, and their intended participation should be included as well as the Vendor's commitments to assume responsibility for their performance. The Vendor will verify valid insurance coverages as stated in Attachment A, RFP Terms and Conditions for each sub-contractor used or assume the liability.

### **2.4 Organization Chart:**

This section should include a proposed organization chart for the project describing the roles and responsibilities of all major participants.

### **2.5 Contractual Relationships**

This section should include a description of the existing and proposed contractual relationship and the history of those relationships among the Vendor, members of the Vendor's Core Project Team, and all other major participants in the project.

### **2.6 Core Project Team Assignments and Responsibilities**

This section should include a summary of the proposed assignments of responsibilities for the services to be provided (identifying the portions of the work to be performed by the Vendor and each member of the Core Project Team). If the Vendor's Core Project Team is comprised of more than one firm, and major subcontractors; at a minimum, this summary shall identify which firms will undertake the roles of project leadership, operations, and financial backing.

### **2.7 Safety Programs**

This section should include a description of the Vendor's overall safety program, including any violations cited by governmental safety agencies or OSHA, recognized safety awards, and the Vendor's lost-time accident record compared with industry standards.

### **2.8 Exceptions to RFP**

If applicable, this section describe all exceptions to the RFP specifications and service agreement with proposed replacement process(es), method(s), and/or calculation(s).

### **3. COMPANY FINANCIAL INFORMATION (PROOF OF FINANCIAL RESPONSIBILITY)**

At a minimum, the Vendor shall provide written proof stating that the Vendor is financially responsible and capable of being bonded for an annual amount of \$180,000 per bond. Performance and Payment Bond requirements are provided in the RFP Section VIII "PERFORMANCE AND PAYMENT BOND". Provide a statement regarding whether the company, affiliates, subsidiaries, officers, or directors have filed for federal bankruptcy protection within seven (7) years of the date of this RFP. Other documents, including company financial statements and records may be requested. Failure to provide the required information or to satisfactorily prove the Vendor's Financial Responsibility to the City shall be cause for rejection of the proposal.

### **4. FORMS AND QUESTIONNAIRE**

All attached forms (Attachments D through G) shall be completed and included as part of the Vendor's Proposal. Failure to complete and submit the forms shall be considered cause for rejection of the Proposal.

Attached forms include the following:

1. Proposal Form No. 1 – Attachment D
2. Proposal Questionnaire No. 1 – Attachment E
3. Proposal Form No. 2 (Price Schedule) – Attachment F
4. Proposal Form No. 3 (Software Requirements) – Attachment G



**ATTACHMENT E**  
**ADVANCED METER INFRASTRUCTURE**  
**Proposal Questionnaire No. 1: Technical Information**

**1. TECHNOLOGY OVERVIEW**

- 1.1. Provide an overview of the meter reading technologies proposed, including a diagram that shows how the different components interact with each other. What are the main features of the proposed system?
- 1.2. Describe in detail the features of the AMI endpoint. How many readings per day does the endpoint take from the meter? Detail the types of flags and algorithms the radio transmitter performs.
- 1.3. Describe in detail how backward capability will be achieved on all upgrades that occur, including new products.

**2. TECHNOLOGY – AMI ENDPOINTS**

- 2.1. What is the name, model and part number(s) of the proposed endpoints that will be used on this project? Describe and provide details of the Endpoint (color, size, weight, shape, etc.).
- 2.2. If the Endpoint has any extended range or power boost modes, will this affect warranty? When will these enhanced modes be used? Approximately what percentage of time would these enhanced modes be used?
- 2.3. Provide a chart detailing which water meter manufacturers' encoders the proposed Endpoint is compatible with. Confirm endpoint will read and transmit a minimum of 8 digits.
- 2.4. Describe in detail when, and how often, an Endpoint needs to be programmed. Does it need to be programmed when it is installed, when the water meter is replaced, and/or when a wire or connection is broken between the encoder and the radio transmitter? If programming is necessary, describe the device required to perform this function. How many variables are programmed into the radio transmitter?
- 2.5. In residential installations, what method is proposed to install the Endpoint? Provide a picture and/or diagram that details exactly how the Endpoint will be installed. If different methods will be used, describe in detail when each type of installation will be used.
- 2.6. Describe in detail any real time alerts the Endpoint can send through the AMI system. What is the duration between the alert being triggered and the AMI software receiving it? As an example of real-time alerts, when an Endpoint is either not wired correctly, not programmed, has a disconnected wire, or has a low battery, what signal is transmitted through the AMI system?

### **3. TECHNOLOGY – DATA COLLECTION EQUIPMENT**

3.1. Using the City limits as a boundary, provide a preliminary propagation study map of the City that shows the greatest coverage that can be attained within the City for AMI coverage. Provide a detailed list of the type of equipment that will be installed, the type of power supplies, the type of backhaul, and approximate heights (AGL in feet) for data collectors, repeaters, and antennas.

3.1.1. Approximately how many meters would be able to be collected by each data collector proposed?

3.2. Do any of the components of the Wi-Fi or FAN data collection equipment have back up power in case of loss of power? If so, how long will the device operate (collecting and sending readings) without power? If the equipment runs out of backup power are the meter readings saved in memory? If the meter readings are saved, how many meter readings are stored and for how long?

3.3. What considerations need to be taken to allow for future collection of data from non-water meter devices (acoustic leak detection, pressure monitoring equipment, flow monitoring, valves, etc.)?

### **4. TECHNOLOGY – HEAD-END ENVIRONMENT**

4.1. Provide an AMI system architecture diagram of the proposed systems that shows the hardware in the QA and Production environment with full failover production for an on-site system. List the quantity and type of hardware required to operate the system with full fail-over protection.

4.2. Provide an AMI system functional block diagram that shows how all of the proposed software and associated interfaces will interact and handle meter-related data.

4.3. Describe any differences, and how they will be addressed, between the City IT standards identified in Attachment H – As-is Technology Environment for On-Premise Solutions and the proposed AMI solution in order to ensure the system availability, responsiveness and fail-over requirements described in the Detailed Technical Specifications.

4.4. Provide storage modeling guidelines to allow the City to ensure sufficient data storage capacity.

4.5. Project data storage needs for eight (8) years based on prior experience in similarly situated environments.

4.6. Describe in detail the level of effort for City IT resources to setup SAN, interfaces, licenses, database and anything else to successful implement an on-premise solution and when each phase is needed in regards to the project timeline completion.

4.7. Describe the services that can be provided to assist in the setup of the environment.

- 4.8. Describe any lessons learned from other installations, especially in regards to uptime, security/tampering and clients moving from an on-premise solution to a hosted solution.
- 4.9. Has the AMI Vendor worked with enQuesta CIS on past projects?
- 4.10. Describe how the Installer's MIS will interface with the CIS system, enQuesta.
- 4.11. What type of warranties will be provided by the Vendor on all aspects of the proposed AMI system?
- 4.12. Provide a configuration and parameter guide for the AMI Head End software that explains what options are available.

## **5. IMPLEMENTATION**

- 5.1. Provide an overview of the MIS handheld system to be used to collect installation information in the field. Detail any aspect of the project that will not utilize this handheld system.
- 5.2. Describe in detail all the validations that will be conducted in the field on the handheld device.
- 5.3. Describe in detail the validations that will be conducted on all installations within the MIS prior to passing the information to the City's billing system.

