

CITY OF LAREDO
CONTRACT DOCUMENTS

CITY OF LAREDO

Water Utilities Department

5816 Daugherty
Laredo, Texas 78041
Ph. (956) 721-2000



P.O. Box 2950
Laredo, Texas 78044
Fax: (956) 721-2001

May 7, 2013

Mr. Jason Wilkie
Pedal Valves Inc.
13625 River Road
Luling, LA 70070

RE: City of Laredo Utilities Water Meters AMI/AMR System Contract Documents

Dear Mr. Wilkie:

Enclosed please find an original signed contract for the Water Meters AMI/AMR System with the City of Laredo Utilities for your files. It does not include Exhibit 10-Response from Pedal Valves to Request for Proposals as you have your copy.

Sincerely,

Margarita Ayala
Customer Service Superintendent
City of Laredo Utilities

**AGREEMENT BETWEEN
CITY OF LAREDO, TEXAS AND PEDAL VALVES INC. FOR WATER
METER AMI/AMR SYSTEM – CONSTRUCTION CONTRACT**

THIS AGREEMENT is by and between CITY OF LAREDO, TEXAS (COL) (“Owner”) and
PEDAL VALVES INC. (PVI) (“Contractor”).

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: **Provide and install a Neptune AMI/AMR System for the City of Laredo (COL). This includes the installation of all infrastructures, meters and transmitters, and all necessary hardware and software for a fully functioning system as it pertains to the project in Years 1 – 5 (Phases 1 – 5). Additionally, the following Exhibits have been attached for the project:**

- Exhibit 1 – City of Laredo RFP**
- Exhibit 2 – City of Laredo Clarifications to RFP**
- Exhibit 3 – Pricing for Neptune Water Meters**
- Exhibit 4 – UME Pricing Options vs Large Meter Pricing**
- Exhibit 5 – Pricing for Installation Services**
- Exhibit 6 – Pricing for Additional Work & Services**
- Exhibit 7 – Pricing for Infrastructure Implementation & Annual Maintenance Costs**
- Exhibit 8 – Schedule of Values**
- Exhibit 9 – Project Phase Schedule**
- Exhibit 10 – Response from Pedal Valves to Request for Proposals**

ARTICLE 2 – THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows: **The Neptune AMI/AMR System and appurtenances will be installed for COL in Phases 1 – 5 along with required hardware and software.**

ARTICLE 3 – POINTS OF CONTACT**3.01 OWNER**

The point of contact for COL (Owner) will be Tomas M. Rodriguez, Jr. P.E., hereinafter referred to as the "Owner's POC". The Owner's POC is to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Owner's POC in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

3.02 CONTRACTOR

The point of contact for PVI (Contractor) will be Jason Wilkie, hereinafter referred to as the "Contractor's POC". The Contractor's POC is to act as Contractor's representative, assume all duties and responsibilities, and have the rights and authority assigned to Contractor's POC in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIMES**4.01 *Time of the Essence***

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract. For the purposes of this contract Substantial Completion is defined as the point in which the Contractor has installed and can deliver 95% of the reads for the amount of meters to be installed per each phase as listed in Exhibit 5. For purposes of calculating the read percentage, the following exclusions apply: Force Majeure or Acts of God, Meters Removed from Service, and Tampered/Vandalized Endpoints.

4.02 *Days to Achieve Substantial Completion and Final Payment*

A. The Work for each Phase will be substantially completed within **365** days after the date when the Contract Times commence to run as provided in Paragraph 2.03 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions within **395** days after the date when the Contract Times commence to run.

4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial loss if the Work is not completed within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay Owner \$850.00 for each day that expires after the time specified in Paragraph 4.02 above for Substantial Completion until the Work is substantially complete. After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by Owner, Contractor shall pay Owner \$100 for each day that expires after the time specified in Paragraph 4.02 above for completion and readiness for final payment until the Work is completed and ready for final payment.

ARTICLE 5 – CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to Paragraphs 5.01.A through 5.01.F below:

A. For all Work in all Phases, a total sum of:

PRICING FOR ALL PHASES:

Meters for Phases 1 – 5	\$	<u>11,701,058.40</u>
Installations for Phases 1 – 5	\$	<u>2,419,110.00</u>
Infrastructure Installed in Phase 1	\$	<u>388,100.00</u>
Annual Maintenance Phases 2 – 5	\$	<u>158,720.00</u>
Totals for All Phases	\$	<u>14,666,988.40</u>

B. For all Work in Phase 1, a total sum of:

PRICING FOR PHASE 1:

Meters for Phase 1	\$	<u>2,340,211.68</u>
Installations for Phase 1	\$	<u>483,822.00</u>
Infrastructure Installed in Phase 1	\$	<u>388,100.00</u>
-Totals for Phase 1	\$	<u>3,212,133.68</u>

C. For all Work in Phase 2, a total sum of:

PRICING FOR PHASE 2:

Meters for Phase 2	\$	<u>2,340,211.68</u>
Installations for Phase 2	\$	<u>483,822.00</u>
Annual Maintenance Phase 2	\$	<u>39,680.00</u>
Totals for Phase 2	\$	<u>2,863,713.68</u>

D. For all Work in Phase 3, a total sum of:

PRICING FOR PHASE 3:

Meters for Phase 3	\$	<u>2,340,211.68</u>
Installations for Phase 3	\$	<u>483,822.00</u>
Annual Maintenance Phase 3	\$	<u>39,680.00</u>
Totals for Phase 3	\$	<u>2,863,713.68</u>

E. For all Work in Phase 4, a total sum of:

PRICING FOR PHASE 4:

Meters for Phase 4	\$	<u>2,340,211.68</u>
Installations for Phase 4	\$	<u>483,822.00</u>
Annual Maintenance Phase 4	\$	<u>39,680.00</u>
Totals for Phase 4	\$	<u>2,863,713.68</u>

F. For all Work in Phase 5, a total sum of:

PRICING FOR PHASE 5:

Meters for Phase 5	\$	<u>2,340,211.68</u>
Installations for Phase 5	\$	<u>483,822.00</u>
Annual Maintenance Phase 5	\$	<u>39,680.00</u>
Totals for Phase 5	\$	<u>2,863,713.68</u>

See Exhibit 3 for Pricing on Meters

See Exhibit 5 for Pricing on Installations

See Exhibit 7 for Pricing on Infrastructure & Annual Maintenance Fees

The Bid prices for Unit Price Work set forth as of the Effective Date of the Agreement are based on estimated quantities. Estimated quantities are subject to change as per Owner's POC and per field conditions.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

- A. **Contractor shall submit invoices for materials on hand as they are received on a monthly basis.**
- B. Contractor shall submit other Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by Owner's POC as provided in the General Conditions. **Contractor shall submit applications for payment on or about the 5th day of the month for work completed the prior month. A Schedule of Values will be provided as Exhibit 8 to this contract.**

6.02 *Progress Payments; Retainage*

5% of all progress payments shall be retained by the City.

6.03 *Project Payment Discount*

Upon reaching a minimum of 13,000 water meter installations, Contractor will issue a discount to the City of Laredo in the amount of \$115,000. This discount will be applied to the final invoice and deducted from the final payment and/or retainage amount at the completion of each phase for a total potential discount of \$575,000 at the end of the five (5) phased terms.

6.04 *Final Payment*

- A. Upon final completion and acceptance of the Work in accordance with Paragraph 14.07 of the General Conditions, Owner shall pay the remainder of the Contract Price as provided in said Paragraph 14.07.

ARTICLE 7 – INTEREST

- 7.01 All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest in accordance with the Texas Prompt Payment Act.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

- 8.01 In order to induce Owner to enter into this Agreement, Contractor makes the following representations:
 - A. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.
 - B. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

- C. Contractor is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Based on the information and observations referred to in Paragraph 8.01.E above, Contractor does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.
- E. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
- F. Contractor has given Owner's POC written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Owner's POC is acceptable to Contractor.
- G. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- H. Contractor certifies that they are capable of completing contract.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

- A. The Contract Documents consist of the following:
 - 1. This Agreement (pages 1 to 9, inclusive).
 - 2. Performance bond (pages 1 to 5, inclusive).
 - 3. Payment bond (pages 1 to 5, inclusive).
 - 4. General Conditions (pages i to 63, inclusive).
 - 5. Certificate of Insurance; Policy of Insurance
 - 6. Supplementary Conditions (pages 1 to 2, inclusive).
 - 7. The following supplementary documents, previously filed with the City of Laredo, are by this reference incorporated into this document.
 - a. Exhibit 1 - City of Laredo RFP
 - b. Exhibit 2 - City of Laredo Clarifications to RFP
 - c. Exhibit 3 - Pricing for Neptune Water Meters
 - d. Exhibit 4 - UME Pricing Options vs Large Meter Pricing
 - e. Exhibit 5 - Pricing for Installation Services

- f. Exhibit 6 - Pricing for Additional Work & Services
 - g. Exhibit 7 - Pricing for Infrastructure Implementation & Annual Maintenance Costs
 - h. Exhibit 8 - Schedule of Values
 - i. Exhibit 9 - Project Phase Schedule
 - j. Exhibit 10 - Response from Pedal Valves to Request for Proposals
8. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
- a. Notice to Proceed by Phase.
 - b. Work Change Directives.
 - c. Change Orders.
- B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 *Terms*

- A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

10.02 *Assignment of Contract*

- A. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 *Successors and Assigns*

- A. Owner and Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 *Severability*

- A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.05 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process or in the Contract execution;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 - 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
 - 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

10.06 *Other Provisions*

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement. Counterparts have been delivered to Owner and Contractor. All portions of the Contract Documents have been signed or have been identified by Owner and Contractor or on their behalf.

SIGNED, in duplicate originals, on this the 2 day of May, 2013.

CITY OF LAREDO,
OWNER:

PEDAL VALVES INC.,
CONTRACTOR:

By: [Signature] 5/2/13
Carlos R. Villarreal Date
City Manager

By: [Signature] 4/29/2013
Jason Wilkie Date
VP of Operations

APPROVED AS TO FORM:

By: Melissa A. Vidal 5/2/13
Melissa A. Vidal Date
Assistant City Attorney I

RECOMMENDED:

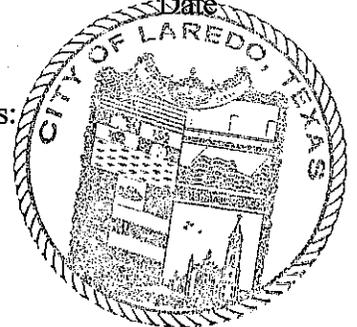
ATTESTED:

By: [Signature] 4/30/13
Tomas M. Rodriguez, Jr. Date
Utilities Director

By: [Signature] 5/2/13
for: Gustavo Guevara Date
City Secretary

Address for giving notices:
City of Laredo Utilities
5816 Daugherty Avenue
Laredo, TX 78041

Address for giving notices:
Pedal Valves Inc.
13625 River Road
Luling, LA 70070



STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.
 3. *Application for Payment*—The form acceptable to Owner’s POC which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 6. *Bidder*—The individual or entity who submits a Bid directly to Owner.
 7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).
 8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.
 9. *Change Order*—A document recommended by Owner’s POC which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.
 10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
 11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.
13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).
14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Owner's POC's written recommendation of final payment.
15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.
16. *Cost of the Work*—See Paragraph 11.01 for definition.
17. *Drawings*—That part of the Contract Documents prepared or approved by Owner's POC which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.
18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
19. *Owner's POC*—The individual or entity named as such in the Agreement.
20. *Field Order*—A written order issued by Owner's POC which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
21. *General Requirements*—Sections of Division 1 of the Specifications.
22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.
23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.
27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
28. *Notice to Proceed*—A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.
29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
30. *PCBs*—Polychlorinated biphenyls.
31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
32. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
36. *Resident Project Representative*—The authorized representative of Owner's POC who may be assigned to the Site or any part thereof.
37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

39. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor’s Applications for Payment.
40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
41. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
43. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.
44. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Owner’s POC, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.
46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.
47. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or Subcontractor.
48. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
49. *Unit Price Work*—Work to be paid for on the basis of unit prices.
50. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and

furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Owner’s POC ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 *Terminology*

- A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives:*

1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Owner’s POC. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Owner’s POC as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Owner’s POC any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day:*

1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective:*

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

- c. has been damaged prior to Owner's POC's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide:*

1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "provide" is implied.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 Delivery of Bonds and Evidence of Insurance

- A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 Copies of Documents

- A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 Commencement of Contract Times; Notice to Proceed

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the

Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Owner's POC for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Owner's POC, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.07 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Owner's POC, and others as appropriate will be held to review for acceptability to Owner's POC as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete

and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Owner's POC.

1. The Progress Schedule will be acceptable to Owner's POC if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Owner's POC responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
2. Contractor's Schedule of Submittals will be acceptable to Owner's POC if it provides a workable arrangement for reviewing and processing the required submittals.
3. Contractor's Schedule of Values will be acceptable to Owner's POC as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Owner's POC as provided in Article 9.

3.02 *Reference Standards*

- A. Standards, Specifications, Codes, Laws, and Regulations
 1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 2. No provision of any such standard, specification, manual, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Owner's POC, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Owner's POC, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct

the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Owner's POC any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Owner's POC before proceeding with any Work affected thereby.
2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) any standard, specification, manual, or code, or (c) any instruction of any Supplier, then Contractor shall promptly report it to Owner's POC in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
3. Contractor shall not be liable to Owner or Owner's POC for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
 - a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:
1. A Field Order;
 2. Owner's POC's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or
 3. Owner's POC's written interpretation or clarification.

3.05 *Reuse of Documents*

- A. Contractor and any Subcontractor or Supplier shall not:
1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Owner's POC or its consultants, including electronic media editions; or
 2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Owner's POC and specific written verification or adaptation by Owner's POC.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

- A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Owner's POC to Contractor, or by Contractor to Owner or Owner's POC, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.
- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 Availability of Lands

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 Subsurface and Physical Conditions

- A. *Reports and Drawings:* The Supplementary Conditions identify:
 - 1. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and
 - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Owner's POC, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
 - 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
 - 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 - 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

- A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:
1. is of such a nature as to establish that any “technical data” on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or
 2. is of such a nature as to require a change in the Contract Documents; or
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Owner’s POC in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

- B. *Owner’s POC’s Review:* After receipt of written notice as required by Paragraph 4.03.A, Owner’s POC will promptly review the pertinent condition, determine the necessity of Owner’s obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Owner’s POC’s findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor’s cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
 - a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or
 - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and

contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

- c. Contractor failed to give the written notice as required by Paragraph 4.03.A.
3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Owner's POC, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Owner's POC by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Owner's POC shall not be responsible for the accuracy or completeness of any such information or data provided by others; and
2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all such information and data;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents;
 - c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and
 - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Owner's POC. Owner's POC will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the

consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Owner's POC concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Owner's POC's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Owner's POC whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Owner's POC, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

- C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Owner's POC (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Owner's POC concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Owner's POC, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.
- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.
- F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
- G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Owner's POC, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Owner's POC, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.01 Performance, Payment, and Other Bonds

- A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents.
- B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.
- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Owner's POC and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 Licensed Sureties and Insurers

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

- A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.
- C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.04 *Contractor's Insurance*

- A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 - 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 - 3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
 - 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:
 - a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
 - b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Owner's POC, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);
5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and
6. include completed operations coverage:
 - a. Such insurance shall remain in effect for two years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability

insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

- A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
1. include the interests of Owner, Contractor, Subcontractors, and Owner's POC, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;
 2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.
 3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
 4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Owner's POC;
 5. allow for partial utilization of the Work by Owner;
 6. include testing and startup; and
 7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Owner's POC with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.
- B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Owner's POC, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.

- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.
- D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.
- E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Owner's POC, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Owner's POC, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Owner's POC, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Owner's POC, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

- A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.
- B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

- A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's

interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

- A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 – CONTRACTOR’S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Owner’s POC in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Owner’s POC except under extraordinary circumstances.

6.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner’s written consent (which will not be unreasonably withheld) given after prior written notice to Owner’s POC.

6.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.
- B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Owner's POC, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Owner's POC for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Owner's POC for review under the circumstances described below.
 - 1. "*Or-Equal*" Items: If in Owner's POC's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Owner's POC as an "or-equal" item, in which case review and approval of the proposed item may, in Owner's POC's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph

6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

- a. in the exercise of reasonable judgment Owner's POC determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and
 - 3) it has a proven record of performance and availability of responsive service.
- b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. *Substitute Items:*

- a. If in Owner's POC's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
- b. Contractor shall submit sufficient information as provided below to allow Owner's POC to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Owner's POC from anyone other than Contractor.
- c. The requirements for review by Owner's POC will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Owner's POC may decide is appropriate under the circumstances.
- d. Contractor shall make written application to Owner's POC for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - 1) shall certify that the proposed substitute item will:
 - a) perform adequately the functions and achieve the results called for by the general design,
 - b) be similar in substance to that specified, and
 - c) be suited to the same use as that specified;

- 2) will state:
 - a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,
 - b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
 - c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
- 3) will identify:
 - a) all variations of the proposed substitute item from that specified, and
 - b) available engineering, sales, maintenance, repair, and replacement services; and
- 4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.

- B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Owner's POC. Contractor shall submit sufficient information to allow Owner's POC, in Owner's POC's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Owner's POC will be similar to those provided in Paragraph 6.05.A.2.
- C. *Owner's POC's Evaluation:* Owner's POC will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Owner's POC may require Contractor to furnish additional data about the proposed substitute item. Owner's POC will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Owner's POC's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Owner's POC will advise Contractor in writing of any negative determination.
- D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- E. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.
- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Owner's POC to reject defective Work.
- C. Contractor shall be fully responsible to Owner and Owner's POC for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
 - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Owner's POC and any such Subcontractor, Supplier or other individual or entity; nor
 - 2. shall create any obligation on the part of Owner or Owner's POC to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Owner's POC through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Owner's POC. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Owner's POC, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Owner's POC, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Owner's POC, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Owner's POC shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
 3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Owner's POC, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Owner's POC, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Owner's POC for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Owner's POC for Owner.

6.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;
 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Contractor shall inform Owner and Owner's POC of the specific requirements of Contractor's safety program with which Owner's and Owner's POC's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Owner's POC or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Owner's POC has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Owner's POC prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Owner's POC determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

- A. Contractor shall submit Shop Drawings and Samples to Owner's POC for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Owner's POC may require.

1. *Shop Drawings:*

- a. Submit number of copies specified in the General Requirements.
- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Owner's POC the services, materials, and equipment Contractor proposes to provide and to enable Owner's POC to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples:*

- a. Submit number of Samples specified in the Specifications.
 - b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Owner's POC may require to enable Owner's POC to review the submittal for the limited purposes required by Paragraph 6.17.D.
- B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Owner's POC's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Submittal Procedures:*

1. Before submitting each Shop Drawing or Sample, Contractor shall have:
 - a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.
3. With each submittal, Contractor shall give Owner's POC specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Owner's POC for review and approval of each such variation.

D. *Owner's POC's Review:*

1. Owner's POC will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Owner's POC. Owner's POC's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Owner's POC's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
3. Owner's POC's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied

with the requirements of Paragraph 6.17.C.3 and Owner's POC has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Owner's POC's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Owner's POC and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Owner's POC on previous submittals.

6.18 *Continuing the Work*

- A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Owner's POC and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 1. observations by Owner's POC;
 2. recommendation by Owner's POC or payment by Owner of any progress or final payment;
 3. the issuance of a certificate of Substantial Completion by Owner's POC or any payment related thereto by Owner;
 4. use or occupancy of the Work or any part thereof by Owner;

5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Owner's POC;
6. any inspection, test, or approval by others; or
7. any correction of defective Work by Owner.

6.20 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Owner's POC, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .
- B. In any and all claims against Owner or Owner's POC or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Owner's POC and Owner's POC's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

- B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Owner's POC will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Owner's POC.
- C. Owner and Owner's POC shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Owner's POC have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this Paragraph 6.21, Owner's POC's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Owner's POC's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 Related Work at Site

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
 - 1. written notice thereof will be given to Contractor prior to starting any such other work; and
 - 2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Owner's POC and the others whose work will be affected. The duties

and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Owner's POC in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:
 - 1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
 - 2. the specific matters to be covered by such authority and responsibility will be itemized; and
 - 3. the extent of such authority and responsibilities will be provided.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.
- C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Owner's POC.