## **6. WARRANTY AND MAINTENANCE**

- 6.1. Provide all warranty information in Vendor's standard format (as an attachment).
- 6.2. State the annual cost to the City of each maintenance plan options available, along with a description of coverage hours, methods of support available to the City staff, problem resolution times, etc.
- 6.3. Both in the Pricing Schedules, and at this point in the proposal, identify which level of maintenance support is being priced for that five year period as part of the not-to-exceed offering.
- 6.4. State that all modifications to the application and database agreed-to between the City and the Vendor shall be incorporated in base code and that the vendor shall bring forward these modifications in new releases without additional charge to the City.
- 6.5. Indicate which components of support are outsourced.
- 6.6. Indicate how the vendor informs customers of any known system problems or bugs.
- 6.7. Describe proposed mechanism for informing customers of upgrades.

- 6.8. Describe available training and support related to version changes.
- 6.9. Indicate whether an electronic 'knowledge base' of known problems is maintained that the City may access on-line.
- 6.10. Describe proposed escalation process in the event the City is not satisfied with the quality or timeliness of responses to problems.
- 6.11. The City requires access to escrowed source code. Describe source code escrow access procedures, conditions under which escrowed source code is released, and typical annual escrow costs (include escrow costs in the Pricing Schedule). The escrow agent shall have a DUNS rating acceptable to the City under a three party agreement with the City. Provide a sample of the three-party escrow agreement and indemnification of the proposed escrow agent.
- 6.12. Describe any User Forum, User Groups, or Development Community that is hosted by the vendor. Describe the type and frequency of organized meetings or communications.
- 6.13. Indicate whether the vendor publishes customer contact list to facilitate discussions among customers, e.g. user groups.
- 6.14. Describe the frequency of software patches and upgrades.

**ATTACHMENT F**  
**ADVANCED METER INFRASTRUCTURE**  
**PROPOSAL FORM NO.2 (AMI PROJECT PRICE SCHEDULE)**

**Instructions**

1. Price entries **required** in pale blue cells.
2. Add rows for additional entries and identify in detail, if needed.
3. Minneapolis reserves the right to alter quantities or remove any item.
4. Pricing is FOB Minneapolis, Minn.

**Vendor Name:** \_\_\_\_\_

*Complete Attachment F*

*Complete Separate Price Attachments for On-Premise, Hosted, SaaS, and Other Cloud Offerings, if Available.*

**Capital Items**

Item	Description	Fixed Price	Explanation (if necessary)
1	Software License Fees	\$	
2	Endpoint Capital - Hardware	\$	
3	Endpoint Capital - Installation	\$	
4	Data Collector Unit (DCU) Capital - Hardware	\$	
5	Data Collector Unit (DCU) Capital - Installation	\$	
6	Reports	\$	
7	Professional Services	\$	
<b>Total Capital</b>		\$	

**O&M Expense Items**

Item	Description	Fixed Price	Explanation (if necessary)
1	Endpoint - O&M Expense - Maintenance, Support and Other Recurring	\$	
2	Data Collector Unit (DCU) - O&M Expense - Maintenance, Support and Other Recurr	\$	
3	Travel and Expense	\$	
<b>Total O&amp;M Expense</b>		\$	

**Software Maintenance**

Item	Price Categories for Ongoing Software Maintenance and Support (AMI Software, AMI DCU hardware)	Fixed Price for Standard Maintenance	Fixed Price for Alternate Maintenance <sup>1</sup>	Explanation (if necessary) <sup>2</sup>
1	Year 1 (Implementation year - data from License Tab)	\$	\$	
2	Year 2 (fill in amounts not to exceed 2% annual increase)	\$	\$	
3	Year 3 (fill in amounts not to exceed 2% annual increase)	\$	\$	
4	Year 4 (fill in amounts not to exceed 2% annual increase)	\$	\$	
5	Year 5 (fill in amounts not to exceed 2% annual increase)	\$	\$	
6	Year 6 (fill in amounts not to exceed 2% annual increase)	\$	\$	
7	Year 7 (fill in amounts not to exceed 2% annual increase)	\$	\$	
8	Year 8 (fill in amounts not to exceed 2% annual increase)	\$	\$	
<b>Total Software Maintenance Price, Year 1- 8</b>		<b>\$</b>	<b>\$</b>	

**Recurring Backhaul Network Costs**

Item	Recurring Backhaul Network Costs	Recurring Annual Expense	Explanation (if necessary) <sup>2</sup>
1	Year 1 (Implementation year)	\$	
2	Year 2	\$	
3	Year 3	\$	
4	Year 4	\$	
5	Year 5	\$	
6	Year 6	\$	
7	Year 7	\$	
8	Year 8	\$	
<b>Total Software Maintenance Price, Year 1- 8</b>		<b>\$</b>	

<sup>1</sup>Alternate annual maintenance fee is a different support agreement from the standard. This could entail more support (24x7), less support, or not

<sup>2</sup>Additional Comments. Provide full explanation here if needed. However, no need to bring forward explanations or comments from schedules that follow.

<b>8 Year Total Cost of Ownership (Services plus Maintenance)</b>	<b>\$</b>	<b>\$</b>	
---	-----------	-----------	--

*List all other comments here.  
Don't forget to check your formulas!*

**AMI Project Software License Fees & Maintenance Pricing**

Vendor Name: \_\_\_\_\_

*Proposer certifies that the software listed is all that is necessary to provide proposed system functionality*

Item	Module	One-Time Fixed Price	Quantity	Unit Price	Standard Annual Maintenance Fee	Annual Maintenance Fee as a % of License	Explanation (including basis for price of software license (i.e., per named user, per concurrent user, site license etc.) <sup>1</sup>	Enhanced Annual Maintenance Fee	Enhanced Annual Maintenance Fee as a % of License	Explanation (including basis for price of software license (i.e., per named user, per concurrent user, site license, etc.)) <sup>1</sup>
<b>Required Software License Fees (list separately-priced modules individually)</b>										
	<b>AMI System Software (specify)</b>									
a.	Software 1	\$		\$	\$			\$		
b.	Software 2	\$		\$	\$			\$		
c.	Software 3	\$		\$	\$			\$		
d.	MDMS Software (if required)	\$		\$	\$			\$		
e.	Other Software (specify)	\$		\$	\$			\$		
f.		\$		\$	\$			\$		
g.		\$		\$	\$			\$		
h.	Source code escrow	\$		\$	\$			\$		
	<b>Subtotal</b>	\$		\$	\$			\$		

<b>Total Software License Fees</b>	\$			\$				\$		
------------------------------------	----	--	--	----	--	--	--	----	--	--

<sup>1</sup>Additional Comments - use space below as needed

List all other comments here.  
Don't forget to check your formulas!