8.02 *Replacement of Owner's POC*

- A. In case of termination of the employment of Owner's POC, Owner shall appoint a new point of contact to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Owner's POC.

8.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

- A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

- A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents.

8.12 *Compliance with Safety Program*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed pursuant to Paragraph 6.13.D.

ARTICLE 9 – OWNER'S POC'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

- A. Owner's POC will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Owner's POC as Owner's representative during construction are set forth in the Contract Documents.

9.02 *Visits to Site*

- A. Owner's POC will make visits to the Site at intervals appropriate to the various stages of construction as Owner's POC deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Owner's POC, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Owner's POC will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Owner's POC's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Owner's POC will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Owner's POC's visits and observations are subject to all the limitations on Owner's POC's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Owner's POC's visits or observations of Contractor's Work, Owner's POC will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

- A. If Owner and Owner's POC agree, Owner's POC will furnish a Resident Project Representative to assist Owner's POC in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the

Site who is not Owner's POC's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

- A. Owner's POC may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

- A. Owner's POC will have authority to reject Work which Owner's POC believes to be defective, or that Owner's POC believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Owner's POC will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

- A. In connection with Owner's POC's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.
- B. In connection with Owner's POC's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.
- C. In connection with Owner's POC's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Owner's POC's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

- A. Owner's POC will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Owner's POC will review with Contractor the Owner's POC's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Owner's POC's written decision thereon will be final and binding (except as modified by Owner's POC to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Owner's POC will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Owner's POC in writing within 30 days of the event giving rise to the question.
- B. Owner's POC will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Owner's POC's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Owner's POC's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.
- D. When functioning as interpreter and judge under this Paragraph 9.08, Owner's POC will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Owner's POC's Authority and Responsibilities*

- A. Neither Owner's POC's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Owner's POC in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Owner's POC shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Owner's POC to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Owner's POC will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner's POC will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Owner's POC will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Owner's POC's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.

- E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

- A. While at the Site, Owner's POC's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner's POC has been informed pursuant to Paragraph 6.13.D.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Owner's POC covering:
 - 1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
 - 2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and
 - 3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Owner's POC pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in

accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

- A. *Owner's POC's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Owner's POC for decision. A decision by Owner's POC shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.
- B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Owner's POC and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Owner's POC and the other party to the Contract within 60 days after the start of such event (unless Owner's POC allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Owner's POC and the claimant within 30 days after receipt of the claimant's last submittal (unless Owner's POC allows additional time).
- C. *Owner's POC's Action:* Owner's POC will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
 - 1. deny the Claim in whole or in part;
 - 2. approve the Claim; or
 - 3. notify the parties that the Owner's POC is unable to resolve the Claim if, in the Owner's POC's sole discretion, it would be inappropriate for the Owner's POC to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

- D. In the event that Owner's POC does not take action on a Claim within said 30 days, the Claim shall be deemed denied.
- E. Owner's POC's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 Cost of the Work

- A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:
 - 1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
 - 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
 - 3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with

the advice of Owner's POC, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Owner's POC, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
 - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
 - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
 - f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
 - g. The cost of utilities, fuel, and sanitary facilities at the Site.

- h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
- 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.

C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Owner's POC an itemized cost breakdown together with supporting data.

11.02 Allowances

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Owner's POC.

B. *Cash Allowances:*

1. Contractor agrees that:
 - a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. *Contingency Allowance:*

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Owner's POC to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 *Unit Price Work*

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Owner's POC subject to the provisions of Paragraph 9.07.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:
 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 2. there is no corresponding adjustment with respect to any other item of Work; and
 3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Owner's POC and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:
1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).
- C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:
1. a mutually acceptable fixed fee; or
 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
 - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a

deduction in Contractor's fee by an amount equal to five percent of such net decrease;
and

- f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Owner's POC and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.
- B. If Owner, Owner's POC, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.
- D. Owner, Owner's POC, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 Notice of Defects

- A. Prompt notice of all defective Work of which Owner or Owner’s POC has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 Access to Work

- A. Owner, Owner’s POC, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor’s safety procedures and programs so that they may comply therewith as applicable.

13.03 Tests and Inspections

- A. Contractor shall give Owner’s POC timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
 - 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
 - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and
 - 3. as otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Owner’s POC the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner’s and Owner’s POC’s acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor’s purchase thereof for incorporation in

the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Owner's POC.

- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Owner's POC, Contractor shall, if requested by Owner's POC, uncover such Work for observation.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Owner's POC timely notice of Contractor's intention to cover the same and Owner's POC has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Owner's POC, it must, if requested by Owner's POC, be uncovered for Owner's POC's observation and replaced at Contractor's expense.
- B. If Owner's POC considers it necessary or advisable that covered Work be observed by Owner's POC or inspected or tested by others, Contractor, at Owner's POC's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Owner's POC may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.
- C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.
- D. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

- A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Owner's POC, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. repair such defective land or areas; or
 - 2. correct such defective Work; or
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Owner's POC's recommendation of final payment, Owner's POC) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Owner's POC as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Owner's POC's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Owner's POC to correct defective Work, or to remove and replace rejected Work as required by Owner's POC in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct, or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Owner's POC and Owner's POC's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.
- C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies

under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 Schedule of Values

- A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Owner's POC. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 Progress Payments

A. Applications for Payments:

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Owner's POC for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. Review of Applications:

1. Owner's POC will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Owner's POC's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Owner's POC's recommendation of any payment requested in an Application for Payment will constitute a representation by Owner's POC to Owner, based on Owner's POC's observations of the executed Work as an experienced and qualified design professional, and on Owner's POC's review of the Application for Payment and the accompanying data and schedules, that to the best of Owner's POC's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Owner's POC's responsibility to observe the Work.
3. By recommending any such payment Owner's POC will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Owner's POC in the Contract Documents; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Owner's POC's review of Contractor's Work for the purposes of recommending payments nor Owner's POC's recommendation of any payment, including final payment, will impose responsibility on Owner's POC:
 - a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

- e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Owner's POC may refuse to recommend the whole or any part of any payment if, in Owner's POC's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Owner's POC may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Owner's POC's opinion to protect Owner from loss because:
 - a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
 - d. Owner's POC has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. *Payment Becomes Due:*

1. Ten days after presentation of the Application for Payment to Owner with Owner's POC's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. *Reduction in Payment:*

1. Owner may refuse to make payment of the full amount recommended by Owner's POC because:
 - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
 - b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - c. there are other items entitling Owner to a set-off against the amount recommended; or
 - d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
2. If Owner refuses to make payment of the full amount recommended by Owner's POC, Owner will give Contractor immediate written notice (with a copy to Owner's POC) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any

adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Owner's POC in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Owner's POC issue a certificate of Substantial Completion.
- B. Promptly after Contractor's notification, Owner, Contractor, and Owner's POC shall make an inspection of the Work to determine the status of completion. If Owner's POC does not consider the Work substantially complete, Owner's POC will notify Contractor in writing giving the reasons therefor.
- C. If Owner's POC considers the Work substantially complete, Owner's POC will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Owner's POC as to any provisions of the certificate or attached list. If, after considering such objections, Owner's POC concludes that the Work is not substantially complete, Owner's POC will, within 14 days after submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Owner's POC considers the Work substantially complete, Owner's POC will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Owner's POC believes justified after consideration of any objections from Owner.
- D. At the time of delivery of the tentative certificate of Substantial Completion, Owner's POC will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Owner's POC in writing prior to Owner's POC's issuing the definitive certificate of Substantial Completion, Owner's POC's aforesaid recommendation will be binding on Owner and Contractor until final payment.

- E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the tentative list.

14.05 *Partial Utilization*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Owner's POC, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
 - 1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Owner's POC will follow the procedures of Paragraph 14.04.A through D for that part of the Work.
 - 2. Contractor at any time may notify Owner and Owner's POC in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Owner's POC to issue a certificate of Substantial Completion for that part of the Work.
 - 3. Within a reasonable time after either such request, Owner, Contractor, and Owner's POC shall make an inspection of that part of the Work to determine its status of completion. If Owner's POC does not consider that part of the Work to be substantially complete, Owner's POC will notify Owner and Contractor in writing giving the reasons therefor. If Owner's POC considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
 - 4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Owner's POC will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

A. *Application for Payment:*

1. After Contractor has, in the opinion of Owner's POC, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;
 - b. consent of the surety, if any, to final payment;
 - c. a list of all Claims against Owner that Contractor believes are unsettled; and
 - d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. *Owner's POC's Review of Application and Acceptance:*

1. If, on the basis of Owner's POC's observation of the Work during construction and final inspection, and Owner's POC's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Owner's POC is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Owner's POC will, within ten days after receipt of the final Application for Payment, indicate in writing Owner's POC's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Owner's POC will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Owner's POC will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Payment Becomes Due:*

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Owner's POC, less any sum Owner is entitled to set off against Owner's POC's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Owner's POC so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Owner's POC, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Owner's POC with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

- A. The making and acceptance of final payment will constitute:
 1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
 2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Owner's POC which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will justify termination for cause:
1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
 2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
 3. Contractor's repeated disregard of the authority of Owner's POC; or
 4. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);
 2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and
 3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Owner's POC as to their reasonableness and, when so approved by Owner's POC, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph, Owner shall not be required to obtain the lowest price for the Work performed.
- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue.

Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

- F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Owner's POC, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
 3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
 4. reasonable expenses directly attributable to termination.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Owner's POC fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Owner's POC, and provided Owner or Owner's POC do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Owner's POC has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Owner's POC, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph

10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 – DISPUTE RESOLUTION

16.01 Methods and Procedures

- A. Either Owner or Contractor may request mediation of any Claim submitted to Owner's POC for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.
- B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.
- C. If the Claim is not resolved by mediation, Owner's POC's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:
 - 1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or
 - 2. agrees with the other party to submit the Claim to another dispute resolution process; or
 - 3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 – MISCELLANEOUS

17.01 Giving Notice

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
 - 1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or
 - 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 Computation of Times

- A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

CITY OF LAREDO

**AMENDMENTS TO STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT
SUPPLEMENTARY CONDITIONS**

The following supplements modify, change, delete from or add to the "Standard General Conditions of the Construction Contract," EJCDC C-70, 2007. Where any Article of the Standard General Conditions is modified or any Paragraph, Subparagraph or Clause thereof is modified or deleted by these Supplementary Conditions, the unaltered provisions of that Article, Paragraph, Subparagraph or Clause shall remain in effect. To any extent that these Supplementary Conditions may conflict with the Owner-Contractor Agreement or the Specifications, these Supplementary Conditions shall control.

A. MODIFICATION OF PARAGRAPH 3.01 INTENT

Subparagraph 3.01.C.

Delete subparagraph 3.01.C and add a new subparagraph 3.01.C. to read as follows: Where any portion of the Contract Documents is contradicted by another, the more specific shall prevail. Where any discrepancy or conflict occur between the General Conditions and these Supplementary Conditions, these Supplementary Conditions shall have priority. Clarifications and interpretations of the Contract Documents shall be issued by Owner's POC as provided in Article 9 or other relevant provisions.

Subparagraph 3.01.D.

Add a new subparagraph 3.01.D to read as follows: Except as may be otherwise specifically stated in the Contract Documents, if there is any conflict, error, ambiguity, or discrepancy between any of the Contract Documents the provisions of the following documents shall prevail in the order listed below:

1. Construction Contract
2. The Exhibits listed in Article 1-Work of the Construction Contract in the order listed in Article 1
3. Standard General Conditions of the Construction Contract as supplemented by the Supplementary Conditions

C. MODIFICATION OF ARTICLE 4-AVAILABILITY OF LANDS: SUBSURFACE AND PHYSICAL CONDITIONS: HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

Paragraph 4.07

Add a new paragraph 4.07 to read as follows: No geotechnical testing is anticipated with this project at this time therefore the provisions of Article 4 will only apply as applicable to the facts of the project.

D. MODIFICATION OF ARTICLE 5 – BONDS AND INSURANCE

Paragraph 5.01

Paragraph 5.01 is deleted in its entirety and replace with a new paragraph 5.01 to read as follows: All bond and insurance requirements will be those provided in City of Laredo RFP and Clarifications to RFP.

Paragraphs 5.02-5.10

Paragraphs 5.02 through 5.10 are deleted.

F. MODIFICATION OF ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

Subparagraph 6.20.D.

Subparagraph 6.20.D. is added to read as follows: Nothing in this paragraph shall be construed to limit the requirements of the terms and conditions included in City of Laredo RFP and Clarifications to RFP including its Indemnification provision.

G. MODIFICATION OF ARTICLE 7 – OTHER WORK AT SITE

Paragraphs 7.01 -7.03

Paragraphs 7.01 through 7.03 are deleted and replaced by a new paragraph 7.01 to read as follows: Owner and Contractor shall coordinate any work at the site in order to allow both to reasonably perform its mutual obligations.

H. MODIFICATION OF ARTICLE 8 – OWNER’S RESPONSIBILITIES

Paragraph 8.11

Paragraph 8.11 is deleted.

I. MODIFICATION OF ARTICLE 10 - CHANGES IN THE WORK: CLAIMS

Subparagraph 10.05.E

Subparagraph 10.5.E is amended to read as follows: Owner’s POC written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 Or 10.05.D will be final and binding upon Owner and Contractor.

J. MODIFICATION OF ARTLE 11 – COST OF WORK; ALLOWANCES; UNIT PRICE WORK

Paragraph 11.04

Paragraph 11.04 is added to read as follows: Nothing in this Article shall be construed to affect the pricing and cost as provided more specifically in the other Contract Documents.

K. MODIFICATION OF ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETIONS

Paragraph 14.10

Paragraph 14.10 is added to read as follows: Nothing in this Article shall be construed to change the manner of payment required more specifically in the other Contract Documents.

L. MODIFICATION OF ARTICLE 16 – DISPUTE RESOLUTIONS

Paragraph 16.01

Paragraph 16.01 is deleted.

EXHIBIT 1

CITY OF LAREDO RFP



***CITY OF LAREDO
FINANCE DEPARTMENT
PURCHASING DIVISION
REQUEST FOR PROPOSALS***

**AUTOMATIC METER READING SYSTEM
UTILITIES DEPARTMENT**

Public Notice

Notice is hereby given that the City of Laredo is now accepting sealed proposals for the selection of a qualified vendor to supply water meters, registers and automatic reading (AMR) and advanced metering infrastructure (AMI) systems for the Utilities Department.

Copies of the specifications may be obtained from the Finance Department – Purchasing Division, 5512 Thomas Ave., Laredo, Texas 78041 or by downloading from our website: www.cityoflaredo.com

Proposals will be received at the City Secretary Office, 1110 Houston St., 3rd floor, Laredo, Texas 78040 until **5:00 P.M. on December 20, 2012** and all proposals received will be opened and publicly acknowledged at **3:00 PM on December 21, 2012**.

A Pre-proposal conference will be held at 10:00 A.M. on Wednesday, December 12, 2012 at the Public Works Training Room #1, 5512 Thomas Avenue, Laredo, Texas 78041

Proposals are to be submitted in a sealed envelope clearly marked:

**Proposal: Water Meter/AMR/AMI System – Utilities Department
RFP FY13-012**

Proposals are to be mailed:

**City of Laredo – City Secretary
C/O Gustavo Guevara Jr.
City Hall – Third Floor
PO Box 579
Laredo, Texas 78042-0579**

Hand Delivered:

**City of Laredo – City Secretary
C/O Gustavo Guevara Jr.
City Hall – Third Floor
1110 Houston
Laredo, Texas 78040**

The City of Laredo reserves the right to reject any and all proposal, and to waive any minor irregularities.

SUBMIT ONE ORIGINAL SIGNATURE PROPOSAL AND FIVE (5) COPIES



**City of Laredo
Purchasing Division**

Notice to Bidders

Notice is hereby given that the City of Laredo is now accepting sealed proposals, subject to the Terms and Conditions of this Invitation for Proposals and other contract provisions, for the selection of a qualified vendor to supply water meters, registers and automatic reading (AMR) and advanced metering infrastructure (AMI) systems for the Utilities Department. Copies of the bid specifications may be obtained from the Finance Department – Purchasing Division, 5512 Thomas Ave., Laredo, Texas 78041 or by downloading from our website: www.cityoflaredo.com Proposals will be received at the City Secretary Office, 1110 Houston St., 3rd. floor, Laredo, Texas 78040 until **5:00 P.M. on December 20, 2012** and **all proposals received will be opened and publicly acknowledged at 3:00 PM on December 21, 2012.**

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1110 Houston
Laredo, Texas 78040

The City of Laredo reserves the right to reject any and all proposals, and to waive any minor irregularities.

WITNESS MY HAND AND SEAL, THIS 27th DAY OF NOVEMBER 2012.


Gustavo Guevara Jr.
City Secretary

CITY OF LAREDO
PURCHASING DIVISION

Vendor Information:

Please complete all information requested below and submit with your bid package

"The undersigned affirms that they are duly authorized to execute this contract, that this company, corporation, firm, partnership or individual has not prepared this proposal in collusion with any other vendor, and that the contents of this proposal as to prices, terms or conditions of said proposal have not been communicated by the undersigned nor by any employee or agent to any other person engaged in this type of business prior to the official opening of this request. By submitting this proposal the vendor agrees to the City of Laredo specifications and all terms and conditions stipulated in the proposed document".

Firm Name: _____

Signature _____ Date _____
of person authorized to sign proposal

Print Name _____
of person authorized to sign proposal

Title: _____

Business Address: _____

City, State, Zip Code: _____

Telephone Number: _____ Fax Number: _____

Contact Person Email Address: _____

Federal Tax ID Number: _____

Vendors Principal/Corporate Place of Business Address: _____

Indicated Status of Business:

Corporation _____ Partnership _____ Sole Proprietorship _____ Other: _____

If other state business status: _____

State how long under its present business name: _____

State if company is a certified minority business enterprise:

Historically Underutilized Business (HUB):	Yes	No	Disadvantaged Business Enterprise (DBE):	Yes	No
Small Disadvantaged Business Enterprise (SDBC)	Yes	No	Other: Please specify		

This company is not a certified minority business:

The above minority information is requested for statistical and tracking purposes only and will not influence the amount of expenditure the City will make with any given company

City of Laredo

Conflict of Interest Disclosure

A form disclosing potential conflicts of interest involving counties, cities, and other local government entities may be required to be filed after January 1, 2006, by vendors or potential vendors to local government entities. The new requirements are set forth in Chapter 176 of the Texas Local Government Code added by H.B. No. 914 of the last Texas Legislature.

Companies and individuals who contract, or seek to contract, with the City of Laredo and its agents may be required to file with the **City Secretary's Office, 1110 Houston Street, Laredo, Texas 78040**, a Conflict of Interest Questionnaire that describes affiliations or business relationships with the City of Laredo officers, or certain family members or business relationships of the City of Laredo officer, with which such persons do business, or any gifts in an amount of \$250.00 or more to the listed City of Laredo officer (s) or certain family members.

The new requirements are in addition to any other disclosures required by law. The dates for filing disclosure statements begin on January 1, 2006. A violation of the filing requirements is a Class C misdemeanor.

The Conflict of Interest Questionnaire (Form CIQ) may be downloaded from http://www.ethics.state.tx.us/whatsnew/conflict_forms.htm.

The City of Laredo officials who come within Chapter 176 of the Local Government Code relating to filing of **Conflicts of Interest Questionnaire (Form CIQ)** include:

1. **Mayor**
2. **Council Members**
3. **City Manager**
4. **Members of the Fire Fighters and Police Officers Civil Service Commission.**
5. **Members of the Planning and Zoning Commission.**
6. **Members of the Board of Adjustments**
7. **Members of the Building Standards Board**
8. **The Board of Commissioners of the Laredo Housing Authority**
9. **The Executive Director of the Laredo Housing Authority**

If additional information is needed please contact Francisco Meza, Purchasing Agent at 956-790-1825

**CITY OF LAREDO
PURCHASING DIVISION**

CONFLICT OF INTEREST QUESTIONNAIRE
For vendor or other person doing business with local governmental entity

FORM CIQ

This questionnaire reflects changes made to the law by H.B. 1491, 80th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code by a person who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the person meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Local Government Code.

A person commits an offense if the person knowingly violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.

OFFICE USE ONLY

Date Received

1 Name of person who has a business relationship with local governmental entity.

2 **Check this box if you are filing an update to a previously filed questionnaire.**

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date the originally filed questionnaire becomes incomplete or inaccurate.)

3 Name of local government officer with whom filer has employment or business relationship.

Name of Officer

This section (item 3 including subparts A, B, C & D) must be completed for each officer with whom the filer has an employment or other business relationship as defined by Section 176.001(1-a), Local Government pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, income, other than investment income, from the filer of the questionnaire? Yes No

B. Is the filer of the questionnaire receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity? Yes No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves an officer or director, or holds an ownership of 10 percent or more? Yes No

D. Describe each employment or business relationship with the local government officer named in this section.

Signature of person doing business with the governmental entity

Date

TERMS AND CONDITIONS OF INVITATIONS FOR PROPOSALS

GENERAL CONDITIONS

Vendors are required to submit Proposals upon the following expressed conditions:

- (a) Vendors shall thoroughly examine the specifications, schedule instructions and other contract documents. Once the award has been made, failure to read all specifications, instructions, and the contract documents, of the City shall not be cause to alter the original contract or for a vendor to request additional compensation.
- (b) Vendors shall make all investigations necessary to thoroughly inform themselves regarding facilities and locations for delivery of materials and equipment as required by the Proposal conditions. No pleas of ignorance by the vendor of conditions that exist or that may hereafter exist as a result of failure or omission on the part of the vendor to make the necessary examinations and investigations, or failure to fulfill in every detail the requirements of the contract documents, will be accepted as a basis for varying the requirements of the City or the compensation to the vendor.
- (c) Vendors are advised that City contracts are subject to all legal requirements provided for in the City Charter and/or applicable City Ordinances, State and Federal Statutes.

1.0 PREPARATION OF PROPOSALS

Proposals will be prepared in accordance with the following:

- (a) All information required by the proposal form shall be furnished. The vendor shall print or type the business name and manually sign the schedule.
- (b) Unit prices shall be shown and where there is an error in extension of price, the unit price shall govern
- (c) Alternate Proposals will not be considered unless authorized by the invitation for proposals or any applicable addendum
- (d) Proposed delivery time must be shown and shall include Sundays and holidays
- (e) Vendors will not include Federal taxes or State of Texas limited sales tax in proposal prices since the City of Laredo is exempt from payment of such taxes. An exemption certificate will be furnished upon request.

2.0 DESCRIPTION OF SUPPLIES

Any catalog or manufacturer's reference used in describing an item is merely descriptive, and not restrictive, unless otherwise noted, and is used only to indicate type and quality of material. Vendor is required to state exactly what they intend to furnish; otherwise Vendor shall be required to furnish the items as specified.

3.0 SUBMISSION OF PROPOSALS

- (a) Proposals and changes thereto shall be enclosed in sealed envelopes, properly addressed and to include the date and hour of the Proposal opening and the material or services. Proposal shall be typed or written on the face of the envelope.
- (b) Unless otherwise noted on the Notice to Vendors cover sheet, all Proposals must be submitted to the Office of the City Secretary, City Hall, 1110 Houston Street, Laredo, Texas 78040. The mailing address is Office of the City Secretary, PO. Box 579, Laredo, Texas 78042.
- (c) Proposals must be submitted on the forms furnished. Telegraphic and facsimile proposals will not be considered.
- (d) Samples, when required, must be submitted within the time specified, at no expense to the City of Laredo. If not destroyed or used up during testing, samples will be returned upon request at the Vendors expense.
- (e) Proposals must be valid for a period of ninety days. An extension to hold proposal pricing for actual quantity bids may be requested by the City.
- (f) The City shall pay no costs or other amounts incurred by any entity in responding to this RFP, or as a result of issuance of this RFP.

4.0 REJECTION OF PROPOSALS

The City may reject a proposal if:

- (a) Vendor misstates or conceals any material fact in the proposal.

**CITY OF LAREDO
PURCHASING DIVISION**

- (b) Proposal does not strictly conform to the law or the requirements of the proposal.
- (c) Vendor is in arrears on existing contracts or taxes with the City of Laredo.
- (d) If proposals are conditional. Vendor may qualify their Proposal for acceptance by the City on an "ALL OR NONE" basis. An "ALL OR NONE " basis proposal must include all items in the specifications.
- (e) In the event that a vendor is delinquent in the payment of City of Laredo taxes on the day the proposals are opened, including state and local taxes, such fact may constitute grounds for rejection of the proposal or cancellation of the contract. A vendor is considered delinquent, regardless of any contract or agreed judgments to pay such delinquent taxes
- (f) No proposal submitted herein shall be considered unless the vendor warrants that, upon execution of a contract with the City of Laredo, vendor will not engage in employment practices such as discriminating against employees because of race, color, sex, creed, or national origin. Vendor will submit such reports as the City may therefore require assuring compliance with said practices.
- (g) The City may reject all proposals or any part of a proposal whenever it is deemed necessary.
- (h) The City may waive any minor informalities or irregularities in any proposal.

5.0 WITHDRAWAL OF PROPOSALS

Proposals may not be withdrawn after they have been publicly opened, unless approved by the City Council.

6.0 LATE PROPOSALS OR MODIFICATIONS

Proposals and modifications received after the time set for the proposal opening will not be considered. Late proposals will be returned to the vendor unopened.

7.0 CLARIFICATIONS OR OBJECTION TO PROPOSAL SPECIFICATIONS

If any person contemplating submitting a Proposal for this contract is in doubt as to the true meaning of the specifications, or other proposal documents or any part thereof, they may submit to the City Purchasing Agent on or before seven days prior to the scheduled opening date a request for clarification. All requests for information shall be made in writing, and the person submitting the request will be responsible for its prompt delivery. Any interpretation of the proposal, if made, will be made only by an addendum duly issued by the Purchasing Agent. A copy of such addendum will be mailed or delivered to each vendor having receiving a set of proposal documents. The City will not be responsible for any other explanations or interpretations of the proposed proposal made or given prior to the proposal opening or award of contract. Protest Procedures: The purpose of this procedure is to establish procedures whereby a vendor may protest specific procurement actions by the City of Laredo. The following sequence of activities must take place in filing a protest:

To be performed by protesting vendor: Within ten (10) days prior to the time that the City Council considers the recommendation of the City's Purchasing Officer, the protesting vendor must provide written protest to the City Purchasing Officer. Such protest must include specific reasons for the protest.

To be performed by City's Purchasing Officer: Shall review the records of procurement and determine legitimacy and procedural correctness. With five (5) working days, the City Purchasing Officer shall provide written response to the protesting vendor of the decision.

If the protesting vendor is not satisfied with the decision of the City Purchasing Officer, such protesting vendor may appeal to the City Manager of the City of Laredo. If the protesting vendor cannot resolve the issue with the City Manager, he shall be entitled to address his concerns when the City Council of the City of Laredo considers the awarding of the contract. Such appeal may be made only after exhausting all administrative procedures through the City Manager.

All protests must be duly submitted via Certified Mail to:

City of Laredo - Purchasing Agent
5512 Thomas Ave.
Laredo, Texas 78041.

8.0 BIDDER DISCOUNTS

- (a) Percent discounts within a certain period of time will be accepted. The period of the discount offered should be sufficient to permit payments within such period in the regular course of business by the City of Laredo.
- (b) In connection with any discounts offered, time will be computed from the date of receipt of supplies or service or from the date a correct invoice is received, whichever is the later date. Payment is deemed to be made on the date the check is mailed.

9.0 INTENT OF CONTRACT

There are two types of contracts awarded for materials, equipment or services.

- (a) ACTUAL QUANTITIES CONTRACT: Quantities specified are actual amounts and are based on the best available information. The purpose of this contract is to establish prices for the amounts and kind of commodities indicated. The quantity indicated is the quantity the City wants to purchase, but the actual amount purchased is subject to change orders, which may increase or decrease the commodities purchased by 25% more or less.

10.0 AWARD OF CONTRACT

The contract will be awarded to the vendor who provides the best value for the city based on the evaluation factors listed in the request for proposal document, in accordance to the provisions of the State of Texas - Local Government Code. The City reserves the right to accept any item or group of items in the proposal specifications, unless the Vendor qualifies its proposal by specific limitation. Proof: The vendor shall bear the burden of proof of compliance with the City of Laredo specifications.

A written award of acceptance (a duly approved purchase order or Letter of Award) furnished by the City to the successful vendor results in a binding contract without further action by either party. These Terms and Conditions shall be the basis and governing document of the binding contract.

Prices must be quoted F.O.B. Destination, Laredo, Texas, unless otherwise specified in the invitation to proposal. The place of delivery shall be that set forth in the purchase order.

Title & Risk of Loss: The title and risk of loss of goods shall not pass to the City of Laredo until the City actually receives and takes possession of the goods at the point or points of delivery. The terms of this agreement is "no arrival, no sale".

Delivery time and prompt payment discounts will be considered in breaking ties. In the event of a tie proposal, the successful vendor will be determined by choosing lots at the City Council meeting.

The City of Laredo shall give written notice to the contractor (supplier) if any of the following conditions exist:

1. Contractor does not provide materials in compliance with specifications and/or within the time schedule specified in proposal.
2. Contractor neglects or refuses to remove materials or equipment which have been rejected by the City of Laredo if found not to comply with the specifications.
3. The contractor makes an unauthorized assignment for the benefit of any contractor.

Upon receiving written notification from the City that one of the above conditions has occurred, the contractor must remedy the problem within ten days, to the complete satisfaction of the City, or the contract will be immediately canceled.

11.0 PAYMENTS & INVOICING

All invoices to the City of Laredo have a 30-day term from receipt of supplies or completion of services.

Discount terms will be computed from the date of receipt and acceptance of supplies or services. Payment shall be deemed to be made from that date.

All invoices must show the purchase order number and invoices shall be legible. Items billed on invoices should be specific as to applicable stock, manufacturer catalog or part number. All items must show unit prices. If prices are based on discounts from list, then list prices must appear on Proposal schedule.

All invoices shall be mailed to the Accounts Payable Office, City Hall, PO. Box 210, Laredo, Texas 78042.

12.0 NON-COLLUSIVE AFFIDAVIT

The City may require that vendors submit a Non-Collusive Affidavit. The vendor will be required to state that the party submitting a proposal or proposal, that such proposal or proposal is genuine and not collusive or sham; that said Vendor has not colluded, conspired, connived or agreed, directly or indirectly, with any vendor or person, to put in a sham proposal or to refrain from submitting a proposal, and has not in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference, with any person, to fix the proposal price or affiant or of any other vendor, or to fix any overhead, profit or cost element of said proposal price, or of that of any other vendor, or to secure any advantage against the City of Laredo or any person interested in the proposed contract; and that all statements in said proposal or proposal are true.

**AUTOMATIC METER READING SYSTEM
UTILITIES DEPARTMENT**

13.0 Scope of Work

The City of Laredo has decided to accept proposals for the supply of water meters, registers and Automatic Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) Systems. The City has based the decision to seek a company to supply both AMR and an AMI system due to the topographical layout of the City, comparative judgments regarding such factors as technical specifications and price will be necessary. The prospective vendor must have a successful record and a broad range of experience in time management and demonstrate the ability to coordinate vendors during project phases which must facilitate financial stability.

13.1 A key part of the proposal must include a combination of AMR mobile and AMI fixed base due to contrasting elevation and demographic differences of the City. It is critical that both AMR and AMI systems will operate off of the same software, therefore allowing for only one interface to the City's existing billing software.

13.2 The selected vendor must have demonstrated experience in the supply and delivery of water meters, registers, automatic meter reading (AMR) endpoints and the supply, delivery, implementation and training of a mobile AMR/fixed network radio frequency (RF) AMI system. The selected vendor will be responsible for the start-up and installation of a complete AMR/AMI system (exclusive of the actual meter installation) as proposed by the selected vendor and as defined in the technical proposal, the price proposal and the request for proposal. The selected vendor will be responsible for training the Owner and/or their designated representative on proper installation of AMR/AMI endpoints and providing integration of AMR/AMI software with the City's billing system.

13.3 The city has approximately 65,000 active meters installed, with approximately 95% being Neptune. The plan is to retrofit approximately 25,000 3-yr old and newer meters with AMR/AMI technology. The plan includes replacing approximately 40,000 meters exceeding 3 years of age with a new meter and technology. In addition approximately 1,500 new accounts will be added each year, with the assumption that these will be 5/8 x 3/4 inch.

13.4 Any questions or comments regarding this request for proposal must be submitted in writing no later than December 13, 2012 to:

Enrique Aldape III
City of Laredo Purchasing Division
5512 Thomas Ave.,
Laredo, TX 78041
Email: ealdape@ci.laredo.tx.us

13.5 Any technical questions regarding this request for proposal, please contact Margarita Ayala at 956-721-2000.

13.6 Responses to the written comments shall be distributed to all interested parties in the form of an addendum to the proposal document.

14.0 Specifications

This request for proposals (RFP) is to procure an AMR/AMI system capable of meeting the current and future meter reading needs of the City. Vendors submitting proposals shall furnish all materials, equipment, and incidentals necessary to train and support Owner's personnel in the use of the system. Vendors shall also furnish all materials, equipment, and incidentals necessary to train and support the Owner or their designated representative in the proper installation of the meters, registers and AMR/AMI endpoints.

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- 14.1 The term “fixed network AMI system” shall be defined as fixed meter reading collectors strategically installed throughout the City, network control computer and/or server for receiving and manipulating meter reading data and all necessary hardware and software. If needed, programming devices required for the installation of the AMI endpoints, diagnostic and interim meter reading shall also be included.
- 14.2 The provider of the water meters and AMR system must have demonstrated experience with the implementation of the fixed network system proposed for the City. A minimum of five (5) references utilizing the proposed system must be provided. The references must be for systems having a minimum of 50,000 or more AMR/AMI endpoints under contract and are pit type settings, similar to the City of Laredo. The references also must be for systems that are actively reading installed endpoints.
- 15.0 Utility Billing Information**
The Owner’s billing system for water customers is HTE billing software. The AMR/AMI software must be compatible with the utility’s billing software.
- 16.0 Scope of Requested Services**
The Owner is requesting proposals for the following products and services for furnishing water meters and for the upgrade of its meter reading system:
- 16.1 Supply and delivery of positive displacement, 5/8-, 3/4 -, 1-, 1 1/2 and 2-inch cold water meters complete with encoder registers with antenna options –The attached antenna must be pre-assembled. The automatic meter reading endpoints need to include an antenna.
- 16.2 A fixed network based AMR/AMI system capable of collecting meter readings for encoded type meters. An encoder with 9 digit readout – enables leak detection to be more accurate. A 6 digit readout is not acceptable nor is an Incremental pulse type design.
- 16.3 Supply and delivery of AMR/AMI endpoints to upgrade existing water meters owned by the City.
- 16.4 Vendors should provide a preliminary assessment of drive by solution for existing meters that are not in range of AMI infrastructure. The assessment should include retrofit requirements of meter installation such as cable length to antenna, etc.
- 16.5 Supply, delivery, and testing of all equipment and software necessary for a fixed network AMI system and a drive by AMR system capable of obtaining readings from all the existing and new meters including assistance with and testing of the systems and necessary programming for the interface with the existing billing system.
- 16.6 Training and technical support services for Owner’s staff.
- 16.7 Provide project management necessary for the successful implementation of the mobile AMR and Fixed Network (AMI) Reading system, including but not limited to providing software, delivery, and installation of AMR/AMI equipment.
- 16.8 The Owner seeks to enter into a contract with a qualified vendor responsible for supplying and implementing an entire system, including automated meter reading equipment, related software, maintenance, training, technical support and infrastructure installation. For reliability and meter reading integrity, the vendor shall be the **sole manufacturer** of the different components of the system (endpoints, data collector, host software, and meters), and provide a turnkey system offering to the utility.

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16.9 The successful Bidder must demonstrate its ability to deliver an AMR/AMI system that adheres to the specifications outlined in this document. The successful bidder will support the AMR and fixed network AMI system on an on-going basis and provide, as references, five (5) other utilities with similar size, climatic and geographical conditions experienced in Laredo, where the AMR/AMI system is installed and is operating successfully. All references must be for water utilities.

16.7 Proposals will be evaluated according to the selection criteria established within this document.

17.0 Exceptions

Prospective Bidders shall furnish a separate statement on Company letterhead titled, —EXCEPTIONS,” giving a complete description of all exceptions to the terms, conditions, and specifications outlined within this document. The —EXCEPTIONS” section shall be listed in the Prospective Bidder’s Table of Contents. If a statement is not provided, then Owner will assume that the Proposer is one hundred percent compliant with the contract documents.

18.0 Water Meter And Register Specifications

Please respond to each requirement by stating —Yes/No” in the Yes box. If the responder feels a clarification is necessary, please add in the description/clarification box.

Requirement	Comply?	Description/Clarification (if necessary)
Controlling Specifications		
The water meters to be furnished shall equal or exceed the requirements of AWWA Standard C-700-02 for Cold Water Meters- Displacement Type, AWWA C-701-07 Standard for Turbine Meters and AWWA C-702-017 Standard for Compound Type or most recently revised standards.		
Certification		
All meters must meet NSF Standard 61 Certification and NSF 61 Annex F and G (lead requirements) requirements in 01/04/14. Documentation verifying NSF certification or compliance with TCEQ interim standard must be submitted with RFP.		
Size and Length		
5/8”x3/4”, 3/4”x3/4”, 1”, 1 1/2” and 2” turbine meters and 2”, 3”, 4”, 6” and 8” compound meters. The 3/4”x3/4” must be 7 1/2” in length. The compound meters must meet the following length requirements: 2” meters-15 1/4”, 3” meters-17”, 4” meters-20”, 6” meters-24” and 8” meters-55 3/8”.		

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Requirement	Comply?	Description/Clarification (if necessary)
Cases		
All meters shall have a non-corrosive waterworks bronze outer case with a separate measuring chamber which can be easily removed from the case. All meters shall have cast on them, in raised characters, the size and direction of flow through the meter. Bronze bottoms shall be provided on 5/8"x3/4", 3/4"x3/4", 1", 1 1/2" and 2" meters. The 1 1/2" and 2" meters can be the split case type with bronze lower and upper shell assemblies. All water meter cases must be equipped with a frost protection bottom plate to prevent meter damage due to freezing temperatures. Matching Laredo designated numerals must be stamped on the case and the lid of the register.		
External Bolts		
All external bolts shall be stainless 316 steel material and be easily removed from the main case. Note: Meters 1 1/2", 2", 3", 4", 6" and 8" shall include bolts, nuts, gaskets and bronze flanges.		
Registers-absolute encoders		
Registers must be an integrated register and transmitter with no external wires, except for a quick connect to the external antenna and meet AWWA C707 Standards or most recently revised for absolute encoded registers.		
The encoder register shall provide a digital output based on solid state technology. It shall read in U.S. gallons.		
The encoder technology shall incorporate features that eliminate dashed readings.		
The encoder register must be constructed of a scratch resistant glass face, non-corrosive metal bottom and a permanent seal.		
The encoder register shall have a plastic or bronze lid that covers the glass face for added protection with a serial number for identification.		
All reduction gearing shall be contained in a permanently hermetically sealed, tamperproof enclosure made from a corrosive resistant material.		
Registers shall have leak detection and the manufacturer shall furnish some form of tamper resistance register at no additional cost.		
The date of manufacture of the register shall be clearly indicated on the face of the register.		

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Requirement	Comply?	Description/Clarification (if necessary)
Registers must come with a 20 foot pig tail wire connected to the meter endpoint if ordered by Owner for inventory, otherwise Bidder will evaluate what length is needed. If register is already set for AMR/AMI, the endpoint must have a 6 foot pigtail. They must be factory potted connections to the meter and pre-wired to the endpoint. Connection wires shall be in the form of a cable in a single protective jacket or fused as a single cable unit suitable for direct burial and exposed mounting. The register and connections must be waterproof and corrosion proof.		
The register shall have a bar code indicating the register serial number.		
Magnetic Chamber		
The measuring chamber shall be of a suitable synthetic polymer and shall not be cast as part of the main case. The chamber's division plate shall be of synthetic polymer. The chamber's bottom plate shall be held in place without the use of fasteners.		
Magnetic Coupling		
The motion of the piston or disc will be transmitted to the sealed register through the use of a direct magnetic drive without any intermediate mechanical coupling.		
Strainers		
All meters must be provided with a corrosive resistant strainer. 1 1/2" meters and larger must be provided with strainers that are easily removable from the meter.		
Accuracy and Head Loss		
Meters shall conform to current AWWA test flow and accuracy standards.		
Pressure Capability		
Meters shall operate up to a working pressure of 150 pounds per square inch, without leakage or damage to any parts. The accuracy shall not be affected when operating at this pressure due to possible distortion.		