AMI Project Infrastructure Pricing

Vendor Name: \_\_\_\_\_

Item	Description	Estimated Quantity	Unit	Unit Price	Extended Price	Total
<b>Endpoint Capital - Hardware</b>						
a.	Endpoints - <i>Vendor must provide an eight (8) year price guarantee.</i>				\$	
b.	Remote Shutoff Valve - 5/8" Valve	500			\$	
c.	Recommended Test Equipment (specify)				\$	
d.	Recommended Spares (specify)				\$	
e.	Recommended equipment needed for future installations by Minneapolis City staff (specify)				\$	
f.	FCC License (if required)				\$	
g.	Other				\$	
h.					\$	
i.					\$	
j.					\$	
					\$	
<b>Total Endpoint Capital - Hardware</b>						\$

<b>Endpoint Capital - Installation</b>						
a.	Endpoint installation with cell phone				\$	
	Endpoint Installation with small meter change out				\$	
b.	5/8" Meter	15,100			\$	
c.	3/4" Meter	1,900			\$	
<b>Total Endpoint Capital - Installation (Installed Endpoints should equal 17,000)</b>						\$

<b>Endpoint - O&amp;M Expense - Maintenance, Support and Other Recurring</b>						
a.	Endpoint Maintenance and Support		Annually		\$	
b.	Other Maintenance and Support (specify)		Annually		\$	
c.	Other		Annually		\$	
					\$	
<b>Total Endpoint O&amp;M Expense - Maintenance, Support and Other Recurring Costs</b>						\$

Additional Comments - use space below as needed

*List all other comments here.  
Don't forget to check your formulas!*

**AMI Project Infrastructure Pricing**

**Vendor Name:** \_\_\_\_\_

*Specify details including all installation of AMI equipment and connections to proposed backhaul including collection points, tower or other WAN nodes.*

Item	Description	Estimated Quantity	Unit	Unit Price	Extended Price	Total
<b>Data Collector Unit (DCU) Capital - Hardware</b>						
a.	Data Collector Units (DCU)				\$	
b.	Poles				\$	
c.	Towers				\$	
d.	Other Communication Infrastructure (please specify)				\$	
e.	Network Infrastructure (specify)				\$	
f.	Other Fixed Network licensing (if required)				\$	
g.	Recommended Test Equipment (specify)				\$	
h.	Recommended Spares (specify)				\$	
i.	Recommended equipment needed for future installations by Minneapolis City staff (specify)				\$	
					\$	
<b>Total Data Collector Unit (DCU) Capital - Hardware</b>						\$

<b>Data Collector Unit (DCU) Capital - Installation</b>						
a.	Data Collector Unit (DCU) installed on buildings		Each		\$	
b.	DCU installed on existing poles		Each		\$	
c.	DCU installed on new poles		Each		\$	
d.	DCU installed on existing towers		Each		\$	
e.	DCU installed on new towers		Each		\$	
f.	30% contingency in case City buildings are not available		Each		\$	
g.	Network installation		Each		\$	
h.	DCU with Wi-Fi installation		Each		\$	
i.	DCU with FAN wire installation		Each		\$	
j.	DCU with AC power installation		Each		\$	
k.	DCU with solar power installation		Each		\$	
l.	Supply and install FAN wire		per 150'		\$	
m.	Supply and install electrical wire		per 150'		\$	
n.	Supply and install steel conduit		Feet		\$	
o.	Supply and install exterior wall penetration for steel conduit		Each		\$	
p.	Other				\$	
					\$	
<b>Total Data Collector Unit (DCU) Capital - Installation</b>						\$

<b>Data Collector Unit (DCU) - O&amp;M Expense - Maintenance, Support and Other Recurring</b>						
a.	Data Collector Unit (DCU) Maintenance and Support		Annually		\$	
b.	Other Maintenance and Support (specify)		Annually		\$	
c.	Network Recurring Costs		Annually		\$	
d.	Other				\$	
					\$	
<b>Total Data Collector Unit (DCU) O&amp;M Expense - Maintenance, Support and Other Recurring Costs</b>						\$

**Additional Comments - use space below as needed**

*List all other comments here.  
Don't forget to check your formulas!*

**AMI Professional Services Pricing**

Vendor Name: \_\_\_\_\_

**Reports**

Item	Report List from Attachment I - Software Requirements. Comment on each report, but price them as a total.	Report ID	Vendor: Choose One: Standard Lib Report, Create, Library Mod, Not Needed	Vendor's Explanation	Price	Comments
a.	Database Balance Report - showing a summary and details that ensure the following equation is balanced. Exact categories may be revised with Contractor and City approval. - Total Meters provided = Installed & billed + Installed waiting for billing + Installed & warranty + Task (by type) + Meters not installed.				\$	
b.	Production Reports showing what is remaining by Zone and Book broken down by meter size.				\$	
c.	Task Reports – showing by Zone, broken down by type.				\$	
d.	History of Contact Report - showing a list of meters the Contractor could not contact (where an appointment was required) and the history of contact.				\$	
e.	Invoice Support Report - detailing what work was performed at each site and the associated read success rate for each account.				\$	
f.	Endpoints not reporting to a data collector within the User defined number of days prior.				\$	
g.	Endpoints that have continuous cut wire alert for the User defined number of days prior.				\$	
h.	Endpoints that have faulty or loose wire connections that are sending irregular meter readings for the User defined number of days prior. Will show the percentage of errors received.				\$	
i.	Water meters that send continuous negative consumption readings for the User defined number of days prior.				\$	
j.	Meters that show intermittent negative consumption during the prior User defined number of days (negative and positive consumption). Will show the number of changes in direction.				\$	
k.	Endpoints that are communicating with the AMI system but are not associated with a documented address.				\$	
l.	Endpoints with low battery power signals.				\$	
m.	Data Collection Equipment diagnostic reports, (# of Endpoints it reads, amount of data being transferred, list of ID being read).				\$	

Item	Report List from Attachment I - Software Requirements. Comment on each report, but price them as a total.	Report ID	Vendor: Choose One: Standard Lib Report, Create, Library Mod, Not Needed	Vendor's Explanation	Price	Comments
n.	List with all meters and associated readings				\$	
o.	List with all billing meters and associated readings				\$	
p.	Accounts by billing date				\$	
q.	Accounts by route				\$	
r.	Backflow detection				\$	
s.	Meters failing validation report				\$	
t.	Zero consumption report				\$	
u.	Continuous consumption report.				\$	
v.	Vacant consumption report, to support soft shut-off and vacant building issues				\$	
w.	Meters with estimated intervals report				\$	
x.	High usage report, based on configurable parameters for individual usage.				\$	
y.	Tamper report				\$	
z.	Outage reports				\$	
aa.	Additional flags indicating different types of leak events occurring at a property where available.				\$	
bb.	Meter readings and consumption for a particular account for a User defined period of time.				\$	
cc.	Combined consumption for a multi-register meter for a particular account for a User defined period of time.				\$	
<b>Total Reports Capital - Development and Implementation</b>					\$	

Add rows as needed, ensuring that cells are calculating accurately

**AMI Project Professional Services Pricing**

Vendor Name: \_\_\_\_\_

**Professional Services**

Item	Task Description (please list tasks)	Hours	Fixed Hourly Rate	Price	Comments
<b>I.</b>	<b>Installation and Set-Up of System</b>				
a.	Install AMI software		\$	\$	
b.	Install Meter Data Management Software (if required)		\$	\$	
c.	Install other software (if required)		\$	\$	
			\$	\$	
<b>II.</b>	<b>Discovery and Configuration</b>				
a.	Discovery		\$	\$	
b.	Configuration		\$	\$	
			\$	\$	
<b>III.</b>	<b>QA Testing</b>				
a.	Functional		\$	\$	
b.	System/Integration		\$	\$	
c.	End to End		\$	\$	
d.	User Acceptance		\$	\$	
			\$	\$	