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Requirement	Comply?	Description/Clarification (if necessary)
Warranty		
Bidders should have a minimum of 10 years' experience with their meters and be actively engaged in the manufacturing of their meters in the United States of America. All meters shall be guaranteed against defects in material and workmanship for a period of fifteen (15) years from the date of shipment. All absolute encoders, registers and endpoints will be warranted against defects and workmanship for a period of 20 years with 10 fixed and 10 at a prorated rate from the date of the shipment. In addition, the manufacturer must provide a meter maintenance plan in writing and state the warranty on the meters and absolute encoder registers.		

19.0 AMR/AMI SYSTEM REQUIREMENTS

Any vendor submitting a proposal must satisfy the following minimum criteria.

Please respond to each requirement by stating "Yes/No" in the Yes box. If the responder feels a clarification is necessary, please add in the description/clarification box. The vendor must submit documentation for technical questions that are listed under this section.

<i>Requirement</i>	<i>Comply?</i>	<i>Description/Clarification (if necessary)</i>
AMR/AMI System		
The AMR/AMI system shall be capable of remotely collecting alpha and numeric meter identification, hourly readings, premise leaks, no flow, tamper information and unauthorized usage from the Owner's existing and new water meters.		
The City requires (a) radio-based AMI and AMR system(s). The proposed system must operate as a point to point communication. <u>No mesh RF type systems will be accepted.</u>		
AMI fixed location data collection units that are capable of forwarding and capturing, respectively, the signals from the endpoints.		
The proposed system shall be fully two-way all the way to the meter endpoint, allowing for over the air programming of the endpoint remotely.		
The fixed network may utilize one or a series of data collector units (DCU) located strategically throughout the City's service area for retrieving meter data. It should not incorporate a series of repeaters to assist the fixed network system with meter reading data collection.		

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<i>Requirement</i>	<i>Comply?</i>	<i>Description/Clarification (if necessary)</i>
The DC must be powered via 110V AC. If AC power is not available at City facility, then the vendor must provide power to generate DC. Vendor must submit proposal of work needed to owner for approval. Upon start-up after power failure, the DC must restore databases, tables, and logs to the previous operational state. Upon power failure, the DC shall retain the past (three) days of meter data in a non-volatile memory. DC must have UPS backup power solution to provide continuous power. Vendor must provide UPS if unavailable.		
A secure communication or data transfer system infrastructure capable of transferring the data from the data collection units to a meter reading system control computer located at the City' office.		
A meter reading system control computer into which the data from the endpoints and other information necessary to operate and maintain the AMI and AMR system may be uploaded, downloaded and stored. The purchase of the control computer may be done independently of this request.		
The software necessary to operate the system and communicate meter reading data to the City' customer information system; the City intends to locate the software on a network server. The information transmitted from the meters will be accessed from several locations within City departments.		
If the system is designed to obtain normal meter readings more often than monthly, a database of meter reading data, and the software to operate the database.		
Ongoing support of the system hardware and software, and ongoing user support.		
The AMI system shall automatically provide the Owner with metering data at the network control computer at least one time per day with 24 one hour totals without having to interrogate the endpoint or data collector. Meter readings, premise leak, no flow, tamper information and unauthorized usage shall be transmitted at least one time a day. This should have the ability to alert the utility via email or text in real time when meter tampering, unauthorized usage, leaks, reverse flow occurs, and loss of communication with endpoint.		
The AMI system should also provide on demand reads.		
The proposed system must provide for leak detection on the customer side, and help support leak detection capabilities on the distribution side.		

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<i>Requirement</i>	<i>Comply?</i>	<i>Description/Clarification (if necessary)</i>
The proposed system must provide analytics based software that informs the utility of utility defined exception conditions; such as leaks, reverse flow conditions, no flow, tampering, unauthorized use, loss of communication in real time, via email.		
The proposed AMR/AMI system must be capable of reading Neptune, Hersey, Sensus and Badger encoders.		
The billing software needs to be able to import data from the current Laredo system to the new AMR/AMI system simultaneously with the existing handheld reading system, or Bidder must provide handhelds to collect readings from non AMR/AMI accounts.		
The AMR/AMI system must comply with all applicable Federal Communication Commission (FCC) Rules & Regulations. The requested AMR/AMI system must operate in a licensed frequency band (please specifically comment on how proposed system complies).		
The system shall have the capability of AMR in case of region failure of AMI or have a self-healing feature within the system.		
Ability to retrofit AMR/AMI technology to existing meters in the system.		
All AMR/AMI equipment and system components shall be labeled in accordance with the FCC.		
The output power of the AMR/AMI system will be governed by the relevant FCC standards for the operating frequencies used.		
Must provide hand held meter reading device/data collector/portable interrogator to collect readings from AMR meters.		
The AMR drive-by system should communicate with the AMI system and the Laredo billing system.		
All vendor supplied software must be supplied with a perpetual, irrevocable license indicating the software's designer, owner and licensor, and detailing the terms and conditions, including annual cost of maintenance by the vendor.		
All Radio frequency (RF) products must be protected against water and moisture.		
The Vendor must provide assistance and/or support for successful interface of their AMR/AMI software to the billing system.		

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<i>Requirement</i>	<i>Comply?</i>	<i>Description/Clarification (if necessary)</i>
A software package shall be provided and be available via the Owners network or local client-based application for up to 50 PCs, connected to the city's network.		
Custom report building shall be such that it utilizes standard query operators. At a minimum, all of the collected metering data should be used for custom reporting capabilities to allow the City to easily design reports to monitor and analyze many aspects of the metering system. If any additional software is needed to create custom reports, the application software must be provided and included in the bid.		
The software shall show and retain a minimum of three years of hourly usage history.		
The software shall be provided as a perpetual license to use the software with the supplied system, provided the annual maintenance agreement is upheld.		
Ability to generate error reports and identify which endpoints and data collectors have been inactive for a certain period of time.		
The software should include the following standard reports: Meter Reading History, Daily Leak Detection, Daily No-Use Meter, Daily Tamper Detection, High / Low Consumption, Unauthorized consumption, Backflow, Area or Group Leaks and ability to create user-defined Reports. Vendor must provide software/third party to create or modify reports.		
The AMR/AMI system should include a provision for Proposer to remotely connect to the control computer or database server to diagnose problems, load patches and upgrades, etc.		
A toll-free telephone Help Desk shall be available between the hours of 7AM and 6 PM, Central Standard Time The Help Desk services shall include: fixed network device problems/questions; software operations problems/questions; equipment returns and repairs; loaner equipment processing; evaluation of information for updates or revisions; evaluation of personnel training needs. Response time shall be within 30 minutes. Prospective Bidder shall provide an issues escalation provision in order to address Owner's unresolved issues within a reasonable time frame.		
The prospective bidder shall provide yearly maintenance costs and how maintenance cost is determined after 5 year warranty period.		

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<i>Requirement</i>	<i>Comply?</i>	<i>Description/Clarification (if necessary)</i>
The system must contain tamper detection capability which, when the meter, endpoint or any wiring between components has been tampered (cut wire, tilting of meter, etc.) with, shall cause a tamper message to be indicated when the endpoint transmits its data. The City desires the system to communicate to the control computer immediately upon tamper. Indicate how quickly tampering with each component will be reported and how will it be reported. How many times will the tamper indication be provided to the DCU or to the system operator? Indicate whether the tamper indication must be reset or reprogrammed, and how this is accomplished.		
The system should give an indication of unauthorized usage; that is, when the customer account record indicates that the customer has been shut off, the system will flag and specifically report any unauthorized usage. Describe how this is accomplished.		
The system should monitor water consumption through the meter and specifically indicate if there is an abnormal increase in water consumption, if there is no time interval (e.g., at night) when the rate of consumption is zero, or if there is a "running continuously" condition.		
The system shall include provisions to ensure data transmission accuracy (for example, error checking), security (for example, encryption) and immunity from outside (electromagnetic) interference as well as fading and other forms of signal degeneration or attenuation, to prevent accidental loss or interception of customer or meter reading data.		
The system must ensure data integrity (so that the readings from the meters, ID numbers, and other data are always associated with the correct meter and customer) and data security (so data cannot be accessed by unauthorized parties). The system must ensure against loss of data.		
Each endpoint shall have a unique, permanent ID number that is transmitted with the meter readings.		
The endpoint must operate in conditions subject to water submergence (i.e., meter boxes or vaults). The endpoint enclosure shall be composed of UV-inhibiting ABS or similar material. All materials used in the endpoint must be non-hazardous.		
The endpoint shall be permanently labeled with manufacturer's name, model number, "City," a tamper warning, endpoint identification number, required FCC labeling, input/output connections, and date of manufacture. The label should contain a bar code of the endpoint identification number.		

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<i>Requirement</i>	<i>Comply?</i>	<i>Description/Clarification (if necessary)</i>
Proposer shall be responsible for obtaining all necessary licenses on behalf of the City. Licenses must be obtained and assigned radio frequencies verified as suitable for use with the AMR/AMI system(s) before any AMR/AMI equipment may be installed. If Proposer is unable to obtain the necessary licenses, the City reserves the right to cancel the contract and orders for all or part of the system, and receive a full refund from Proposer of all amounts paid.		
The City requires handheld meter reading devices, cradle/data transfer units, control computer, software, etc., to read meters equipped with endpoints as well as capture manual meter readings. The handheld device must present to the meter reader unambiguous and appropriate information needed to locate a water meter. It must also inform the meter reader of the next meter to read, any upcoming hazard (e.g., dog), special routing information, and special instructions (including the presence of an AMR/AMI-equipped meter, which is not manually read).		
The handheld device must automatically time stamp each meter reading with unalterable date and time of read.		
The handheld device must allow for searching and viewing of data within the handheld meter reading device, by several fields or keys, including meter location address, meter number, unread account, sequence number and manually-entered flag/tag/bookmark.		
The handheld device must visually and audibly warn the meter reader of a meter reading entry that is out of range, including no consumption for an active account, or of an inactive account that has consumption since the previous reading. The device must allow the meter reader to override an out-of-range warning, to enter an unusual reading, or skip a reading and make a notation of the fact, if a meter has been removed from service. Two high and low out of range limits, the second requiring more verification than just the meter reading, are preferred.		
The system should enable the system operator to select or customize the fields (such as previous unable-to-read code) that appear.		
The handheld device must allow for field entry of data, including meter readings, and information on meters that are out of sequence. The handheld device must allow the meter reader to modify or correct certain fields, including meter access notes, hazard, and special instructions to update the associated billing system data. The system must provide a capability for review and approval of any changed data by a supervisor before these changes may be applied to the meter reading database in the handheld control computer or the City's customer information system.		

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<i>Requirement</i>	<i>Comply?</i>	<i>Description/Clarification (if necessary)</i>
The handheld device must allow for entering an unable-to-read code, at least one additional special reporting code, and comments for each meter reading record.		
The handheld meter reading device must automatically be configured, and programs and data uploaded, whenever the state of the handheld meter reading device changes, such as when a memory card is removed and/or installed.		
The handheld unit must be able to withstand an impact of a five-foot drop onto a concrete surface without breaking or losing data.		
The handheld units must have a multi-line alpha/numeric display, large enough for easy reading of route data, readable in normal daylight, and have an internal display light for reading the display under low-light conditions.		
The handheld device must be able to be carried by hand (left or right hand equally) and secured by a hand strap or supported by a belt and/or shoulder strap, to free up both hands when device is not in use.		
The handheld device must have alpha/numeric/special function keys that allow a meter reader to easily enter data correctly while wearing gloves.		
The portable interrogator unit should be capable of accommodating a bar code reader to capture meter or endpoint numbers from bar codes pasted on these components.		
Proposer shall include firmware for all system components, including endpoints, DCUs and portable interrogator/programming/testing units, at no additional cost. Proposers shall provide any available upgrades or patches to such firmware to correct problems, add new standard features, and ensure system compatibility and full functionality for 5 years at no additional cost. Indicate how firmware patches or upgrades would be applied to each system component. There shall be no annual maintenance fees for component firmware.		
Must provide ongoing software licenses, which cover patches and upgrades to ensure that the system and its software continue to perform to design criteria;		
Must provide ongoing maintenance and service contracts for the certain system components, including data collection units, handheld devices, etc.		
The system should indicate when there is an extended period (e.g., 10 days) of no flow through the meter.		
Proposer is responsible for providing a sufficient number of DCU's so that 100% of all expected reads are obtained, unless there are temporary physical barriers beyond the control of the City of the Proposer. Please provide estimated number of DCU's.		

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<i>Requirement</i>	<i>Comply?</i>	<i>Description/Clarification (if necessary)</i>
The AMR meter reading device must not automatically delete its meter reading data after transfer to the control computer, so that the transfer can be reinitiated if problems occur. Data sent to the handheld meter reading device must overwrite existing data, with proper warning and the opportunity to cancel the action before the transfer begins, so as not to allow the accidental erasure of non-transferred meter reading data. The handheld meter reading device must display a message or other indications when data transfer is taking place and when the transfer is complete.		
The data transfer method must synchronize the meter reading data with the associated handheld meter reading device, through identification validation, so that the handheld meter reading device has the appropriate route data for its assigned meter reader.		
The DC must be capable of using the following as WAN backhauls for data: <ul style="list-style-type: none"> · GPRS (Cell Phone) · Ethernet (Hard Wire) · CDMA (WIFI) If backhaul does not exist at a City facility, then the proposal must present a solution to solve the problem.		
The Prospective Bidder shall prepare and submit as part of the technical proposal a propagation study for reading all accounts in the system. The Proposer may request from the Owner an Excel database containing the service addresses for water accounts along with potential infrastructure. Not all services may be on this list and some locations have multiple meters. For the purposes of the propagation study, the Prospective Bidder shall assume there is at least one meter at each property. The Prospective Bidder may be able to install equipment on any City owned infrastructure. Prospective Bidder must provide a list of locations identified as possible sites to Owner for approval. Prospective Bidder shall include all necessary requirements to install AMR/AMI equipment at site. Proposer must include the costs of mounting. It should be noted that the existing cell phone towers are not City property. If a City facility is used, then the equipment must be esthetically compatible with the surroundings. The City reserves the right to inspect any installation and clean-up work within 30 days before payment is made to the Contractor. The City reserves the right to inspect any installation and clean-up work within 90 days after installation in response to customer complaints of damage. Contractor shall be responsible for claims resulting from damage caused by installation.		

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<i>Requirement</i>	<i>Comply?</i>	<i>Description/Clarification (if necessary)</i>
Endpoints		
The proposed system endpoint shall allow migration from walk-by to drive-by to fixed base without the need to physically visit each unit.		
All endpoints shall be warranted to be free of defects in material or workmanship for a period of at least twenty (20) years.		
Batteries must be Lithium batteries and must be fully potted.		
The battery for each AMR/AMI endpoint must be warranted for a minimum period of twelve years with full warranty and vendor pays shipping costs to replace if battery fails within the first 12 years when the system provides a minimum of 24 daily reads.		
All AMR/AMI endpoints equipment must be rated non-condensing from -22°F to +149°F and operate in conditions of water submergence.		
The AMR/AMI endpoint shall have capabilities to indicate damage or tampering with the wire connection between the AMR/AMI endpoint and the register.		
The AMR/AMI endpoint must have an internal clock that is synchronize through the DCU(s).		
Training		
All City field staff must be trained properly prior to the commencement of installations.		
System shall include onsite training for the AMR/AMI system and the schedule shall be coordinated with the Owner. Training must include office, Administrative (DCU, endpoints, software, backups, troubleshooting) and field training (installation, diagnostics and maintenance). Bidder must provide all materials necessary including training aids, trainee work books, etc.		
The office and administrative training on operation of the AMR/AMI system shall not occur until after the software has been installed and the billing interface file has been written, tested, and is working successfully to transfer meter reading data to the billing system.		
Prospective Bidder shall provide manuals and written procedures sufficient for complete operation and maintenance including installation, configuration, diagnostics and repair of the system, its software and its components. This shall include 5 complete versions hard copy sets as well as 5 copies on CD-ROM.		

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<i>Requirement</i>	<i>Comply?</i>	<i>Description/Clarification (if necessary)</i>
The Proposer shall provide trained and experienced instructor(s), and ensure that they do not perform other duties during the training period that will interrupt instruction. Instructor will provide a checklist to trainees to evaluate presentation of course materials for effective feedback to the City.		
Proposer shall restore, repair or replace any City equipment damaged in training, and restore any hardware or software modified in training.		
Project Management		
The selected vendor shall provide project management for their scope of work as detailed below. The Project Manager shall be required to coordinate activities with the Owner and Owner's representative.		
The vendor shall provide their proposed statement of work and project management responsibility documentation which includes system installation, configuration, and testing.		
The vendor shall submit a project schedule that includes: securing a FCC license (if required), network delivery, installation, configuration (including transfer file with billing system), meter and AMI endpoint delivery, system testing, and training.		
Proposer will designate a Project Manager, who shall be responsible for managing the entire installation project on behalf of the proposer/bidder and for seeing that all installations are carried out in a professional manner and in compliance with the procedures required by the system vendor/manufacture, the City, and all other applicable local, state and federal regulations. The project manager shall be available throughout the duration of the project, except for holidays and vacations, during which the proposer/bidder shall provide a qualified substitute. The Project Manager shall be experienced in supervising AMR/AMI meter installation contracts, and familiar with applicable regulations and safe and proper installation procedures. The City shall approve the Project Manager or a change in the Project Manager.		
Proposer shall provide resumes for key employees, including Project Manager, and other staff who will be assigned to the project.		
Short listed proposers must provide sufficient information to enable the City to assess relative financial strength.		

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<i>Requirement</i>	<i>Comply?</i>	<i>Description/Clarification (if necessary)</i>
Vendor shall indicate if there are any anticipated or pending lawsuits against it, or any litigation within the past five (5) years or bankruptcy filings within the past ten (10) years, and, if so, shall describe them.		
The City will not store any project materials at their facilities pertaining to the installation requirements of this RFP (coaxial cables, antenna's, DCU's etc.).		
Warranty		
The prospective vendor shall provide to the Owner on-call assistance services and warranty services for a period of five (5) years.		
The prospective vendor of the AMR equipment shall warrant the system against failures. Should the system substantially fail to perform such that the City cannot reliably use the system for billing, the City will notify the Vendor of this condition, whereupon Vendor shall be responsible for promptly restoring the system to its normal level of reliability and accuracy at its sole cost and expense.		
All other AMR/AMI system components shall be guaranteed against failure for one year from the date of installation.		
The proposed meter manufacturer must ensure that it will stock a sufficient supply of repair parts to fulfill the warranty requirements for the entire warranty period. All parts shall be available from the meter manufacturer for a period of 20 years from the date of purpose.		

SYSTEM INFORMATION QUESTIONS
Documentation adequately describing the operation and maintenance of the system and its components, including data management and back-up, for use by City employees or agents in carrying out such operation and maintenance;
Describe any options for the frequency (that is, number of reads per time interval) at which meter readings may be obtained. Are these options user-settable? If so, how is this accomplished?
Indicate any provisions in the database for integration with City's GIS data related to meter or premises location.
Describe the schedule for a typical training program.
Prospective vendors must describe any other unique features that their software provides to Owner to improve overall utility operational efficiency and management of the AMR/AMI system. If roadmap features are discussed, they must be available within the next twelve months.
Prospective vendors must describe any unique features that their software provides to assist in Customer Service efforts.
Describe the capacity of each system component in terms of the number of meter readings stored (in total and per meter) and/or the number of meter readings that can be transmitted or received in a given time interval. What happens as capacity is approached? What happens when it is exceeded? (For example, does new data overwrite old data?) Describe how old data is archived.
Briefly indicate any capabilities or limitations of the system to separate meters into groups (e.g., by routes, types of customer billing cycles) for reading.