Item	Task Description (please list tasks)	Hours	Fixed Hourly Rate	Price	Comments
<b>IV.</b>	<b>Training</b>				
a.	Training for Utility Billing (34 people)	272	\$	\$	
b.	Training for Water Business Services (3 people)	24	\$	\$	
c.	Training for IT Support Staff (5)	160	\$	\$	
d.	Training for Meter/Endpoint Installers and maintenance personnel (25)	200	\$	\$	
			\$	\$	
<b>V.</b>	<b>Interface/Integration to Other Systems</b>				
a.	AMI Software to Billing System - Meter Inventory Transfer Process		\$	\$	
b.	AMI Software to Billing System - Meter Infrastructure Process (two way)		\$	\$	
c.	AMI Software to Billing System - Metering Point Provisioning		\$	\$	
d.	AMI Software to Billing System - Billable Reads		\$	\$	
e.	AMI Software to Billing System - On-Demand Reads		\$	\$	
f.	AMI Software to Billing System - Interval Data		\$	\$	
g.	AMI Software to Billing System - Remote Shut Off		\$	\$	
h.	AMI Software to Billing System - Service Order Creation		\$	\$	
i.	Billing System to MIS		\$	\$	
j.	MIS to Billing System		\$	\$	
k.	MIS to AMI software		\$	\$	
l.	AMI software to GIS		\$	\$	
			\$	\$	
<b>Total Professional Services</b>		<b>656</b>		<b>\$</b>	

**Additional Comments - use space below as needed**

*List all other comments here.  
Don't forget to check your formulas!*

**ATTACHMENT G**  
**ADVANCED METER INFRASTRUCTURE**  
**Proposal Form No. 3 (Software Requirements)**

Using the tables in the matrix document below, the Vendor must respond to each individual requirement by entering an 'X' in one of the columns provided. Select the appropriate response using the following guidelines below.

The functional requirements are presented in tabular format. The columns in the table include:

<b>Reference #</b>	The internal cross-reference number for the requirement. See appendices for detail requirements that were summarized to this internal cross-reference number.
<b>Requirement</b>	The specific function or behavior necessary to satisfy City business needs.
<b>Standard</b>	The requirement is satisfied by the solution proposed without configuration. Where the requirement is satisfied by third-party software, indicate the third party product proposed. Also mark here for questions in which the Vendor satisfies the requirement.
<b>Configured</b>	The requirement is not satisfied by the solution out of the box, but is satisfied by configuration.
<b>Customized</b>	A modification to the solution is required to satisfy this requirement. Provide an explanation of the volume of labor and work complexity. In addition, indicate whether the requirement will be satisfied by an upcoming release, and if so, give the version number and date of release.
<b>Not Available</b>	The solution will not satisfy the requirement. Also mark here for questions in which the Vendor does not satisfy the requirement.
<b>Describe how this requirement will be satisfied</b>	Details regarding the delivery of the requirement. Narrative will adequately describe how the Vendor solution can satisfy the requirement. Screen shots, sample reports, or supporting documentation may be included in the response. Use extra pages as necessary and include the Requirement Reference #.

The Vendor also must enter a response in each requirement table under the row heading: "Describe how this requirement will be satisfied."

Where Vendor has indicated that modifications/exceptions are needed to meet the requirement, Vendor must use this section to provide an explanation of the amount of work, the level of complexity and your availability to perform the modification. Where appropriate, indicate whether the requirement is planned for upcoming releases, and give the version number and date of release if known.

To understand associated data requirements, Vendor should reference any appendices or links provided. Additionally, Vendor can provide further comments outlining additional information or functionality of the system relevant to the requirement by attaching documents to the completed appendix and indicating the appropriate reference number.

The Vendor may also include screen shots, samples, and inventories for any requirement listed.

The items listed should not be construed as to be an exhaustive list of system requirements. As part of the implementation process, the City expects Vendor to conduct an assessment of the City's process and business requirements, determine how the Vendor's solution meets the City's requirements, and identify possible gaps. The City anticipates that this process would occur on-site and in collaboration with the relevant stakeholders.

**1. GENERAL REQUIREMENTS**

			<b>Designate X for only one answer</b>			
<b>Ref #</b>		<b>REQUIREMENT</b>	<b>Standard</b>	<b>Configure</b>	<b>Customize</b>	<b>Not Available</b>
		Software Setup/Licensing				
1.1		The Vendor and the City will work cooperatively to configure the QA and Production environments with the AMI software. The Vendor has the responsibility to lead all configuration activities.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			<b>Designate X for only one answer</b>			
<b>Ref #</b>		<b>REQUIREMENT</b>	<b>Standard</b>	<b>Configure</b>	<b>Customize</b>	<b>Not Available</b>
		Software Setup/Licensing				
1.2		The Vendor will provide documentation demonstrating proper installation and configuration of the hardware and software including application and databases.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			<b>Designate X for only one answer</b>			
<b>Ref #</b>		<b>REQUIREMENT</b>	<b>Standard</b>	<b>Configure</b>	<b>Customize</b>	<b>Not Available</b>
		Software Setup/Licensing				
1.3		The Vendor will provide an Operations and Maintenance Manual that will detail exactly how the hardware and SQL database software need to be configured.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			<b>Designate X for only one answer</b>			
<b>Ref #</b>		<b>REQUIREMENT</b>	<b>Standard</b>	<b>Configure</b>	<b>Customize</b>	<b>Not Available</b>
		Software Setup/Licensing				
1.4		During setup, for security purposes, full administrative level access to OS and database systems will be reserved for the City personnel implementers only.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			<b>Designate X for only one answer</b>			
<b>Ref #</b>		<b>REQUIREMENT</b>	<b>Standard</b>	<b>Configure</b>	<b>Customize</b>	<b>Not Available</b>
		Software Setup/Licensing				
1.5		The Vendor will supply the City with a full use perpetual site license for accessing the software.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			<b>Designate X for only one answer</b>			
<b>Ref #</b>		<b>REQUIREMENT</b>	<b>Standard</b>	<b>Configure</b>	<b>Customize</b>	<b>Not Available</b>
		Data Security/Legal Compliance				
2.1		The software will have login and password protection by individual City Users ensuring the software is only accessed by authorized personnel using the City's IT standards for password security.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			<b>Designate X for only one answer</b>			
<b>Ref #</b>		<b>REQUIREMENT</b>	<b>Standard</b>	<b>Configure</b>	<b>Customize</b>	<b>Not Available</b>
		Data Security/Legal Compliance				
2.2		The software will have different levels of authority to allow administrative, City user, and view-only access.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			<b>Designate X for only one answer</b>			
<b>Ref #</b>		<b>REQUIREMENT</b>	<b>Standard</b>	<b>Configure</b>	<b>Customize</b>	<b>Not Available</b>
		Data Security/Legal Compliance				
2.3		Vendor will have a documented and approved Information Security Management Program with administrative, technical, and physical safeguards.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			<b>Designate X for only one answer</b>			
<b>Ref #</b>		<b>REQUIREMENT</b>	<b>Standard</b>	<b>Configure</b>	<b>Customize</b>	<b>Not Available</b>
		Data Security/Legal Compliance				
2.4		Describe how the approved Information Security Management Program requirement will be satisfied relative to Risk Analysis and Management.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Data Security/Legal Compliance				
2.5		Describe how the approved Information Security Management Program requirement will be satisfied relative to Security Program Management.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Data Security/Legal Compliance				
2.6		Describe how the approved Information Security Management Program requirement will be satisfied relative to Access Controls.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Data Security/Legal Compliance				
2.7		Describe how the approved Information Security Management Program requirement will be satisfied relative to Audit Controls.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Data Security/Legal Compliance				
2.8		Describe how the approved Information Security Management Program requirement will be satisfied relative to Integrity Controls, including data backup and recovery/disaster recovery.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Data Security/Legal Compliance				
2.9		Describe how the approved Information Security Management Program requirement will be satisfied relative to Network/Transmission Security.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Data Security/Legal Compliance				
2.10		Describe how the approved Information Security Management Program requirement will be satisfied relative to Personnel Security and Awareness Training.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Data Security/Legal Compliance				
2.11		Describe how the approved Information Security Management Program requirement will be satisfied relative to Physical and Environment Security.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Meter Reading Retrieval				
3.1		The AMI software will allow the City to request and retrieve meter readings and consumption by zone or individual account. Where an account has multiple registers, all readings will be returned upon an individual account request.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Meter Reading Retrieval				
3.2		The AMI software will allow an on-demand read that retrieves the most recent meter reading.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Meter Reading Retrieval				
3.3		The AMI software will support 8 digits (0.1ft3) resolution).				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Meter Reading Retrieval				
3.4		The AMI software must support single and dual register meter information.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Meter Reading Retrieval				
3.5		Where a current valid reading is not available, the meter reading software will return an error code that indicates the type of problem at that site. The error code will be reflective of the problem in the field and not a generic non-numeric reading error code.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Meter Reading Retrieval				
3.6		The AMI Software shall provide the ability to process hourly time-stamped meter reading taken from all water meters and verify the percentage of reads received for particular Zones. This data must then be exposed to various configurable parameters set, such as high/low parameters to assure the accuracy of the data.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Meter Reading Retrieval				
3.7		The AMI software must be able to search for records matching specified information.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			<b>Designate X for only one answer</b>			
<b>Ref #</b>		<b>REQUIREMENT</b>	<b>Standard</b>	<b>Configure</b>	<b>Customize</b>	<b>Not Available</b>
		Meter Reading Retrieval				
3.8		The ability to create data views using tools built into the AMI software is desired. AMI software shall provide the user with reports of the current status and reading history of individual accounts and selectable groups of accounts. The AMI system will automatically provide data, corresponding to all the accounts in a billing cycle or other grouping presented to it, to the utility billing system in a mutually agreed upon, non-proprietary file format.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			<b>Designate X for only one answer</b>			
<b>Ref #</b>		<b>REQUIREMENT</b>	<b>Standard</b>	<b>Configure</b>	<b>Customize</b>	<b>Not Available</b>
		Meter Reading Retrieval				
3.9		The AMI system will allow the City to set up static (specifically defined meters) and dynamic (user defined conditions) meter groups.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.1		The Vendor will lead a business requirement meetings to define which reports will be produced and used during the startup phase and during the second year of the project (as required by the City). The City will approve the final reports.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.2		The AMI software will be capable of producing standard reports that can be downloaded as a PDF file and in Excel/CSV format for further analysis and action.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.3		Vendor will develop and configure a Database Balance Report - showing a summary and details that ensure the following equation is balanced. Exact categories may be revised with Vendor and City approval.  Total Meters provided = Installed & billed + Installed waiting for billing + Installed & warranty + Task (by type) + Meters not installed.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.4		Vendor will develop and configure Production Reports showing what is remaining by Zone and Book broken down by meter size.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			<b>Designate X for only one answer</b>			
<b>Ref #</b>		<b>REQUIREMENT</b>	<b>Standard</b>	<b>Configure</b>	<b>Customize</b>	<b>Not Available</b>
		Reporting Capability				
4.5		Vendor will develop and configure Task Reports – showing by Zone, broken down by type.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			<b>Designate X for only one answer</b>			
<b>Ref #</b>		<b>REQUIREMENT</b>	<b>Standard</b>	<b>Configure</b>	<b>Customize</b>	<b>Not Available</b>
		Reporting Capability				
4.6		Vendor will develop and configure a History of Contact Report - showing a list of meters the Vendor could not contact (where an appointment was required) and the history of contact.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.7		Vendor will develop and configure an Invoice Support Report - detailing what work was performed at each site and the associated read success rate for each account.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.8		Vendor will develop and configure a report showing endpoints not reporting to a data collector within the User defined number of days prior.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.9		Vendor will develop and configure a report showing endpoints that have continuous cut wire alert for the User defined number of days prior.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.10		Vendor will develop and configure a report showing endpoints that have faulty or loose wire connections that are sending irregular meter readings for the User defined number of days prior. Will show the percentage of errors received.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.11		Vendor will develop and configure a report showing water meters that send continuous negative consumption readings for the User defined number of days prior.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.12		Vendor will develop and configure a report for water meters that show intermittent negative consumption during the prior User defined number of days (negative and positive consumption) and will show the number of changes in direction.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.13		Vendor will develop and configure a report to show Endpoints that are communicating with the AMI system but are not associated with a documented address.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.14		Vendor will develop and configure a report to show Endpoints with low battery power signals.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.15		Vendor will develop and configure Data Collection Equipment diagnostic reports, (# of Endpoints it reads, amount of data being transferred, list of IDs being read).				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.16		Vendor will develop and configure a report to show all meters and associated readings.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.17		Vendor will develop and configure a report to show all billing meters and associated readings.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.18		Vendor will develop and configure a report to show all Accounts by billing date.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.19		Vendor will develop and configure a report to show all Accounts by route.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.20		Vendor will develop and configure a report to show all Backflow detection.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.21		Vendor will develop and configure a report to show all Meters failing validation.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.22		Vendor will develop and configure a report to show all zero consumption meters.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			<b>Designate X for only one answer</b>			
<b>Ref #</b>		<b>REQUIREMENT</b>	<b>Standard</b>	<b>Configure</b>	<b>Customize</b>	<b>Not Available</b>
		Reporting Capability				
4.23		Vendor will develop and configure a report to show all continuous consumption meters.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			<b>Designate X for only one answer</b>			
<b>Ref #</b>		<b>REQUIREMENT</b>	<b>Standard</b>	<b>Configure</b>	<b>Customize</b>	<b>Not Available</b>
		Reporting Capability				