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Can the system provide reads on demand? Describe how the system obtains "off-cycle", special or on-demand readings from a particular meter.
Can the system obtain multiple readings at short intervals (e.g., hourly or several times per day) to monitor water consumption patterns from a particular meter or group of meters? If so, describe what and how. Are such short interval readings stored in memory at the endpoint or DCU, transmitted all at once, or transmitted as they are received?
Indicate what radio frequencies are used for interactions between the endpoints and DCUs. What licenses are required? The proposer shall assist the City with obtaining necessary licensing.
Is the endpoint intended to be mounted away from the meter and attached to the register only by wire, or can it be integrated with the meter and/or register? Describe the physical characteristics of the endpoint, including dimensions and weight. Provide pictures or drawings to scale.
Can the endpoint distinguish different makes and models of meter registers? Does the endpoint have to be programmed or modified to accept different makes or models of meter registers? How and where is this accomplished? Are different endpoints required for different makes and models of registers? If so, how are these distinguished?
Does the endpoint have the capacity to handle more than one register? How many ports for meter registers does the proposed endpoint have? Describe any provisions of the endpoint to handle dual register compound meters, and multiple meters in close proximity. Indicate any restrictions on installing endpoints in close proximity to each other.
What type of battery does the endpoint use? What is the expected battery life? Is the battery removable and replaceable? If so, what is the current cost of replacement batteries? Can the battery be replaced in the field? Does battery replacement require soldering or special tools? How will the system prevent loss of programming or data if the battery expires? Does the AMR/AMI system provide a warning well in advance of battery failure? If so, what is it and how is this accomplished? Is battery life affected by the type of meter register the endpoint is reading? If so, indicate the differences in expected and guaranteed lives from one type of register to another.
Describe any special endpoint battery disposal provisions, and indicate the current cost of providing battery disposal if special handling is required.
The endpoint shall be able to be initialized or programmed during or prior to field installation. Describe all endpoint programmability options, features and procedures. Can the endpoint store an account or meter number? Will this number be transmitted with the meter reading data? Can this number be programmed into the endpoint from a field programming unit based on information downloaded from an installation work order database? Indicate capabilities and procedures. Indicate field length of account number.
Describe how the endpoint will protect itself, the meter and the customer's premises against electrical surges or magnetic fields. Describe any risks of surges from endpoint batteries.
Describe features, including physical characteristics (seals, tamper resistant bolts, etc.) to minimize, detect and report tampering with the endpoint.
Describe features of the endpoint that prevent corrosion or degradation of mechanical or electrical performance (e.g., encapsulation or coating).
Describe requirements for mounting endpoint (elevation, orientation, etc.) to ensure adequate radio propagation.
Endpoint installation procedures must be simple and easy to perform. Briefly describe installation procedures. Indicate design provisions to avoid installers' mistakes in installation, connection to meters, and programming.
If the data communication system consists of different levels of receiver/concentrators (e.g., data collection units, small area collectors, large area collectors). Proposer shall provide responses for the equipment in each level.
Indicate the mode of operation and schedule by which the DCU captures, stores and re-transmits data received from endpoints back to the AMR/AMI control computer. Do DCUs relay data through each other to the control computer?
Proposer shall be responsible for communication network or provisions to deliver meter readings and other AMR/AMI system data to the control computer. Proposer must specify the capital, installation, operation and maintenance costs of such network or provisions. Indicate available options and proposed method for transmitting data.

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How is the DCU powered? What are the estimated one-time and continuing costs for powering DCUs? How does the system preserve data should power to a DCU be lost?
Describe any programmable features, such as data reporting schedules, for DCUs, and procedures for programming or configuring. Do DCUs install themselves onto the system as they are powered up?
Indicate how the DCU is protected against electrical surges such as lightning.
Indicate recommended fixed DCU maintenance intervals and procedures. Indicate maintenance procedures in the event of physical accident or damage.
Indicate what FCC or other regulatory agency licenses, if any, the system will require. Indicate the expected length of time to acquire such licenses. Indicate what problems can occur in the process of obtaining such licenses.
Indicate any provisions offered by the Proposer or its system to identify and remove interlopers on its licensed frequency.
The handheld meter reading device shall be capable of alerting (if necessary) and receiving the signals from endpoints. Can the handheld meter reading device interrogate meter registers (if so, which ones)? The handheld meter reading device should be capable of downloading consumption profile data, if that is a capability of the system.
What is the maximum distance at which a portable interrogator will reliably receive the complete meter reading signal from an endpoint?
Describe any provisions for mounting and operating the portable interrogator within a vehicle.
Indicate the size and weight (with batteries installed) of the handheld meter reading device.
Indicate the temperature and humidity operating ranges for the handheld unit. The unit must be capable of being submerged for up to 20 seconds without loss of functionality.
Describe the capacity of the handheld device, in terms of the number of meter readings that may be captured under normal circumstances.
Indicate the method(s) (e.g., memory card, data cradle, communication port, etc.) used to transfer data between the handheld device and the control computer.
Indicate how long it normally takes to upload the data from a 200-meter route, and how long to download the next 200-meter route. How long for a 400-meter route?
Describe the mechanism and procedure for downloading data from and uploading data to the AMR/AMI control computer.
Describe the capacity of each unit. If the unit stores work order information, how much data, or how many work orders, can it accommodate? How many meter readings can a portable interrogator accommodate?
What is the maximum distance at which a portable interrogator will reliably receive the complete meter reading signal from an endpoint?
Indicate portable unit interrogator weight and dimensions. Describe any features, such as shoulder or belt strap, to facilitate carrying and preventing it from being dropped.
What connecting hardware and software, including cables, modem, cradle, battery, charger, etc. are required for the portable interrogator unit to be fully functional?
Does the portable interrogator unit use rechargeable batteries? If so, what type? If not, what does it use? How long does it take to fully recharge a battery after a full day of normal use? Can the batteries be recharged in charger cradles separate from the unit cradles? Can the battery be recharged from a 12 volt vehicle system? The unit must ensure against accidental data loss in case of a dead battery.
Indicate the portable interrogator display's overall dimensions, the number of characters displayed, and the height and width of the characters. Does the display allow alphanumeric characters? Include an illustration of the display screen and keypad. How does the unit enable the display to be easily readable in bright or dim light? Indicate the angular range readability.
Describe any audible tones used by the portable interrogator unit, and their function (e.g., confirming a reading or successful programming, warning of an out-of-limits condition, low battery, etc.)? Can the volume be adjusted?

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Does the portable interrogator unit permit manual entry of meter readings and other information (for example, the information necessary to complete a meter or endpoint investigation or repair work order)? If so, what other information? Describe its capability to record notes or comments. Describe how the unit processes and interfaces with the City's customer information system in the case of a meter change, register change, endpoint change or any combination thereof
Proposer shall include menus, navigators and major screen shots of system in its proposals. Describe provisions and guidelines for customizing screens, menus and navigators.
How many concurrent users can the system accommodate? Can the system process batch transfer of meter reading data in the background while allowing users to conduct queries and other transactions?
What provisions exist for data entry and editing by users in system? What restrictions are placed on such functions to ensure security and data integrity? Are edits traceable by the City? Are restriction settings customizable by the City?
Describe any provisions for allowing customers to access their own consumption history and profiles, and comparisons for their usage to groups of similar customers, through the system.
Describe any capacity limitations on the number of accounts, number of readings per account, etc. for the configuration proposed. Describe any provisions for archiving and retrieving additional data.
The software shall include a security system, incorporating multiple levels of authorization and access. Describe security features, logging and levels.
Describe data back-up capabilities and procedures to ensure that system and consumption data is not corrupted or lost.
Provide a list, with brief descriptions and screen shots or sample pages, of the standard reports provided for system and component performance; missing or late data; errors, anomalies and alarm conditions; data transfer, management and administration; analysis of consumption for individual customers or groups of customers; and other major report categories.
Describe any system capabilities to validate meter readings for reasonableness, unusually high or low readings, and potential meter rollovers.
Indicate the nature and extent to which standard reports can be customized. Permissible customization shall not void any software product warranties, nor prevent any overlay of future software releases. The City desires that the software or its associated database management system include a custom report generator.
Documentation shall be provided with the software and shall include at a minimum: system overview description, system flow charts, file descriptions and record layouts, database structure diagrams, description of program function and logic, back-up and recovery procedures, operating procedures, screen layouts, data entry procedures, report descriptions, descriptions of all user options, and descriptions of all error messages.
All vendor supplied software must be supplied with a perpetual, irrevocable license indicating the software's designer, owner and licensor, and detailing the terms and conditions, including annual cost of maintenance by the vendor. Indicate how many servers or workstations the software license will cover and the cost, if any, of additional server or workstation licenses.
Indicate any third party provider of software specifically designed to support Proposer's software. Indicate the warranty, licensing and support provisions for any such packages.
Indicate any provisions in the database for integration with City's GIS data related to meter or premises location.
Proposer shall describe in its proposal recommendations and requirements for AMR system preventative maintenance, back-up, archiving, etc.
List other conditions the system can detect. Describe these capabilities and how they are accomplished.
Describe any additional capabilities of the AMR/AMI system(s) proposed, such as remote controlled shut-off or turn-on, pressure monitoring, etc.
All responses must reflect current capabilities. Indicate any planned future capabilities for the equipment being proposed, the anticipated development and availability schedule, expected unit incremental costs, and the expected procedures for upgrading equipment already installed.
Indicate the proposed mode of data transfer between the DCUs and the AMR/AMI control computer.
Indicate the maximum distance in feet the endpoint and DCU can be apart and still always obtain meter readings. Indicate how the system will obtain readings from meters in subbasements.

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20.0 Pricing

Prospective Bidders shall indicate all costs associated with all items listed on the attached **Price Proposal Form**, including, but not limited to, equipment, software, programming, set-up, training, shipping, insurance, bonds, annual maintenance, and any other costs required to provide a complete and operational system. The ability to program the proposed system must be provided in the total system cost. All terms and conditions shall be included and no subsequent alterations will be permitted unless mutually accepted in writing. Bidder must also provide list of parts availability and their cost for maintenance and a parts replacement due to warranty and the turn-around time for the Owner to receive those parts.

21.0 Bid Tabulation Form

The following tables summarize the meter quantities by size and type. The vendor should describe in detail any potential price increases over the life of the five year project. All columns marked with (X's) require a price.

ESTIMATED QUANTITY	METER SIZE	METER TYPE	AMI Complete Meter	AMR Complete Meter	AMI kit (REG /ENDPOINT/ Antenna)	AMR kit (REG /ENDPOINT/ Antenna)	AMR Retrofit (ENDPOINT/ Antenna)	AMI Retrofit (ENDPOINT/ Antenna)
8000	5/8" x 3/4"	Pit PD	x	x				
4000	5/8" x 3/4"	Pit PD			x	x		
350	3/4"	Pit PD			x	x		
150	3/4"	Pit PD	x	x				
150	1"	Pit PD			x	x		
120	1"	Pit PD	x	x				
100	1 1/2"	Pit PD			x	x	x	x
75	1 1/2"	Turbine	x	x	x	x		
100	2"	Pit PD			x	x	x	x
100	2"	Turbine			x	x	x	x
80	2"	Compound	x	x	x	x		
25	3"	Turbine			x	x	x	x
25	3"	Compound			x	x	x	x
10	3"	Compound	x	x	x	x		
3	4"	Turbine			x	x	x	x
3	4"	Compound						
10	4"	Compound	x	x	x	x		
3	6"	Turbine			x	x	x	x
3	6"	Compound			x	x	x	x
1	6"	Compound	x	x	x	x		

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22.0 Scope of Requested Services

The City of Laredo is requesting proposals for the following services:

- 22.1 Installation or retrofit of positive displacement, 5/8-, 3/4 -, and 1-inch cold water meters complete with encoder registers with antenna options –The attached antenna must be pre-assembled. The automatic meter reading endpoints need to include an antenna.
- 22.2 Proposer shall submit price for installation in a separate table to allow the City to accept the AMR/AMI System bid with or without the installation bid.

23.0 Installation Project.

- 23.1 Project Duration. Project duration shall be implemented over five fiscal years.
- 23.2 Installation Sequence. Contractor shall conduct installations by geographic proximity and logistics, and neighborhoods to be determined by the City in discussion with Contractor. Unless approved in writing by the City, Contractor shall complete at least 90% of the installations in the specified target area before commencing installation on any further geographic location. Exceptions to completion may be granted by the City on the basis of vacant or abandoned properties, could find no meter or no existing standard connections for a meter, piping or plumbing deteriorated or in fragile condition, bad control valves or curb stops or other factors as determined by the City.
- 23.3 Installation Schedule. The City and Contractor shall establish an overall schedule for installation of the entire project. On the first work day of each week, Contractor will provide the City an updated schedule of where work is planned for the next 3 weeks.
- 23.4 Work Hours. Vendor shall propose normal work hours, which must be approved by the City. Installers must be available on a periodic basis for evening and Saturday installations, as well as for installations that must be conducted at other times because of special needs.
- 23.5 Daily Reports. A listing of all installation appointments to be visited by Contractor's installers each day shall be electronically transmitted to the City each work day prior to 8:30 A.M. At the end of each day, Contractor shall transmit electronically to the City information on completed work orders in a City approved file format.
- 23.6 24-Hour Customer Response. For 90 days after the City was notified of installation, Contractor must respond to calls from customers or the City concerning leaks, loss of service, low pressure and other problems (except for missed appointments) associated with installations on a 24-hour per day basis. Contractor must respond within one (1) hour of receiving the call and arrive at customer's premises ready to correct any problems within three (3) hours of receiving the call. If Contractor fails to respond, the City will assess liquidated damages of \$300 plus the City's direct costs to make repairs. Such penalties and costs to be deducted from the amount owed to the Contractor.
- 23.7 City Project Manager. The City will designate an employee or agent who will manage the project on behalf of the City. The function of this Project Manager is to coordinate with the contractor and ensure compliance by the Contractor with the specifications. The designation of a Project Manager shall not relieve the Contractor of its full responsibility to comply with the terms of the Contract and/or all plans and specifications.
- 23.8 Installation Acceptance. Each Installation will be accepted by the City conditioned upon (1) electronic submission of a list of completed installations containing for that installation the premise identification number, address, old and new meter serial numbers, old and new meter readings, Endpoint ID number, location of meter and endpoint, installer's name, Contractor's inspector's name, and all other information relevant to the installation; (2) satisfactory inspection by the City; (3) successful capture of a confirming

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meter reading or sequence of meter readings from that meter and endpoint by the City operating the AMR/AMI system in a normal way; and (4) confirmation that endpoint ID numbers, meter register numbers and other information have been correctly captured in the AMR/AMI control system database and/or the City's project management database for each customer's premises.

- 23.9 Installation Conditional Acceptance. If the City does not inspect the installation within 7 calendar days of being notified of the installation, or if the City does not attempt to obtain confirming readings for the installation within 7 calendar days of being notified of the installation, or if the City does not confirm that the correct information for the installation has been captured in the AMR/AMI control system database and/or the City's project management database within 7 calendar days of being notified of the installation, through no fault of the Contractor, then such installation shall be deemed by the City to be conditionally accepted, and the City shall pay the Contractor for the installation. However, if the City finds discrepancies in the conditions of acceptance for 12 months after the date it was notified of installation, the City shall debit the payments from any amounts owed the Contractor, and remand the work to the Contractor for correction.
- 23.10 Payments. Contractor shall provide to the City on a weekly basis its list of newly completed installations and any authorized additional work in an itemized format. This list shall be attached to an electronic draft invoice. The City shall notify Contractor of any listed items that do not meet the City's contract conditions, so that Contractor may resolve any discrepancies. The City may at its discretion reject the entirety of any list on which there are discrepancies in more than 10% of the entries. The City shall process all other items as acceptable and arrange payment for these. Payments will be based on the price schedules adopted by the City and the Contractor based on prices submitted by the Proposer.
- 23.11 Automated Project Control System. The Contractor shall utilize an automated installation information management process, so that little or no information has to be captured or entered manually. The system should use electronic tags, bar coding or the similar means to capture equipment identification numbers. The system shall have a redundant backup process, so that all information is preserved in the event of a breakdown in the primary system. The system should enable the correction of any incorrect information pertaining to meter or service size, meter type, meter location, address, etc. Proposer shall describe in detail its project control system in the proposal, including flow charts.
- 23.12 No Solicitation. No Contractor, or its employees or agents, may solicit business from the City's water customers while engaged on any contract associated with this project
- 24.0 Contractor Staff.**
- 24.1 Installation Manager. Proposer will designate an Installation Manager, who shall be responsible for managing the entire installation project on a day-to-day basis on behalf of the Contractor and for seeing that all installations are carried out in a professional manner and in compliance with the procedures required by the system vendor/manufacture, the City, and all other applicable local, state and federal regulations. The Installation Manager shall be available throughout the duration of the project, except for holidays and vacations, during which the Contractor shall provide a qualified substitute. The Installation Manager shall be experienced in supervising meter installation contracts, and familiar with applicable regulations and safe and proper installation procedures. The City shall approve the Installation Manager or a change in the Installation Manager.
- 24.2 Installers. Contractor's employees or subcontractors shall be fully trained in the removal of existing meter and the installation of a new meter and endpoint. They shall also be trained in retrofitting newer meters as requested with AMR/AMI-compatible registers and endpoint, regardless of size. The City reserved the right to require Contractor to retrain, reassign or dismiss any employee or subcontractor who fails to perform workmanlike and competent work.

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- 24.3 Licensed Plumbers. Contractor shall engage by employment or subcontract at least one person who shall maintain a Texas Plumber's License. This person(s) shall be responsible for supervising the work of all Installers, and correcting any problems or damage to plumbing occasioned by the changing of meters or registers and the installation of the AMR/AMI equipment under this contract. Proposer shall provide references for each such person. The City reserves the right to approve licensed plumbers for work on this project.
- 24.4 Bonding, Background Checks. The Contractor shall bond all Licensed Plumbers and Installers. Contractor shall subject all employees to a criminal offense background check and drug and alcohol testing. Contractor shall not employ as Installer any person who fails these checks. The City reserves the right to review all background checks, to reject any potential hire, and prevent any such employee from working on the City projects.
- 24.5 Training of Employees. Describe training procedure, and probation provisions for new employees.
- 24.6 Uniforms and Identification. Contractor's field personnel shall wear easily recognizable uniforms containing the Contractor's name, as well as prominently displayed picture identification badges containing Contractor's name, employee name, title and signature, employee picture and employee I.D. number. Contractor's employees who are no longer employed by Contractor shall be required to return their uniforms and identification cards immediately upon termination of employment and the Contractor shall immediately notify the City of all such terminations and if identification cards were received from terminated employee.
- 25.0 Items to be Supplied by Contractor**
- 25.1 General. Contractor will supply the following components and aspects of installation: overall project management; training and direct supervision of installers; appointment scheduling; problem solving and complaint handling; inspection, testing and quality control.
- 25.2 Tools and Materials. The Contractor shall furnish all supplies, materials, tools and equipment necessary for the successful and timely completion of all meter and AMR/AMI installations under this contract as specified herein.
- 25.3 Meter Box Lids. The AMR/AMI systems shall be configured to obtain the maximum signal strength from endpoints installed in meter pits or vaults. Installation Contractor shall replace all meter box lids and any other lids needed to obtain the performance requirements specified herein. The City will provide the meter box lids. Under no circumstance will a meter pit or vault be left uncovered and unsupervised.
- 25.4 Vehicles. Contractor shall be responsible for all vehicles it uses on the project. Contractor shall provide service vehicles on site stocked with common fittings and supplies needed for normal service restoration and/or replacement. Contractor's vehicles, including private vehicles used for the work, shall have the company logo prominently displayed on both sides of the vehicle. Any employee of the Contractor or its subcontractors that drives a vehicle in connection with this project must have a valid driver's license for the class of vehicle being driven and valid insurance.
- 25.5 Parking. The City requires that Contractor deploy vehicles to minimize parking problems and avoid blocking any streets. Contractor is required to follow all parking laws. Contractor shall be responsible for all parking violations.
- 25.6 Field Communications. The City requires that all the Contractor's installers, plumbers, inspectors and supervisory personnel be equipped with cellular phones or radios so that problems or questions can be addressed immediately and the Installation Manager can be contacted immediately if needed.

26.0 Account Data and Installation Scheduling

- 26.1 Account Data File. Prior to the start of the installations, the Project Manager will provide the Contractor with an electronic file containing the information necessary to create work orders for meter/AMR/AMI installation. The City will provide Contractor with weekly updates to this file for routes where the AMR/AMI system has not yet been installed. For each meter, the data file will indicate the meter size, make and serial number, whether the meter shall be retrofitted or replaced, the meter location (if known), access notes to the meter, and the name and phone number that may be listed on the account.
- 26.2 Customer Notification. Contractor must notify the homeowners of their intent to change out or retrofit their meters within the next week by dropping off a door hanger to each location at least 24 hours in advance of performing the work.
- 26.3 Non-Accessible Meter. In the event a meter is obstructed or is not accessible, the Contractor will make at least three attempts at any reasonable time to contact the customer to gain access to the meter. These attempts must be documented on the work order. After three documented attempts to change the meter, Installation Manager may request the Project Manager schedule the meter change out. The Contractor shall only be paid for completed installations and is expected to provide all reasonable support in resolving difficult installation situations.
- 26.4 Failed Attempts. Contractor shall notify the City if it is unable to secure an installation appointment with a customer. Contractor will be responsible for installation if the City secures an appointment within 30 days of receiving written or electronic notice from Contractor.