4.24		Vendor will develop and configure a Vacant consumption report to show all meters reporting usage that are shut-off or in vacant buildings.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.25		Vendor will develop and configure a report to show all meters with estimated consumption intervals.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.26		Vendor will develop and configure a report to show all meters with High usage, based on configurable parameters for individual usage.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.27		Vendor will develop and configure a report to show all meters with tamper alerts.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.28		Vendor will develop and configure a report to show all meters involved in reporting outages.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.29		Vendor will develop and configure a report to show all meters reporting additional flags indicating different types of leak events occurring at a property where available.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.30		Vendor will develop and configure a report to show all meters reporting meter readings and consumption for a particular account for a User defined period of time.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.31		Combined consumption for a multi-register meter for a particular account for a User defined period of time.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.32		<p>All reports will include, at a minimum, the following fields of information:</p> <ol style="list-style-type: none"> <li>1. Account number.</li> <li>2. Service address.</li> <li>3. Meter manufacturer, type, size, serial number.</li> <li>4. Endpoint ID, type, model and firmware information.</li> <li>5. Error code clearly indicating the type of error detected.</li> <li>6. Reading and consumption information for the prior periods as configured in the system.</li> </ol>				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.33		The reports will be customizable with an integrated reporting tool. It will allow the reports to be run on both ad hoc and scheduled times and support both static (specific meter groups that do not change) and dynamic reporting groups (allows for a number of conditions to be set) to be created.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.35		The reports will be customizable with an integrated reporting tool. It will allow the reports to be run on both ad hoc and scheduled times and support both static (specific meter groups that do not change) and dynamic reporting groups (allows for a number of conditions to be set) to be created.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Reporting Capability				
4.36		The AMI software will be able to notify the City Users of real time alerts via e-mail or text message for specific events (large negative consumption, meter tampering, low battery, etc.)				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Notifications				
5.1		The AMI software will be able to notify the City Users of real time alerts via e-mail or text message for specific events (large negative consumption, meter tampering, low battery, etc.)				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Data Storage and Capacity				
6.1		The AMI software (or MDMS) will be capable of storing a minimum of seven years of readings. The system will allow data to be archived after a City definable number years.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Data Storage and Capacity				
6.2		The AMI software will be capable of storing hourly readings from a minimum of 120,000 meters.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Data Storage and Capacity				
6.3		The AMI software will be capable of allowing Users to search using an account number, an address, a meter serial number, and/or a transmitter serial number.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Functional Requirements				
7.1		The AMI software will allow City Users to access any customer's past water consumption for a period of at least seven years. It will have tools to allow the User to analyze that consumption, and will provide graphing functionality to view that consumption history. The desired graph will compare consumption history with different time periods and group consumption averages of multiple endpoints. Users will be able to access meter readings and water consumption for any meter or meter group for any period specified by the User. The AMI software should display this information in a table format or graph as selected by the User and should provide an export function to download selected data to a file in Excel, HTML, rich text format (RTF) or PDF formats, as selected by the User.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Functional Requirements				
7.2		<p>The AMI software will allow Users to compare water consumption patterns in a number of different ways. Some examples of the types of consumption analysis that are preferred include, but are not limited to:</p> <ol style="list-style-type: none"> <li>1. Comparisons between two or more consumption periods for one customer, e.g. consumption by day (or by month or by hour) in July 2016, July 2015, July 2014.</li> <li>2. Comparisons within one consumption period for a single customer with their average consumption for a different consumption period, e.g. consumption by day in July 2016, versus average consumption by day in July 2013 and July 2015.</li> <li>3. Comparisons within one consumption period for a single customer with the average water consumption for the same period of a group of customers, Compare time of day consumption for a single customer with usage for the entire day or a different part of the day in the same part of the year or over an entire year.</li> <li>4. Comparisons in configurable time periods for consumption for groups of users or all users.</li> </ol>				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Functional Requirements				
7.3		The AMI software will enable the consumption period to be defined by the User (e.g. every five minutes, every hour, daily, weekly, monthly). A consumption period definition should only be limited by how frequently the radio transmitter reads the meter.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Functional Requirements				
7.4		<p>The AMI software will enable a User to group and total a number of different consumptions. Some examples of grouping consumption histories include, but are not limited to:</p> <ol style="list-style-type: none"> <li>1. Grouping high and low-flow register consumption from compound meters.</li> <li>2. Grouping meters within a specific geographic area. These groups could become temporary or permanent meter groups.</li> </ol>				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Functional Requirements				
7.5		<p>The AMI software will allow the City to identify, report and correct erroneous meter readings or conditions that may affect consumption analysis. Erroneous readings may, at a minimum, include the following conditions:</p> <ol style="list-style-type: none"> <li>1. Roll over - being able to identify and correct consumption as a result of a meter rolling over their dial from a reading of 9999999(99) to 0000000(00).</li> <li>2. Backward consumption - when a meter is installed backwards.</li> <li>3. Consumption relating to incorrectly installed meters. Either installed at an incorrect address, or incorrect consumption due to meter registers being installed on incorrect meter sizes.</li> </ol>				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Data Set Validation				
8.1		The AMI Software must perform high low analysis. The AMI Software must check the reported value for the Reading is within a percentage threshold of the historic average for the meter taking into account seasonal variance.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Data Set Validation				
8.2		<p>The AMI Software must perform gap identification. The AMI Software must identify gaps in the data set where no data has been received for a configurable number of days and perform the following estimations on them:</p> <ul style="list-style-type: none"> <li>a. Historic average extrapolation estimations</li> <li>b. Linear interpolation extrapolation estimations</li> </ul>				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Data Set Validation				
8.3		The AMI Software must support site-specific validations to be added to the system at a later date.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Data Set Validation				
8.4		The AMI software must perform restricted use analysis, identifying high consumption during restricted times.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Data Set Validation				
8.5		<p>The AMI software must identify gaps in the data set where no data has been received for a configurable number of days and perform the following estimations on them:</p> <ol style="list-style-type: none"> <li>1. A historic average extrapolation</li> <li>2. Linear interpolation extrapolation</li> <li>3. Custom</li> </ol>				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Data Set Validation				
8.6		The AMI software must allow select meters to be combined into a virtual meter to enable district water usage management. Virtual meters may have any number of contributing meters with the ability to apply multipliers to their consumption.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Data Set Validation				
8.7		The AMI software must allow the user to create groups of meters based on attributes or on an ad hoc basis for reporting purposes.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Interfaces				
9.1		The Vendor will supply all required software and interfaces necessary for City staff to operate and manage the AMI system. This software will include interfaces to the Utility's existing customer information system and GIS software and database systems. The Vendor will develop, configure and test all interfaces.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Interfaces				
9.2		In the event the City and Vendor disagree with certain aspects of the interfaces, the City will make the final decision.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
	Interfaces					
9.3		The AMI Provider will provide or create a method of importing meter readings from Itron AMR endpoints and normalizing the data to be used for reporting and billing in the Vendor's system. This requirement applies to non-Itron vendors.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
	Interfaces					
9.4		The Vendor and the City will jointly plan and develop meter reading interfaces that transfer meter reading information between the City's billing system and the Contractor's AMI software. The Vendor will be responsible for the programming the AMI meter reading of the interface and coordinating with the CIS vendor for the programming on the billing system side of the interface with oversight from the City. The Vendor will be responsible for end to end testing.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
	Interfaces					
9.5		The Vendor and the City will jointly test and adjust programing the interfaces on the QA system. In the event of a testing failure, the Vendor will be responsible for updating the programing on the AMI meter reading side of the interface in the event of testing failure. The City will be responsible for the programing on the billing system side of the interface.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
	Interfaces					
9.6		The Billing System interface will allow for meter reading requests can be performed by individual account (radio transmitter number).				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Interfaces				
9.7		The Billing System interface will limit a query on the number of records requested at one time to a maximum of 25,000.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Interfaces				
9.8		Meter reading information will be uploaded within a 4 hour period and will not impact the AML software for other User requests or processing activities during completion of this data transfer.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			<b>Designate X for only one answer</b>			
<b>Ref #</b>		<b>REQUIREMENT</b>	<b>Standard</b>	<b>Configure</b>	<b>Customize</b>	<b>Not Available</b>
		Interfaces				
9.9		The Billing System interface process will allow business rules to be applied to the queries being requested. These business rules will be determined by the City during the planning of the billing interface.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			<b>Designate X for only one answer</b>			
<b>Ref #</b>		<b>REQUIREMENT</b>	<b>Standard</b>	<b>Configure</b>	<b>Customize</b>	<b>Not Available</b>
		Interfaces				
9.10		The Billing System interface process will return a specific and detailed error code when a valid meter reading is not available within 5 business days for any meter.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
	Interfaces					
9.11		The Billing System interface will allow individual account requests whereby the AMI software allows the User to enter the number of days the AMI software will search for a valid reading.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
	Interfaces					
9.12		The Billing System interface will receive and record all leak, backflow, tamper flags that are available.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
	Interfaces					
9.13		The Billing System interface will allow transfers to be scheduled.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
	Interfaces					
9.14		The Installer will use an integrated Meter Installation System (MIS) that includes a handheld field work order system, inventory control, appointment scheduling, and data verification review capability.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Interfaces				
9.15		The interface will allow the billing system to update AMI software with account, address, area, and meter information.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Interface Detail				
10.1		Interface 1 - AMI Software to Billing System - Meter Inventory Transfer Process: each device is brought in separately and when installed at a premise joined together on enQuesta's Customer Meter Device Table. This will be a 2-way asynchronous interface.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Interface Detail				
10.2		<p>Interface 2 - AMI Software to Billing System - Meter Infrastructure Process (two way): This stage is designed to handle the business objectives of fitting up the Metering Point to be operational for Automated Meter Infrastructure business processes in a two-step process.</p> <p>The first step is a download program that allows the customer to select a single or range of Metering points by Route or Cycle within enQuesta. Execution of this selection routine can flag the metering point for identification to be used by the Customer Service personnel or for executive tracking of current efforts especially when a Vendor is used. The file established contains all the necessary information to schedule and execute a meter exchange or retrofit of the metering point.</p> <p>The second step is the information required in a file to populate the required information in the enQuesta billing system. This is best accomplished daily to keep the account data accurate. The file will include but is not limited to such information as Old meter number and off read, New Meter and start Reading, New Other Device Type used in accordance with the AMI solution in question to obtain the reading remotely. The file being uploaded creates and completes a work order in enQuesta to follow the Utilities current metering point exchange solution. It also changes the identification on the account from its early state.</p>				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Customer Access				
10.3		Interface 3 - AMI Software to Billing System - Metering Point Provisioning: Once the connection has been made to the Meter Data Management system provision of the meter point is crucial in maintaining the status of the metering point at any given moment. Real time integration established so when an action occurs on the account the Meter data Management Metering point is immediately updated to reflect those changes. Whether the function is something as simple as a cycle change or planned outage, the AMI system is updated. This integration is the preferred method.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Customer Access				
10.4		Interface 4 - AMI Software to Billing System - Billable Reads: The importance of the AMI solution is to obtain accurate meter readings which are stored, evaluated and supplied on demand to the billing system for processing. The method is labeled as a Cycle billing request in enQuesta. This request puts together a count of the billable meters and accounts with the specific cycle. This request is sent to the AMI system which then establishes a file of the best possible reading from the AMI solution to be billed. The file, when returned to enQuesta, is then visually compared for total accounts and Meter accuracy before the upload step is executed into the enQuesta Month file for further editing id required. If the totals do not seem accurate a re-request can be performed. The accounts in the AMI system are also flagged through provisioning and once the meter read is billed the AMI establishes a billing closure date so the next request will know from where to begin establishing the next month's best reading to be supplied for billing when requested.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Customer Access				
10.5		<p>Interface 5 - AMI Software to Billing System - On-Demand Reads: It will be necessary for enQuesta to get the reads from the AMI system on demand real time. This could be for informational purpose or display and also for billable reads.</p> <p>On Demand "Interim" read: This option should be available from the customer Inquiry portal as well as WebConnect. This read is for informational purpose only and will not be marked as billable in enQuesta or the AMI system.</p> <p>On Demand Interim read for Inquiry Portal: This option will be available to the CSRs. If for any reason the CSR would like to know the current read from the customer meter, enQuesta will make a request to the AMI system thru a web service call. This read will be used for display only and will not be stored in enQuesta. The read will be shown on an enQuesta screen.</p> <p>On Demand Interim Read for WebConnect: This option will be available from WebConnect for the end user to click and view the most current read. The AMI system should be able to either get the read from the end point or send the most current read stored in the AMI system. The customer (utility) should be able to choose what option they would like to implement to control the network traffic.</p>				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Customer Access				
10.6		Interface 6 - AMI Software to Billing System - Interval Data: In order to show the consumption pattern over time of use, it will be necessary to display the interval data over a period of time. This data will be used for display on the inquiry portal as well as WebConnect. This data will be displayed in a graphical format. This will be done thru web service calls. The request will be done for the interval the data is displayed for. It could be 15 minutes, 1 hour or daily, data.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Customer Access				
10.7		Interface 7 - AMI Software to Billing System - Remote Shut Off: If the meter installed at a customer site is a remote shut off meter then the enQuesta credit & collections process should send the shut off signal to the AMI system which in turn can shut the meter. There could be modification in enQuesta when the S&S customer uses a mobile work management system. In that case the shut off work order for a remote shut off meter will not be sent to the mobile work management system thru the interface.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Customer Access				
10.8		Interface 8 - AMI Software to Billing System - Service Order Creation: The AMI system may be configured to figure out a problem with the meter at which point it may decide to create a service order on the enQuesta system. enQuesta provides a web service through which the AMI system will be able to create a service order. The AMI system will need to store the work order types for different types of events. In case of the S&S customer using an MIS system these orders will be sent to the MIS.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Customer Access				
10.9		Interface 9 - Billing System to AMI System: Meter reading request will allow the billing system to request meter readings from individual or multiple accounts.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Customer Access				
10.10		Interface 10 - MDMS software (if required) to Billing System: If the Contractor's solution incorporates an interface between the MDMS software and the City's billing system, then it will, in consultation with the City, design, build and test a data transfer protocol between the City's billing system and the MDMS. The Contractor will provide a solution that will ensure that all systems are easily updatable and synchronized when meters or radio transmitters are being added or replaced and consumption data is uploaded to the AMI from field readings.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Customer Access				
10.11		<p>Interface 11 - Billing System to MIS: The City will provide Initial Customer Information on a Zone by Zone basis.</p> <p>a. This information will be provided to the Contractor no later than eight weeks prior to the beginning of installations in those Zones.</p> <p>b. Once the Initial Customer Information has been passed to the Contractor, the City will send daily updates for any changes made to the following information: customer, owner, or meter information.</p> <p>c. The City may pass service requests for meters the Contractor previously installed, for warranty investigation purposes.</p>				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Customer Access				
10.12		Interface 12 - MIS to Billing System: The Contractor shall provide the City installation information daily once the installation information has passed all validations.  a. Records will be provided in batch files grouped by field activity, including: replacements, retrofits, task, warranty, repairs.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Customer Access				
10.13		Interface 13 - MIS to AMI software: The Contractor shall be responsible for all interfaces between the MIS and the AMI software where this is required for calculating RSR and checking installation issues in the field.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Customer Access				
10.14		Interface 14 - AMI software to GIS: The Contractor will be responsible for all interfaces between the AMI software and GIS where this is required for spatial analysis of meter reading and data collector issues.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Customer Access				
11.1		The software will be integrated with the City's billing website, not requiring a separate login to view a customer's water consumption data. <a href="https://ub.ci.minneapolis.mn.us/iwr/user/login.seam">https://ub.ci.minneapolis.mn.us/iwr/user/login.seam</a> .				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Customer Access				
11.2		The software will be accessible to customers using desktop or mobile web browsers.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Customer Access				
11.3		The AMI software will allow Customers to access their own water consumption for a period of at least three years.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Multiple Meters and Accounts				
12.1		The software will allow a single customer to access and view all meters they are responsible for in a single logged on session.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Multiple Meters and Accounts				
12.2		Where a meter has more than one meter register the software will be able to aggregate the consumption into a single view.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Multiple Meters and Accounts				
12.3		The software will allow utility customers to set leak, exceeds water budget, and out of town alerts and to be notified of said alerts via email and/or text.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Customer Display				
13.1		The software's main customer display screen will have the City's logo and branding on it.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Customer Display				
13.2		The display will provide all account, address, meter information relating to that particular customer.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Customer Display				
13.3		The system will display temperature and precipitation data in both graphical and tabular format, synchronized with the consumption data.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Customer Display				
13.4		The graph will allow the customer to compare consumption history for different time periods of the same length on a single graph. (daily, monthly, and yearly).				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Customer Display				
13.5		The customer will be able to compare their consumption with an average customer based on the same meter size.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Customer Web Portal Reporting				
14.1		The software will allow the customer to download both graphical and chart based reports of their consumption. The downloaded reports will be available in PDF or Excel format, based on the customer's preference.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Customer Web Portal Reporting				
14.2		The system will allow utility customers to view a seamless consumption profile/graph, even if a meter has been changed out at their premise.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Customer Web Portal Reporting				
14.3		The system will allow utility customers to set leak, exceeds water budget, and out of town alerts and to be notified of said alerts via email and/or text.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Customer Web Portal Reporting				
14.4		The system will be capable of exporting data (consumption and weather) in both graphical and tabular format in PDF, Excel, and CSV formats.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Consumption Alerts				
15.1		The software will allow the customer to set up e-mail alerts that will automatically inform customer of a customer specific % increase in their water bill. This may be used to pro-actively inform the customer of high consumption or be setup for a specific period of time (when the house is vacant).				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		System Fail-Over				
16.1		The Vendor will enable fail-over capability for the Production and QA environments.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		System Fail-Over				
16.2		The system will allow for 'hot-swapping' of processors, power supplies, and other key components so that any failure of these individual components can be remedied with replacement while the system is in operation.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		System Fail-Over				
16.3		The system will allow for replicated disc permitting continuous operation in the event of disc storage failure.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			<b>Designate X for only one answer</b>			
<b>Ref #</b>		<b>REQUIREMENT</b>	<b>Standard</b>	<b>Configure</b>	<b>Customize</b>	<b>Not Available</b>
		System Fail-Over				
16.4		In the event of a system failure, the system provides an automatic instantaneous reversion to a hot stand-by system having a real-time duplicate database.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			<b>Designate X for only one answer</b>			
<b>Ref #</b>		<b>REQUIREMENT</b>	<b>Standard</b>	<b>Configure</b>	<b>Customize</b>	<b>Not Available</b>
		System Responsiveness				
17.1		Vendor will enable a system designed with capacity such that when connected directly to the system network, 65 concurrent Users will experience sub-second response time to screen refreshes and constrained-data queries. The Vendor will describe the record constraints imposed on data queries in order to achieve this response level.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		System Responsiveness				
17.2		Vendor will enable a system designed with capacity such that the after-hours backups, database management system data maintenance routines, and report production will occur in no more than a four-hour window.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