27.0 Installation Procedures.

- 27.1 Procedures Approval. The Contractor shall propose detailed scheduling and installation procedures to the City for approval prior to scheduling or commencing installations. The procedures shall be designed to optimize the work of the Installers, the City field inspectors and all other staff working on the project.
- 27.2 Procedures Testing. Prior to the commencement of full-scale installation, but after Vendor shall have installed the AMR/AMI system control computer and a sufficient quantity of data collection units, Contractor shall install the meters and meter reading equipment on approximately 50 meters, following the Contractor proposed procedures. During this test and a period not longer than twenty (20) business days following it, the City and the Contractor shall evaluate the procedures for public notification, scheduling installations, meter and endpoint installation, data transfer to the City's billing system, meter reading over the system, installation data management and project control, and problem resolution, to ensure they are working and effective. The City may require Contractor to modify any procedures that it deems are deficient or ineffective. No work will be started until the AMR/AMI system equipment is determined to be working to performance requirements in the test area, the project control procedures and systems are determined to be performing accurate, and the installation procedures have been approved by the City.
- 27.3 Work Order Processing. Contractor shall be responsible for ensuring that all data transferred to and from the City's information systems is properly working before commencing any installations. The City desires access to the Vendor's database and reserves the right to audit the Vendor's database.
- 27.4 Work Order Data. The Installation Manager will provide work orders to Installers. Each work order will include at a minimum, the customer's address, premises identification number, meter location, meter access notes, designation of replacement or retrofit, existing meter number, existing register number, meter make, model and size, and most recent meter reading. The City desires that all work orders be electronic.

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- 27.5 Site Conditions. Before, or at the time of installation, the Installer, under the direct supervision of the Installation Manager and the Contractor's Licensed Plumbers, shall inspect the existing water meter setting, including piping and control valves. If the Contractor determines that conditions are such that damage to the existing piping would result, the Installation Manager shall immediately contact the City Project Manager, shall not attempt the installation until the site is inspected by an authorized City representative, and shall postpone installation at that site until the Project Manager authorizes the Contractor to proceed with the work.
- 27.6 Geopositioning Coordinates. For each meter installed in an outdoor pit, box or vault, Contractor shall capture Survey Grade GPS positioning using a geopositioning device. In the event the meter's GPS position cannot be acquired (because the GPS receiver is blocked), Installer must manually enter the descriptive location of meter into handheld data entry unit. Describe how Proposer intends to provide GPS data for each meter.
- 27.7 Digital Photographs. The City requires that digital photographs be taken before and after installation to provide documentation of problematic pre-existing site conditions. The photo should have an accurate date and time stamp and the file name of the photo shall include the applicable register number. Digital photographs should be available to the City in a database searchable by address, premises identification number, meter number or account number.
- 27.8 Old Meter Reading Disputes. Contractor shall provide procedures for ensuring that any dial meter is read properly (such as a digital photograph), and for providing evidence of the reading in the case of any customer disputes.
- 27.9 Repairs. At its option, the City may authorize the Contractor to make any necessary repairs to service lines or piping, order the customer to make such repairs, or undertake such repairs itself.
- 27.10 Old Piping. Old piping *per se* shall not be grounds for the failure of the Installer to replace a meter designated for replacement. Only when old piping is leaking or deteriorated to a point that damage to it could reasonably be expected by changing the meter, will poor piping be accepted as a reason for not replacing the meter. Unless the City's Project Manager remands the particular installation to the City for further action, Contractor is still required to install the meter and AMR/AMI equipment after the piping has been repaired or replaced at any time during the installation period.
- 27.11 Meter Replacement. Installer shall ensure he is at correct location and meter, and check for running water prior to commencing meter change-out. Installer shall then replace the meter, using new gaskets or washers. All conversion bushings or other hardware necessary to install the new water meter in the consumer's existing meter setup must be furnished by the Contractor.
- 27.12 Strainers. If the meter to be replaced has a strainer, the Installation Contractor shall be responsible for replacing the strainer along with the meter, unless conditions prevent such replacement. The contractor shall otherwise be responsible for repairing or cleaning the strainer to ensure that is in good working order and will not adversely affect meter performance.
- 27.13 Verifying Service Working. Installer shall flush water line after installing a new meter to ensure the meter is registering properly and verify service restoration to the entire premise. The Contractor shall repair or replace at their own cost, any damage caused to the private service line and private fixtures due to not following proper procedures when restoring service to customer.
- 27.14 Valves. To shut off the water, the Contractor shall close at the curb stop valve. At no time shall an Installer use a crimping device to restrict water flow. If the curb stop valve cannot be located or is inoperable the Contractor shall notify the City Project Manager and the City shall rectify the problem. If shutoff valves are damaged by Contractor when opening or closing, Contractor shall replace such valves following the City

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rules, regulations and specifications, upon being authorized by the City at Contractor's own cost. Valves provided by Contractor must conform to the City's specifications.

- 27.15 Internal Plumbing Irregularities. The Contractor shall report to the Project Manager, prior to the installation of a meter, any meter and/or plumbing irregularities including but not limited to meters installed backwards and disconnected meters. The Contractor shall also notify the Project Manager of a condition in which a meter has been removed and replaced with connecting pipes, registers are disconnected from meters, there are illegal connections before a meter, or there are unmetered connections of a customer's plumbing to a service lateral, fire pipe or water main. The Contractor shall not proceed with the installation of a meter until the Project Manager has authorized such installation.
- 27.16 Dirt or Water Around Meter. Contractor shall be responsible for removing and properly disposing of any reasonable amount of dirt needed to access a meter in a meter pit or vault. Dirt shall be removed such that there is a minimum of 2" clearance below the meter. Contractor shall attempt to expose connection to the service line and any piping between the service line connection and the meter to ensure that they are in a condition that won't be damaged by changing the meter. If a water meter box or vault is flooded so that the meter is fully or partially submerged, the Installer must pump out the water in the box before changing the meter. The pumped out water shall be disposed of in a safe and proper manner as to not cause harm to the surroundings or to others. The Installer must ensure that the water service is not in any way contaminated, even intermittently, by standing water in the meter vault or box. All waste resulting from cleaning the meter pit as well as replacing the meter box and lid must be cleaned up and hauled off by the Contractor. The existing meter box and lid, if replaced, shall be disposed of by the Contractor. If grass or shrubbery is damaged by the installation process, the Contractor must repair the damage to original condition to the satisfaction of the consumer by replanting, re-sodding or reseeding. The City reserves the right to inspect any installation and clean-up work within 30 days before payment is made to the Contractor. The City reserves the right to inspect any installation and clean-up work within 90 days after installation in response to customer complaints of damage. Contractor shall be responsible for claims resulting from damage caused by installation.
- 27.17 Service Line Damage. The Contractor shall be responsible for repairing any service lines it damages at its sole cost and expense, unless Installation Manager has reported (prior to commencement of installation) a condition of antiquated or inferior plumbing to the Project Manager and the Project Manager has authorized the Contractor to proceed with the work. In the event a service line fails during or after the installation procedure has been authorized to proceed, the Contractor's licensed plumber will oversee the necessary repair work to the water service line. The cost of this work will be reimbursed to the Contractor at a price agreed to beforehand. This price will include site preparation, all labor, material and permits as required. All work must comply with the City's standards for service repairs or replacement. The City personnel shall inspect all work. Any damage done by the Contractor outside the area and scope of the work of the contract shall be repaired or replaced at Contractor's sole cost and expense. All plumbing work other than the replacement of a water meter must be authorized by the City and inspected by the City field inspector.
- 27.18 Returned Work Orders. Returned work orders shall include: meter size and meter type, verification or correction of existing meter and account information, old meter serial number, final reading on old meter, new meter number, new meter register number, premises identification number, endpoint ID number, reading on new meter register, date and time of installation, name of installer, notice of any problems encountered or repairs made. All information requested on the work order must be completely filled out for the installation to be considered complete and eligible for payment. An electronic copy of all the work order information must be provided to the Project Manager on a daily basis.

28.0 Quality Control

- 28.1 Response to complaints. Should the Contractor receive a call or complaint from a customer or the City regarding installation, the Contractor shall immediately log the call, including caller's name, address, account number if available, date and time of call, nature of problem and the action taken. Copies of all call logs shall be forwarded to the City's Project Manager not less than once per day.
- 28.2 Improper installations. The Contractor shall be responsible for replacing any meter, endpoint or appurtenances improperly set by its Installer. The Contractor shall correct any damage to couplings, threads, unions or meters by use of improper tools or cross threading by an Installer.
- 28.3 Leaks after installation. Contractor shall be responsible for correcting any leaks at the valves, couplings or service lines that could reasonably be attributed to the meter installation if reported by the City or customers within 90 days of installation.
- 28.4 Installation control and audit procedures. Proposer shall describe in detail its proposed system for ensuring that all data pertaining to installation is correctly recorded during installation, and that all data transferred to the CIS is accurate. Proposer shall describe procedures for eliminating any opportunities for a meter or endpoint to be associated in the control computer or the CIS with the wrong address or account number.
- 28.5 Regular meetings with the City. Project Manager shall meet with the City personnel periodically and not less than monthly to update them on progress against the installation schedule.

29.0 Warranties

- 29.1 Installation Warranties. All installation work, including materials used in the installation performed under this contract, shall be guaranteed against defects in workmanship for a period of one year from the date of acceptance by the City.
- 29.2 Installation References. Proposer shall provide a list of all AMR/AMI installation contracts performed by the installation contractor incorporated in its proposal, including the total number of units, percent completed, and contract information, that installation contractor shall have commenced within a three-year interval ending with the date of its proposal. Proposer shall provide the names, addresses, and telephone numbers of three references, if available, from utilities of the comparable size, where the installation has been substantially completed.
- 29.3 Installation Manager Resumes. Proposer shall provide resumes for key employees, including Installation Manager and other staff who will be assigned to the project.

30.0 Insurance Requirements

When required and specified in the City of Laredo Proposal specifications, the successful bidder(s) shall furnish the City with original copies of valid insurance policies herein required upon execution of the contract and shall maintain said policies in full force and effect at all times during the term of this contract.

- 30.1 Commercial General Liability insurance at minimum combined single limits of \$1,000,000 per-occurrence and \$2,000,000 general aggregate for bodily injury and property damage, which coverage shall include products/completed operations (\$1,000,000 products/ completed operations aggregate), and XCU (Explosion, Collapse, Underground) hazards. Coverage for products/completed operations must be maintained for at least two (2) years after the construction work has been completed. Coverage must be amended to provide for an each-project aggregate limit of insurance. An alternative would be to have separate limits for all lines of General Liability coverage for each project.

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- 30.2 Workers Compensation insurance at statutory limits, including Employers Liability coverage a minimum limits of \$1,000,000 each-occurrence each accident/\$1,000,000 by disease each-occurrence/\$1,000,000 by disease aggregate.
- 30.3 Commercial Automobile Liability insurance at minimum combined single limits of \$1,000,000_per-occurrence for bodily injury and property damage, including owned, non-owned, and hired car coverage.
- 30.4 Any Subcontractor(s) hired by the Contractor shall maintain insurance coverage equal to that required of the Contractor. It is the responsibility of the Contractor to assure compliance with this provision. The City of Laredo accepts no responsibility arising from the conduct, or lack of conduct, of the Subcontractor.
- 30.5 A Comprehensive General Liability insurance form may be used in lieu of a Commercial General Liability insurance form. In this event, coverage must be written on an occurrence basis, at limits of \$1,000,000 each-occurrence, combined single limit, and coverage must include a broad form Comprehensive General Liability Endorsement, products/completed operations, XCU hazards, and contractual liability.
- 30.6 With reference to the foregoing insurance requirement, Contractor shall specifically endorse applicable insurance policies as follows:
 - 30.6.1 The City of Laredo shall be named as an additional insured with respect to General Liability and Automobile Liability.
 - 30.6.2 All liability policies shall contain no cross liability exclusions or insured versus insured restrictions.
 - 30.6.3 A waiver of subrogation in favor of the City of Laredo shall be contained in the Workers compensation, Builders Risk, and all liability policies.
 - 30.6.4 All insurance policies shall be endorsed to require the insurer to immediately notify The City of Laredo of any material change in the insurance coverage.
 - 30.6.5 All insurance policies shall be endorsed to the effect that The City of Laredo will receive at least sixty- (60) days' notice prior to cancellation or non-renewal of the insurance.
 - 30.6.6 All insurance policies, which name The City of Laredo as an additional insured, must be endorsed to read as primary coverage regardless of the application of other insurance.
 - 30.6.7 Required limits may be satisfied by any combination of primary and umbrella liability insurances.
 - 30.6.8 Contractor may maintain reasonable and customary deductibles, subject to approval by The City of Laredo.
 - 30.6.9 Insurance must be purchased from insurers that are financially acceptable to the City of Laredo. Insurer must be rated A- or greater by AM Best Rating with an admitted carrier licensed by the Texas Department of Insurance.
- 30.7 All insurance must be written on forms filed with and approved by the Texas Department of Insurance. Certificates of Insurance shall be prepared and executed by the insurance company or its authorized agent and shall contain provisions representing and warranting the following:
 - 30.7.1 Sets forth all endorsements and insurance coverage's according to requirements and instructions contained herein.
 - 30.7.2 Shall specifically set forth the notice-of-cancellation or termination provisions to The City of Laredo.

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- 30.8 Upon request, Contractor shall furnish The City of Laredo with certified copies of all insurance policies.
- 30.9 Vendor must comply with all applicable federal and State of Texas laws, regulations and codes in respect to the qualifications, licenses and certifications necessary to perform all scope of work.

31.0 Proposal Evaluation and Award

All properly completed proposals will be reviewed by the Utilities Department. The Utilities Department shall make a recommendation to the City of Laredo as to the best proposer for contract negotiations. The City of Laredo may accept the recommendation and order negotiations with the selected proponent, or may reject the recommendation and order the re-issuance of another RFP.

31.1 Oral Interviews and Product Demonstration

During the evaluation process, the City of Laredo may choose to interview a select number of proposers. Proposers should be prepared to make a presentation to the City of Laredo including an operating demonstration of the proposed equipment and software.

- 31.2 The City's obligation for performance of this proposal is contingent upon the availability of funds from which payments for the contract purchases can be made. If no funds are appropriated and budgeted during the next fiscal year, this proposal becomes null and void.

- 31.3 Submission and award of contract shall be based on the "Terms and Conditions of the Request for Proposal" which is attached and make part of these specifications. This contract will be awarded the bidder (s) that provides the **best value** to the City of Laredo and who's proposed price and other factors have been considered in accordance to the provisions of Chapters 252 and 271 of the State of Texas - Local Government Code.

In determining the **best value** for the City of Laredo the following factors shall be considered by the Utilities Department, in accordance with the corresponding weights, in evaluating the proposals:

- 31.4 The following factors shall be considered by the selection committee, in accordance with the corresponding weights, in evaluating the proposals:

Section	Criteria	Weighted %
I	<u>Company Information / Qualifications/ Reputation – Tab A</u> Provide background information on the company and other team members, if any, including qualifications, corporate structure, staffing levels, years in business, recent similar project experience. Minimum three references.	15%
II	<u>Technical Specification-Tab B</u> Describe how you will accomplish the requirements of the project described on this RFP.	20%
III	<u>Pricing – Tab C</u> Cost Effective Solution	50%
IV	<u>Warranty – Ongoing support to the City of Laredo Tab D</u> Vendor must provide details about warranties, methods of remedy, and response time to repair by phone and on-site respectively.	10%
V	<u>Vendor Information Sheet Page 2 and Conflict of Interest Questionnaire -- Tab E</u>	5%

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31.5 Rating of Definitions for 10 point Method

Points	Rating	Definition
0	Unsatisfactory	Does not satisfy criteria in specifications.
1	Very Poor to Unsatisfactory	
2	Very Poor	Meets elements of some criteria minimally.
3	Poor to Very Poor	
4	Poor	Meets some criteria at minimum acceptable level.
5	Average to Poor	
6	Average	Adequately meets most criteria.
7	Good to Average	
8	Good	Exceeds minimum criteria.
9	Very Good	Provides benefits to the entity in addition to all required criteria.
10	Excellent	Exceeds all required criteria and provides additional benefits in most areas.

32.0 Evaluation Form (Example)

Section	Criteria	0-10 Points	Weighted %	Points x Weight
I	Company Information / Qualifications (Tab A)	8	15%	1.2
II	Technical (Tab B)	6	20%	1.2
III	Pricing (Tab C)	8	50%	4.0
IV	Warranty (Tab D)	5	10%	0.5
V	Vendor Information Sheet Page 2 and Conflict of Interest Questionnaire (Tab E)	10	5%	0.5
Total Raw Point				7.40
Total Raw Point x 10 (True Evaluation Points) Evaluation Score				74

33.0 Required Format and Contents of Proposal

For a proposal to be considered it must contain the following minimum information presented in the following format:

33.1 Section I Company Information / Qualifications – Tab A

Provide background information on the company and other team members, if any, including qualifications, corporate structure, staffing levels, years in business, recent similar project experience and, for main contractor only company financial data including bonding rate.

Provide references for at least five clients for whom you have completed a project comparable to this project within the last 2 years. The references must be for systems having a minimum of 50,000 or more AMR/AMI endpoints under contract and are pit type settings, similar to the City of Laredo. The references also must be for systems that are actively reading installed endpoints.

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33.2 Section II Technical Specifications-Tab B

Describe how you will accomplish the requirements of the project described on this RFP. The proposed solution must be compatible with existing equipment.

Be specific, so that the response can be evaluated for understanding of the City's requirements. A detail description of the proposed system is required, including:

33.2.1 A logical diagram of all components involved in the implementation, equipment and capabilities;

33.3 A summary description of the major hardware, software, licenses and operating features of the metering system and its management with a list of equipment that will be provided;

33.3.1 Description of the planned incorporation and possibility of future upgrades; and

33.3.2 A description of alternative approaches not specifically requested in this RFP which the Vendor believes may have value to the City;

34.0 Cost Proposal

34.1 Section III Pricing – Tab C

List the total cost for the project assuming all work is performed during regular business hours. Provide an itemized breakdown of the cost for the project, by site, showing costs for each hardware and software item, direct labor cost, and overhead.

Items in the budget estimate should include:

34.1.1 Software licenses to register software components of hardware;

34.1.2 Staffing required for implementation;

34.1.3 Training cost and number of hours.

34.1.4 Prices indicated shall be for normal installations, exclusive of repairs to or modification or replacement of service lines, pits (other than the replacement of lids and rings), valves or customer's plumbing.

34.1.5 Pricing shall be firm for five years from the date of the Notice to Proceed.

******Cost must be presented separately as well as for a total overall cost.***

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Water Meters/AMR/AMI System Pricing

ESTIMATED QUANTITY	METER SIZE	METER TYPE	AMI Complete Meter	AMR Complete Meter	AMI kit (REG /ENDPOINT/ Antenna)	AMR kit (REG /ENDPOINT/ Antenna)	AMR Retrofit (ENDPOINT/ Antenna)	AMI Retrofit (ENDPOINT/ Antenna)	TOTAL \$
8000	5/8" x 3/4"	Pit PD							
4000	5/8" x 3/4"	Pit PD							
350	3/4"	Pit PD							
150	3/4"	Pit PD							
150	1"	Pit PD							
120	1"	Pit PD							
100	1 1/2"	Pit PD							
75	1 1/2"	Turbine							
100	2"	Pit PD							
100	2"	Turbine							
80	2"	Compound							
25	3"	Turbine							
25	3"	Compound							
10	3"	Compound							
3	4"	Turbine							
3	4"	Compound							
10	4"	Compound							
3	6"	Turbine							
3	6"	Compound							
1	6"	Compound							
TOTAL \$									

Installation Services Pricing (Refer to Specification 22.2)

ESTIMATED QUANTITY	METER SIZE	METER TYPE	AMI Complete Meter	AMR Complete Meter	AMI kit (REG /ENDPOINT/ Antenna)	AMR kit (REG /ENDPOINT/ Antenna)	TOTAL \$
8000	5/8" x 3/4"	Pit PD					
4000	5/8" x 3/4"	Pit PD					
350	3/4"	Pit PD					
150	3/4"	Pit PD					
150	1"	Pit PD					
120	1"	Pit PD					
TOTAL \$							

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34.2 Section IV Warranty – Tab D

All materials, and work or labor must have at least one year of warranty for defects in material and workmanship after acceptance testing and that they conform to the applicable product specifications. Vendor must provide details about warranties, methods of remedy, and response time to repair by phone and on-site respectively.

34.3 Section V Vendor Information Sheet Page 2 and Conflict of Interest Questionnaire page 4—Tab E

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35.0 Vendors Instructions:

Proposals will be received at the City Secretary Office, 1110 Houston St., 3rd. floor, Laredo, Texas 78040 until **5:00 P.M. on December 20, 2012** and all proposals received will be opened and publicly acknowledged at 3:00 PM on December 21, 2012.

Proposals are to be submitted in a sealed envelope clearly marked:

Proposal: **Water Meter/AMR/AMI System – Utilities Department
RFP FY13-012**

Proposals are to be mailed: City of Laredo - City Secretary
C/O Gustavo Guevara, Jr.
City Hall - Third Floor
P. O. Box 579
Laredo, Texas 78042-0579

Hand Delivered: City of Laredo - City Secretary
C/O Gustavo Guevara, Jr.
City Hall - Third Floor
1110 Houston Street
Laredo, Texas 78040

Required Submittals:

- 1. Bidder information sheet (Page 2)**
- 2. Conflict of Interest Disclosure (Page 4)**
- 3. Please submit one original signed proposal and five copies**

EXHIBIT 2

CITY OF LAREDO CLARIFICATIONS TO RFP



City of Laredo Purchasing Division

Clarifications RFP FY13-012

December 14, 2012

Ref: Proposal: **Water Meter/AMR/AMI System – Utilities Department
FY13-012**

To All Interested Vendors:

Please note the following **clarifications**:

- A) In section 16.8, the City is requesting that the vendor shall be the sole manufacturer of the different components of the system (endpoints, data collector, host software, and meters), and provide a turnkey system offering to the utility. A prime contractor will not be considered a qualified bidder as this is not what the City is looking for.
- B) On page 13 under Registers-absolute encoders, the no external wires except for a quick disconnect to the external antenna is for the registers that will be provided with the meters for a complete meter exchange noted under the section 21.0, Bid Tabulation Form, under columns AMI/Complete Meter and AMR/Complete Meter and for meter retrofits under the columns AMI Kit(Reg/Endpoint/Antenna) and AMR Kit (Reg/Endpoint/Antenna).
- C) On page 14, still under Registers-absolute encoders, it states that the registers must come with a 20 foot pig tail wire connected to the meter endpoint if ordered by Owner for inventory. This is for meters exchanges that will be done by the Utilities Department. The endpoints mentioned that must have a 6 foot pigtail are for registers that are already set in the field or are in our inventory and are AMR/AMI ready and are noted under section 21.0, Bid Tabulation Form, under columns AMR Retrofit (Endpoint/Antenna) and AMI Retrofit (Endpoint/Antenna).
- D) The stem + water height = overflow height for the tank. Is not the top of the bowl, but the provided information will provide an idea of the height of the tank. Ground Elevation +stem+ water height=overflow elevation for the tank. The Total Static Head (Ft) is the elevation of the overflow of the tank, again, is not the top of the bowl, but the provided information will give an idea of the height of the tank.
- E) Is the City able to provide an estimated cost for the meters, and the installation of the meters combined? 4.5 million per year on a 5 year project timeline.
- F) What is the anticipated start date for the project? February 2012
- G) Is a performance & payment bond required for this project? Yes. See page 36.
- H) Are meters in setters, or are they connected with straight meter couplings? Even if the meters have reseters, they are attached by meter couplings.



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- I) What percentage, if any, of meters are located in asphalt/concrete? 10-15%
- J) Do all settings have shut off valves before the meter? Yes.
- K) What is the material of the existing service lines (plastic, copper, galvanized)? All
- L) What is the age of the existing service lines? Unknown
- M) Will the Contractor be responsible for obtaining warehousing for the storage of old/new meters? Yes.
See page 25 under Project Management.
- N) Who will take possession of the meters removed from service? The vendor.
- O) What is the primary make-up of the meter box lid (plastic, cast iron or concrete)? The majority (90%) are cast iron.
- P) Are there existing holes in the meter box lids? No
- Q) According to page 35 of 43, “All waste resulting from cleaning the meter pit as well as replacing the meter box and lid must be cleaned up and hauled off by the Contractor.” Question: Is the Installation Contractor responsible for providing the meter boxes and lids? No. Is so, who is responsible for providing the meter boxes and lids? City will provide boxes and lids as noted under Section 25.3. Please provide the specifications for the meter boxes needing to be installed? (Drawings, sizes, etc.) Not applicable as the City will be providing the meter boxes and lids needed. How should the Installation Contractor price the replacement of the meter box and lid seeing as there is not a line item on the price sheet? Based on the number of accounts that are listed on the Installation Services Pricing on page 41, the price should include everything to install one meter.
- R) According to pg. 32 of 43, “Installation Contractor shall replace all meter box lids and any other lids needed to obtain the performance requirements specified herein. The City will provide the meter box lids.” Question: How should the Installation Contractor price the replacement of the lids seeing as there is not a line item on the price sheet? Based on the number of accounts that are listed on the Installation Services Pricing on page 41, the price should include everything to install one meter.
- S) What is the procedure for inoperable or broken valves? See section 27.14
- T) How is the Contractor to price the installation of the AMI System (Collectors, network control computer, all necessary hardware and software, billing system integration, etc.) and the installation of the AMR System (Mobile Laptop Meter Reading Device, software, work order management system, etc.) seeing as there is not a line item for the above mentioned items? Based on the number of accounts that are listed on the Water meters/AMR/AMI System Pricing on page 41, the price should include everything to have one meter function in the manner specified.



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- U) How many tanks have Ethernet? Two
- V) Could there be a price increase after the first year maybe based on the PPI? There is a formula that exists for construction contracts. It is something that is negotiable.
- W) Can you provide the two heights missing on the tanks, (Del Mar and Hillside)? The Del Mar tank is 100 feet to the bottom of the bowl and has a total of 129 feet to the top of the tank. The Hillside tank has 87 feet to the bottom of the bowl and has a total of 110 feet to the top of the tank.
- X) Can you clarify in the RFP, the warranty list a warranty of 20 years with 10 fixed and 10 at a prorated rate on page 15 but has 12 years full warranty for the batteries on page 23. Which is correct? Page 23 is a typo. It should read 10 years not twelve.
- Y) Who will pay for the interface to the Billing System? The Vendor. It is part of the whole system cost.
- Z) Will the City consider extending the deadline for the RFP? No.
- AA) On past meter bids, the “domestic only” (made in the United States) was specified. I wanted to clarify that that was in effect for all components on the project. Yes, that is correct and is under Warranty on page 15 in the RFP.
- BB) To make sure I am clear on section 16.8, Neptune does comply with the sole manufacturer requirement for all meters, transmitters, and associated software/reading equipment. As a manufacturer though, we cannot supply the meter installation aspect. Therefore, our wish is to have Pedal Valve (our installation partner) act as the prime on this proposal to provide a turnkey solution. As in the past all warranties and performance guarantees will be the responsibility of Neptune and our distributor, HD Supply. To further clarify the City acknowledges that although it has maintained that the vendor shall be the sole manufacturer certain business practices prevent the manufacturer from being the prime party submitting the proposal. In these cases, the City will accept proposals from other than sole manufacturers with the condition that all specified components (meters, transmitters, and all other associated software/reading equipment used) by the prime proposer be provided by a single manufacturer and therefore all warranties and performance guarantees will be the responsibility of the sole manufacturer and/or their representative.
- CC) The RFP states that the City will not store any project materials at their facilities. Will the City provide land/area where the contactor can bring in storage containers/conexes to warehouse the materials for the project? No, the vendor is responsible for storing all project materials.



City of Laredo Purchasing Division

DD) I see that there are bid forms for the meters and the installation but that there is no bid form for the infrastructure components such as data collectors, software, servers, annual maintenance fees, etc. Are you planning on providing an additional form for the infrastructure or should we add a table to our proposal for these items? Neither. Based on the number of accounts that are listed on the Water meters/AMR/AMI System Pricing on page 41, the price should include everything to have one meter function in the manner specified.

EE) I am requesting consideration for addendum to Water Meter/AMR/AMI System-Utilities Department RFP FY 13-012. The addendum is as follows: Alternative Metering and System Technologies exceeding current specifications provided by City of Laredo in-conjunction this RFP can be proposed in addition general proposal submittals. No, the City will not do an addendum to this RFP.

Sincerely,

Enrique Aldape III
Administrative Assistant II

Acknowledgement of Clarifications #1 _____

(Please sign/ date and include with proposal)

XC Purchasing File

EXHIBIT 3

PRICING FOR NEPTUNE WATER METERS

**Exhibit 3 - Pricing for Neptune Water Meters
Overall**

Phases 1 - 5 AMI Complete Meter	\$7,825,830.95
Phases 1 - 5 AMR Complete Meter	\$358,512.35
Phases 1 - 5 AMI Retrofit	\$3,368,948.45
Phases 1 - 5 AMR Retrofit	\$147,766.65
Total Meter Purchase for Project	\$11,701,058.40

**Exhibit 3 - Pricing for Neptune Water Meters
Year 1**

Complete Meters

Size	QTY	AMI Complete Meter Unit Cost	AMI Extended	AMR Complete Meter Unit Cost	AMR Extended
5/8" X 3/4"	7588	\$175.74	\$1,333,515.12	\$150.30	\$1,140,476.40
3/4"	167	\$201.47	\$33,645.49	\$174.74	\$29,181.58
1"	173	\$247.20	\$42,765.60	\$219.95	\$38,051.35
1.5"	103	\$568.54	\$58,559.62	\$537.64	\$55,376.92
2"	97	\$1,155.61	\$112,094.17	\$1,093.61	\$106,080.17
3"	20	\$2,175.26	\$43,505.20	\$2,101.67	\$42,033.40
4"	4	\$2,657.27	\$10,629.08	\$2,578.21	\$10,312.84
6"	3	\$4,276.36	\$12,829.08	\$4,178.89	\$12,536.67
Totals	8155		\$1,647,543.36		\$1,434,049.33

Retrofits

Size	QTY	AMI Retrofit Unit Cost	AMI Extended	AMR Retrofit Unit Cost	AMR Extended
5/8" X 3/4"	4451	\$143.37	\$638,139.87	\$119.48	\$531,805.48
3/4"	148	\$143.37	\$21,218.76	\$119.48	\$17,683.04
1"	107	\$143.37	\$15,340.59	\$119.48	\$12,784.36
1.5"	57	\$143.37	\$8,172.09	\$119.48	\$6,810.36
2"	73	\$286.75	\$20,932.75	\$238.95	\$17,443.35
3"	13	\$286.75	\$3,727.75	\$238.95	\$3,106.35
4"	5	\$286.75	\$1,433.75	\$238.95	\$1,194.75
6"	1	\$286.75	\$286.75	\$238.95	\$238.95
Totals	4855		\$709,252.31		\$591,066.64

AMI	95%
AMR	5%

Year 1 AMI Complete Meter	\$1,565,166.19
Year 1 AMR Complete Meter	\$71,702.47
Year 1 AMI Retrofit	\$673,789.69
Year 1 AMR Retrofit	\$29,553.33
Total Meter Purchase Year 1	\$2,340,211.68

**Exhibit 3 - Pricing for Neptune Water Meters
Year 2**

Complete Meters

Size	QTY	AMI Complete Meter Unit Cost	AMI Extended	AMR Complete Meter Unit Cost	AMR Extended
5/8" X 3/4"	7588	\$175.74	\$1,333,515.12	\$150.30	\$1,140,476.40
3/4"	167	\$201.47	\$33,645.49	\$174.74	\$29,181.58
1"	173	\$247.20	\$42,765.60	\$219.95	\$38,051.35
1.5"	103	\$568.54	\$58,559.62	\$537.64	\$55,376.92
2"	97	\$1,155.61	\$112,094.17	\$1,093.61	\$106,080.17
3"	20	\$2,175.26	\$43,505.20	\$2,101.67	\$42,033.40
4"	4	\$2,657.27	\$10,629.08	\$2,578.21	\$10,312.84
6"	3	\$4,276.36	\$12,829.08	\$4,178.89	\$12,536.67
Totals	8155		\$1,647,543.36		\$1,434,049.33

Retrofits

Size	QTY	AMI Retrofit Unit Cost	AMI Extended	AMR Retrofit Unit Cost	AMR Extended
5/8" X 3/4"	4451	\$143.37	\$638,139.87	\$119.48	\$531,805.48
3/4"	148	\$143.37	\$21,218.76	\$119.48	\$17,683.04
1"	107	\$143.37	\$15,340.59	\$119.48	\$12,784.36
1.5"	57	\$143.37	\$8,172.09	\$119.48	\$6,810.36
2"	73	\$286.75	\$20,932.75	\$238.95	\$17,443.35
3"	13	\$286.75	\$3,727.75	\$238.95	\$3,106.35
4"	5	\$286.75	\$1,433.75	\$238.95	\$1,194.75
6"	1	\$286.75	\$286.75	\$238.95	\$238.95
Totals	4855		\$709,252.31		\$591,066.64

AMI	95%
AMR	5%

Year 1 AMI Complete Meter	\$1,565,166.19
Year 1 AMR Complete Meter	\$71,702.47
Year 1 AMI Retrofit	\$673,789.69
Year 1 AMR Retrofit	\$29,553.33
Total Meter Purchase Year 1	\$2,340,211.68

**Exhibit 3 - Pricing for Neptune Water Meters
Year 3**

Complete Meters

Size	QTY	AMI Complete Meter Unit Cost	AMI Extended	AMR Complete Meter Unit Cost	AMR Extended
5/8" X 3/4"	7588	\$175.74	\$1,333,515.12	\$150.30	\$1,140,476.40
3/4"	167	\$201.47	\$33,645.49	\$174.74	\$29,181.58
1"	173	\$247.20	\$42,765.60	\$219.95	\$38,051.35
1.5"	103	\$568.54	\$58,559.62	\$537.64	\$55,376.92
2"	97	\$1,155.61	\$112,094.17	\$1,093.61	\$106,080.17
3"	20	\$2,175.26	\$43,505.20	\$2,101.67	\$42,033.40
4"	4	\$2,657.27	\$10,629.08	\$2,578.21	\$10,312.84
6"	3	\$4,276.36	\$12,829.08	\$4,178.89	\$12,536.67
Totals	8155		\$1,647,543.36		\$1,434,049.33

Retrofits

Size	QTY	AMI Retrofit Unit Cost	AMI Extended	AMR Retrofit Unit Cost	AMR Extended
5/8" X 3/4"	4451	\$143.37	\$638,139.87	\$119.48	\$531,805.48
3/4"	148	\$143.37	\$21,218.76	\$119.48	\$17,683.04
1"	107	\$143.37	\$15,340.59	\$119.48	\$12,784.36
1.5"	57	\$143.37	\$8,172.09	\$119.48	\$6,810.36
2"	73	\$286.75	\$20,932.75	\$238.95	\$17,443.35
3"	13	\$286.75	\$3,727.75	\$238.95	\$3,106.35
4"	5	\$286.75	\$1,433.75	\$238.95	\$1,194.75
6"	1	\$286.75	\$286.75	\$238.95	\$238.95
Totals	4855		\$709,252.31		\$591,066.64

AMI	95%
AMR	5%

Year 1 AMI Complete Meter	\$1,565,166.19
Year 1 AMR Complete Meter	\$71,702.47
Year 1 AMI Retrofit	\$673,789.69
Year 1 AMR Retrofit	\$29,553.33
Total Meter Purchase Year 1	\$2,340,211.68

**Exhibit 3 - Pricing for Neptune Water Meters
Year 4**

Complete Meters

Size	QTY	AMI Complete Meter Unit Cost	AMI Extended	AMR Complete Meter Unit Cost	AMR Extended
5/8" X 3/4"	7588	\$175.74	\$1,333,515.12	\$150.30	\$1,140,476.40
3/4"	167	\$201.47	\$33,645.49	\$174.74	\$29,181.58
1"	173	\$247.20	\$42,765.60	\$219.95	\$38,051.35
1.5"	103	\$568.54	\$58,559.62	\$537.64	\$55,376.92
2"	97	\$1,155.61	\$112,094.17	\$1,093.61	\$106,080.17
3"	20	\$2,175.26	\$43,505.20	\$2,101.67	\$42,033.40
4"	4	\$2,657.27	\$10,629.08	\$2,578.21	\$10,312.84
6"	3	\$4,276.36	\$12,829.08	\$4,178.89	\$12,536.67
Totals	8155		\$1,647,543.36		\$1,434,049.33

Retrofits

Size	QTY	AMI Retrofit Unit Cost	AMI Extended	AMR Retrofit Unit Cost	AMR Extended
5/8" X 3/4"	4451	\$143.37	\$638,139.87	\$119.48	\$531,805.48
3/4"	148	\$143.37	\$21,218.76	\$119.48	\$17,683.04
1"	107	\$143.37	\$15,340.59	\$119.48	\$12,784.36
1.5"	57	\$143.37	\$8,172.09	\$119.48	\$6,810.36
2"	73	\$286.75	\$20,932.75	\$238.95	\$17,443.35
3"	13	\$286.75	\$3,727.75	\$238.95	\$3,106.35
4"	5	\$286.75	\$1,433.75	\$238.95	\$1,194.75
6"	1	\$286.75	\$286.75	\$238.95	\$238.95
Totals	4855		\$709,252.31		\$591,066.64

AMI	95%
AMR	5%

Year 1 AMI Complete Meter	\$1,565,166.19
Year 1 AMR Complete Meter	\$71,702.47
Year 1 AMI Retrofit	\$673,789.69
Year 1 AMR Retrofit	\$29,553.33
Total Meter Purchase Year 1	\$2,340,211.68

**Exhibit 3 - Pricing for Neptune Water Meters
Year 5**

Complete Meters

Size	QTY	AMI Complete Meter Unit Cost	AMI Extended	AMR Complete Meter Unit Cost	AMR Extended
5/8" X 3/4"	7588	\$175.74	\$1,333,515.12	\$150.30	\$1,140,476.40
3/4"	167	\$201.47	\$33,645.49	\$174.74	\$29,181.58
1"	173	\$247.20	\$42,765.60	\$219.95	\$38,051.35
1.5"	103	\$568.54	\$58,559.62	\$537.64	\$55,376.92
2"	97	\$1,155.61	\$112,094.17	\$1,093.61	\$106,080.17
3"	20	\$2,175.26	\$43,505.20	\$2,101.67	\$42,033.40
4"	4	\$2,657.27	\$10,629.08	\$2,578.21	\$10,312.84
6"	3	\$4,276.36	\$12,829.08	\$4,178.89	\$12,536.67
Totals	8155		\$1,647,543.36		\$1,434,049.33

Retrofits

Size	QTY	AMI Retrofit Unit Cost	AMI Extended	AMR Retrofit Unit Cost	AMR Extended
5/8" X 3/4"	4451	\$143.37	\$638,139.87	\$119.48	\$531,805.48
3/4"	148	\$143.37	\$21,218.76	\$119.48	\$17,683.04
1"	107	\$143.37	\$15,340.59	\$119.48	\$12,784.36
1.5"	57	\$143.37	\$8,172.09	\$119.48	\$6,810.36
2"	73	\$286.75	\$20,932.75	\$238.95	\$17,443.35
3"	13	\$286.75	\$3,727.75	\$238.95	\$3,106.35
4"	5	\$286.75	\$1,433.75	\$238.95	\$1,194.75
6"	1	\$286.75	\$286.75	\$238.95	\$238.95
Totals	4855		\$709,252.31		\$591,066.64

AMI	95%
AMR	5%

Year 1 AMI Complete Meter	\$1,565,166.19
Year 1 AMR Complete Meter	\$71,702.47
Year 1 AMI Retrofit	\$673,789.69
Year 1 AMR Retrofit	\$29,553.33
Total Meter Purchase Year 1	\$2,340,211.68