**2. HOSTED OR SOFTWARE-AS-A-SERVICE SPECIFIC SOLUTION REQUIREMENTS**

The following requirements apply to only those solutions that are hosted by the Vendor or provided as a Software-as-a-Service. Vendors that are not proposing a hosted or Software-as-a-Service solution do not need to complete this section.

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		System Availability				
18.1		The software will be available for use by City personnel 24 hours per day, 7 days per week, and 365 days a year, except during scheduled maintenance windows.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		System Availability				
18.2		Vendor will provide the City five (5) days of notice prior to any planned system outage.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		System Availability				
18.3		Prior to any planned outage the software will be backed up to ensure full system restoration and data recovery.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		System Availability				
18.4		Should Vendor fail in any fulfilling its obligations for any System Availability requirement listed above, Vendor shall provide remedies (financial or otherwise).				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Backups				
19.1		Backups of each environment shall be performed on a daily basis at a time specified by the City.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

			Designate X for only one answer			
Ref #		REQUIREMENT	Standard	Configure	Customize	Not Available
		Data Locations				
20.1		All City data and any backups of City data shall be located in the continental United States.				
<i>Describe how this requirement will be satisfied</i>						
Additional comments / recommendations associated with this requirement:						

**ATTACHMENT H**  
**ADVANCED METER INFRASTRUCTURE**  
**As-is Technology Environment for On-Premise Solutions**

This section describes the current technology environment to assist Contractors with understanding the on-premise technology infrastructure in which the AMI system will operate. If the proposed system is a Software-As-A-Service or hosted solution, this section will be less applicable.

The City does not anticipate making substantial architectural changes to its enterprise technology architecture other than the addition of servers, clients or services required to support the proposed system. All servers (physical or virtual) that are required to support the proposed system will be furnished by the City through its managed services provider.

The City's managed service provider operates two geographically diverse data centers for hosting the City's applications, including the majority of the City's enterprise environment.

Most of the servers operated on the City's behalf are virtual servers and exist in a VMware environment. The City prefers virtual servers to physical servers. The majority of application servers run Microsoft Windows. Microsoft SQL is the preferred database management system. Table 1 lists major elements of the enterprise environment.

**Table 1: Current Server Services**

<b>Service</b>	<b>Specification</b>	<b>Roadmap</b>
<b>Server OS</b>	Microsoft Windows 2012 Server 64 bit run in a virtualized environment	Current
<b>DBMS</b>	Microsoft SQL Server 2014, 2012 R2	Current
<b>Storage</b>	Storage Area Networks (SAN)	Current
<b>Mail Server</b>	Exchange Online	Current
<b>Disaster Recovery</b>	EMC RecoveryPoint, replicating at the disk level in a warm disaster recovery site	Current
<b>Other Enterprise Application Services</b>		
<b>GIS</b>	ESRI ArcServer 10.2.2 (GIS)	Current
<b>Document Management</b>	Microsoft SharePoint (Online)	Current
<b>Disaster Recovery</b>	EMC RecoveryPoint, replicating at the disk level in a warm disaster recovery site	Current

The current end-user clients use Microsoft Windows 7 Enterprise 32 bit operating system. The base image software includes the following core components:

- Internet Explorer 11
- Microsoft Office 2010 Professional