Exhibit 3 - Pricing for Neptune Water Meters

Meter Size	Meter Type	Item	Unit Cost
5/8" X 3/4"	PD	AMI Meter	\$175.74
5/8" X 3/4"	PD	AMR Meter	\$150.30
5/8" X 3/4"	PD	AMI Kit (Register/Endpoint/Antenna)	\$143.37
5/8" X 3/4"	PD	AMR Kit (Register/Endpoint/Antenna)	\$119.48
3/4"	PD	AMI Meter	\$201.47
3/4"	PD	AMR Meter	\$174.74
3/4"	PD	AMI Kit (Register/Endpoint/Antenna)	\$143.37
3/4"	PD	AMR Kit (Register/Endpoint/Antenna)	\$119.48
1"	PD	AMI Meter	\$247.20
1"	PD	AMR Meter	\$219.95
1"	PD	AMI Kit (Register/Endpoint/Antenna)	\$143.37
1"	PD	AMR Kit (Register/Endpoint/Antenna)	\$119.48
1.5"	PD	AMI Meter	\$422.69
1.5"	PD	AMR Meter	\$393.46
1.5"	PD	AMI Kit (Register/Endpoint/Antenna)	\$143.37
1.5"	PD	AMR Kit (Register/Endpoint/Antenna)	\$119.48
1.5"	PD	AMI Retrofit (Endpoint/Antenna)	\$101.21
1.5"	PD	AMR Retrofit (Endpoint/Antenna)	\$126.51
1.5"	Turbine	AMI Meter	\$568.54
1.5"	Turbine	AMR Meter	\$537.64
1.5"	Turbine	AMI Kit (Register/Endpoint/Antenna)	\$143.37
1.5"	Turbine	AMR Kit (Register/Endpoint/Antenna)	\$119.48
1.5"	Turbine	AMI UME	\$408.07
1.5"	Turbine	AMR UME	\$383.34
2"	PD	AMI Kit (Register/Endpoint/Antenna)	\$143.37
2"	PD	AMR Kit (Register/Endpoint/Antenna)	\$119.48
2"	PD	AMI Retrofit (Endpoint/Antenna)	\$101.21
2"	PD	AMR Retrofit (Endpoint/Antenna)	\$126.51
2"	Turbine	AMI Kit (Register/Endpoint/Antenna)	\$143.37
2"	Turbine	AMR Kit (Register/Endpoint/Antenna)	\$119.48
2"	Turbine	AMI Retrofit (Endpoint/Antenna)	\$101.21
2"	Turbine	AMR Retrofit (Endpoint/Antenna)	\$126.51
2"	Compound	AMI Meter	\$1,155.61
2"	Compound	AMR Meter	\$1,093.61
2"	Compound	AMI Kit (Register/Endpoint/Antenna)	\$286.75
2"	Compound	AMR Kit (Register/Endpoint/Antenna)	\$238.95
2"	Compound	AMI UME	\$816.13
2"	Compound	AMR UME	\$766.67
3"	Turbine	AMI Kit (Register/Endpoint/Antenna)	\$143.37
3"	Turbine	AMR Kit (Register/Endpoint/Antenna)	\$119.48
3"	Turbine	AMI Retrofit (Endpoint/Antenna)	\$101.21
3"	Turbine	AMR Retrofit (Endpoint/Antenna)	\$126.51

Exhibit 3 - Pricing for Neptune Water Meters

Meter Size	Meter Type	Item	Unit Cost
3"	Compound	AMI Meter	\$2,175.26
3"	Compound	AMR Meter	\$2,101.67
3"	Compound	AMI Kit (Register/Endpoint/Antenna)	\$286.75
3"	Compound	AMR Kit (Register/Endpoint/Antenna)	\$238.95
3"	Compound	AMI Retrofit (Endpoint/Antenna)	\$202.41
3"	Compound	AMR Retrofit (Endpoint/Antenna)	\$253.00
3"	Compound	AMI UME	\$1,075.81
3"	Compound	AMR UME	\$1,026.35
<hr/>			
4"	Turbine	AMI Kit (Register/Endpoint/Antenna)	\$143.37
4"	Turbine	AMR Kit (Register/Endpoint/Antenna)	\$119.48
4"	Turbine	AMI Retrofit (Endpoint/Antenna)	\$101.21
4"	Turbine	AMR Retrofit (Endpoint/Antenna)	\$126.51
<hr/>			
4"	Compound	AMI Meter	\$2,657.27
4"	Compound	AMR Meter	\$2,578.21
4"	Compound	AMI Kit (Register/Endpoint/Antenna)	\$286.75
4"	Compound	AMR Kit (Register/Endpoint/Antenna)	\$238.95
4"	Compound	AMI UME	\$1,335.49
4"	Compound	AMR UME	\$1,286.03
<hr/>			
6"	Turbine	AMI Kit (Register/Endpoint/Antenna)	\$143.37
6"	Turbine	AMR Kit (Register/Endpoint/Antenna)	\$119.48
6"	Turbine	AMI Retrofit (Endpoint/Antenna)	\$101.21
6"	Turbine	AMR Retrofit (Endpoint/Antenna)	\$126.51
<hr/>			
6"	Compound	AMI Meter	\$4,276.36
6"	Compound	AMR Meter	\$4,178.89
6"	Compound	AMI Kit (Register/Endpoint/Antenna)	\$286.75
6"	Compound	AMR Kit (Register/Endpoint/Antenna)	\$238.95
6"	Compound	AMI Retrofit (Endpoint/Antenna)	\$202.41
6"	Compound	AMR Retrofit (Endpoint/Antenna)	\$253.00
6"	Compound	AMI UME	\$1,854.84
6"	Compound	AMR UME	\$1,805.38
<hr/>			
8"	Compound	AMI Meter	\$6,666.67
8"	Compound	AMR Meter	\$6,559.14
8"	Compound	AMI Kit (Register/Endpoint/Antenna)	\$286.75
8"	Compound	AMR Kit (Register/Endpoint/Antenna)	\$238.95
8"	Compound	AMI UME	\$1,854.84
8"	Compound	AMR UME	\$1,805.38

Unit Pricing in the table above is guaranteed for 5 years from date of contract. The City of Laredo can also purchase inventory from Pedal Valves Inc. at the same costs listed above for a period of 5 years from date of contract.

EXHIBIT 4

UME PRICING OPTIONS

VS

LARGE METER PRICING

Exhibit 4 - UME Pricing Options vs Large Meter Pricing

Meter Size & Type	Meter Price	UME Price	Unit Savings by Choosing UME over Full Meter
1.5" Turbine AMI	\$568.54	\$408.07	\$160.47
1.5" Turbine AMR	\$537.64	\$383.34	\$154.30
2" Compound AMI	\$1,155.61	\$816.13	\$339.48
2" Compound AMR	\$1,093.61	\$766.67	\$326.94
3" Compound AMI	\$2,175.26	\$1,075.81	\$1,099.45
3" Compound AMR	\$2,101.67	\$1,026.35	\$1,075.32
4" Compound AMI	\$2,657.27	\$1,335.49	\$1,321.78
4" Compound AMR	\$2,578.21	\$1,286.03	\$1,292.18
6" Compound AMI	\$4,276.36	\$1,854.84	\$2,421.52
6" Compound AMR	\$4,178.89	\$1,805.38	\$2,373.51

EXHIBIT 5

PRICING FOR INSTALLATION SERVICES

**Exhibit 5 - Pricing for Installation Services
Overall**

Complete Meters

Size	QTY	AMI/AMR Meter Installation Unit Cost	Extended
5/8" X 3/4"	37940	\$45.00	\$1,707,300.00
3/4"	835	\$45.00	\$37,575.00
1"	865	\$45.00	\$38,925.00
Totals	39640		\$1,783,800.00

Retrofits

Size	QTY	AMI/AMR Retrofit Installation Unit Cost	AMI Extended
5/8" X 3/4"	22255	\$27.00	\$600,885.00
3/4"	740	\$27.00	\$19,980.00
1"	535	\$27.00	\$14,445.00
Totals	23530		\$635,310.00

Total Installation Services for Project	\$2,419,110.00
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**Exhibit 5 - Pricing for Installation Services
Year 1**

Complete Meters

Size	QTY	AMI/AMR Meter Installation Unit Cost	Extended
5/8" X 3/4"	7588	\$45.00	\$341,460.00
3/4"	167	\$45.00	\$7,515.00
1"	173	\$45.00	\$7,785.00
Totals	7928		\$356,760.00

Retrofits

Size	QTY	AMI/AMR Retrofit Installation Unit Cost	AMI Extended
5/8" X 3/4"	4451	\$27.00	\$120,177.00
3/4"	148	\$27.00	\$3,996.00
1"	107	\$27.00	\$2,889.00
Totals	4706		\$127,062.00

Total Installation Services Year 1	\$483,822.00
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**Exhibit 5 - Pricing for Installation Services
Year 2**

Complete Meters

Size	QTY	AMI/AMR Meter Installation Unit Cost	Extended
5/8" X 3/4"	7588	\$45.00	\$341,460.00
3/4"	167	\$45.00	\$7,515.00
1"	173	\$45.00	\$7,785.00
Totals	7928		\$356,760.00

Retrofits

Size	QTY	AMI/AMR Retrofit Installation Unit Cost	AMI Extended
5/8" X 3/4"	4451	\$27.00	\$120,177.00
3/4"	148	\$27.00	\$3,996.00
1"	107	\$27.00	\$2,889.00
Totals	4706		\$127,062.00

Total Installation Services Year 1	\$483,822.00
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**Exhibit 5 - Pricing for Installation Services
Year 3**

Complete Meters

Size	QTY	AMI/AMR Meter Installation Unit Cost	Extended
5/8" X 3/4"	7588	\$45.00	\$341,460.00
3/4"	167	\$45.00	\$7,515.00
1"	173	\$45.00	\$7,785.00
Totals	7928		\$356,760.00

Retrofits

Size	QTY	AMI/AMR Retrofit Installation Unit Cost	AMI Extended
5/8" X 3/4"	4451	\$27.00	\$120,177.00
3/4"	148	\$27.00	\$3,996.00
1"	107	\$27.00	\$2,889.00
Totals	4706		\$127,062.00

Total Installation Services Year 1	\$483,822.00
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**Exhibit 5 - Pricing for Installation Services
Year 4**

Complete Meters

Size	QTY	AMI/AMR Meter Installation Unit Cost	Extended
5/8" X 3/4"	7588	\$45.00	\$341,460.00
3/4"	167	\$45.00	\$7,515.00
1"	173	\$45.00	\$7,785.00
Totals	7928		\$356,760.00

Retrofits

Size	QTY	AMI/AMR Retrofit Installation Unit Cost	AMI Extended
5/8" X 3/4"	4451	\$27.00	\$120,177.00
3/4"	148	\$27.00	\$3,996.00
1"	107	\$27.00	\$2,889.00
Totals	4706		\$127,062.00

Total Installation Services Year 1	\$483,822.00
---	---------------------

**Exhibit 5 - Pricing for Installation Services
Year 5**

Complete Meters

Size	QTY	AMI/AMR Meter Installation Unit Cost	Extended
5/8" X 3/4"	7588	\$45.00	\$341,460.00
3/4"	167	\$45.00	\$7,515.00
1"	173	\$45.00	\$7,785.00
Totals	7928		\$356,760.00

Retrofits

Size	QTY	AMI/AMR Retrofit Installation Unit Cost	AMI Extended
5/8" X 3/4"	4451	\$27.00	\$120,177.00
3/4"	148	\$27.00	\$3,996.00
1"	107	\$27.00	\$2,889.00
Totals	4706		\$127,062.00

Total Installation Services Year 1	\$483,822.00
---	---------------------

EXHIBIT 6

PRICING FOR ADDITIONAL WORK & SERVICES

Exhibit 6 - Pricing for Additional Work & Services

Breakout Additional Work Pricing		
Meter Size	Additional Scope Item	Unit Price
3/4"	Curb Stop Replacement	\$65.00
3/4"	Meter Box & Lid Replacement	\$20.00
3/4"	Repair Leaking/Defective Piping at Meter Location	\$90.00
3/4"	Concrete/Asphalt Remove & Repour to Access Meter	\$175.00
1"	Curb Stop Replacement	\$80.00
1"	Meter Box & Lid Replacement	\$20.00
1"	Repair Leaking/Defective Piping at Meter Location	\$110.00
1"	Concrete/Asphalt Remove & Repour to Access Meter	\$175.00
N/A	Drill/Plasma Cut Hole in Lid for Transmitter*	\$5.00

* This charge is for Contractor to drill/plasma cut a hole in the existing meter box lid to allow for installation of the transmitter. Contractor will receive an initial "seed" stock from the City of Laredo in the amount of 500 lids. The City may need to provide additional "seed" stock throughout the project as defective/broken lids are replaced and diminish initial stock. "Seed" stock will be used to go out into the field on initial installs and placed into service. Existing lids will be brought into our warehouse and drilled/plasma cut. These lids will then go back out in rotation and the cycle will continue.

Exhibit 6 - Pricing for Additional Work & Services

Complete Meters

Size	AMI/AMR Meter Installation Unit Cost
1.5"	\$195.00
2"	\$195.00
3"	\$445.00
4"	\$445.00
6"	\$695.00

Retrofits

Size	AMI/AMR Retrofit Installation Unit Cost
1.5"	\$27.00
2"	\$27.00
3"	\$27.00
4"	\$27.00
6"	\$27.00

UME Replacements

Size	AMI/AMR UME Replacement Unit Cost
1.5"	\$50.00
2"	\$50.00
3"	\$100.00
4"	\$100.00
6"	\$150.00

EXHIBIT 7

**PRICING FOR INFRASTRUCTURE
IMPLEMENTATION & ANNUAL MAINTENANCE
COSTS**

Exhibit 7 - Pricing for Infrastructure Implementation & Annual Maintenance Costs

AMI/AMR Infrastructure Implementation

<u>Reading Equipment</u>	<u>Quantity</u>
R450 Data Collector	9
Server Upgrade	1
Training/Implementation	1
CE5320B Handheld w/HR2650i	12
MRX920 Mobile Data Collector w/ laptop	1
Installation*	9
Total Implementation Cost for AMI/AMR Infrastructure	\$388,100.00

*Installation includes the installation of up to 9 (nine) R450 data collectors with 8 (eight) of the sites utilizing Point-to-Point (P2P) connections for data back-haul and 1 (one) of the sites utilizing a LAN connection for backhaul. One of the collectors may not be needed to be installed and may be used as a spare. Data will be backhauled to the 2 (two) locations (includes the existing pilot location) served by a LAN connection, the City offices on Daugherty Ave., or a combination thereof. No additional cost for equipment or monthly charges for the City. P2P devices are included.

It is the responsibility of the City of Laredo to provide electricity (120VAC) at each collector site (water tanks). Based on the discussions at the pre-proposal conference it was stated that 120VAC was available at all of the sites. Further, it is the responsibility of Pedal Valve to extend electricity from the site to their equipment as specified in Exhibit 10 (Response from Pedal Valves to Request for Proposals).

Exhibit 7 - Pricing for Infrastructure Implementation & Annual Maintenance Costs

Annual Maintenance Charges from HD Supply/Neptune

<u>Annual Maintenance*</u>	<u>Quantity</u>	<u>Price/ea</u>	<u>Total</u>
ARB N Sight AMR Software	1	\$750.59	\$750.59
CE5320B Handheld w/HR2650i	12	\$994.12	\$11,929.41
MRX920 Mobile Data Collector	1	\$1,000.00	\$1,000.00
ARB N Sight AMI Software	1	\$2,000.00	\$2,000.00
AMI Data Collector	10	\$2,400.00	\$24,000.00
			\$39,680.00

*Maintenance Cost will commence after year 1; Maintenance is included in the price of the material/equipment/software during year one.

Fixed for 5 Years, Renegotiate after that period. Neptune has not increased annual maintenance pricing since 2004.

Annual Maintenance costs are direct with HD Supply/Neptune

Exhibit 7 - Pricing for Infrastructure Implementation & Annual Maintenance Costs

AMI/AMR Infrastructure Implementation

<u>Reading Equipment</u>	<u>Quantity</u>	<u>Price</u>	<u>Total</u>
R450 Data Collector	9	\$ 17,059.46	\$ 153,535.14
Server Upgrade	1	\$ 5,939.23	\$ 5,939.23
Training/Implementation	1	\$ 6,318.33	\$ 6,318.33
CE5320B Handheld w/HR2650i	12	\$ 3,791.00	\$ 45,492.00
MRX920 Mobile Data Collector w/ laptop	1	\$ 8,845.69	\$ 8,845.69
Installation*	9	\$ 18,663.29	\$ 167,969.61
Total Implementation Cost for AMI/AMR Infrastructure			\$388,100.00

*Installation includes the installation of up to 9 (nine) R450 data collectors with 8 (eight) of the sites utilizing Point-to-Point (P2P) connections for data back-haul and 1 (one) of the sites utilizing a LAN connection for backhaul. One of the collectors may not be needed to be installed and may be used as a spare. Data will be backhauled to the 2 (two) locations (includes the existing pilot location) served by a LAN connection, the City offices on Daugherty Ave., or a combination thereof. No additional cost for equipment or monthly charges for the City. P2P devices are included.

It is the responsibility of the City of Laredo to provide electricity (120VAC) at each collector site (water tanks). Based on the discussions at the pre-proposal conference it was stated that 120VAC was available at all of the sites. Further, it is the responsibility of Pedal Valve to extend electricity from the site to their equipment as specified in Exhibit 10 (Response from Pedal Valves to Request for Proposals).

Note: Detail line item pricing not provided in the original Contract. It was provided by the Pedal Valves at our request.

Exhibit 7 - Pricing for Infrastructure Implementation & Annual Maintenance Costs

Annual Maintenance Charges from HD Supply/Neptune

<u>Annual Maintenance*</u>	<u>Quantity</u>	<u>Price/ea</u>	<u>Total</u>
ARB N Sight AMR Software	1	\$750.59	\$750.59
CE5320B Handheld w/HR2650i	12	\$994.12	\$11,929.41
MRX920 Mobile Data Collector	1	\$1,000.00	\$1,000.00
ARB N Sight AMI Software	1	\$2,000.00	\$2,000.00
AMI Data Collector	10	\$2,400.00	\$24,000.00
			\$39,680.00

*Maintenance Cost will commence after year 1; Maintenance is included in the price of the material/equipment/software during year one.

Fixed for 5 Years, Renegotiate after that period. Neptune has not increased annual maintenance pricing since 2004.

Annual Maintenance costs are direct with HD Supply/Neptune

EXHIBIT 8

SCHEDULE OF VALUES

TO OWNER: City of Laredo
5512 Thomas Avenue
Laredo, TX 78041

PROJECT: AMI/AMR Water
Meter System

APPLICATION NO: 1

Distribution to:

<input checked="" type="checkbox"/>	OWNER
<input type="checkbox"/>	ARCHITECT
<input checked="" type="checkbox"/>	CONTRACTOR
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	

PERIOD TO:

FROM CONTRACTOR:
Pedal Valves Inc.
13625 River Road
Luling, LA 70070

Contractors Lic. # M-36824

PROJECT NOS: PVILTX-13625

PHASE 1

CONTRACT DATE:

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract Continuation Sheet, AIA Document G703, is attached.

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

1. ORIGINAL CONTRACT SUM	\$	3,212,133.68
2. Net change by Work Change Directives	\$	0.00
3. CONTRACT SUM TO DATE (Line 1 ± 2)	\$	3,212,133.68
4. TOTAL COMPLETED & STORED TO DATE (Column G on G703)	\$	0.00
5. RETAINAGE:		
a. 5 % of Completed Work (Column D + E on G703)	\$	-
b. 5 % of Stored Material (Column F on G703)	\$	-
Total Retainage (Lines 5a + 5b or Total in Column I of G703)	\$	0.00
6. TOTAL EARNED LESS RETAINAGE (Line 4 Less Line 5 Total)	\$	0.00
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate)	\$	-
8. CURRENT PAYMENT DUE	\$	0.00
9. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 less Line 6)	\$	3,212,133.68

CONTRACTOR:

By: _____ Date: _____

Name & Title Printed: Jason Wilkie, VP of Operations

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner		\$0.00
Total approved this Month	-	
TOTALS	\$0.00	\$0.00
NET CHANGES by Change Order	\$0.00	

AIA Document G702, APPLICATION AND CERTIFICATE FOR PAYMENT, containing Contractor's signed Certification, is attached.

In tabulations below, amounts are stated to the nearest dollar.

Use Column 1 on Contracts where variable retainage for line items may apply.

APPLICATION NO: 1
 APPLICATION DATE: [REDACTED]
 PERIOD TO: 01/00/00
 PROJECT NO: PVILTX-13625

A	B	B1	B2	C	D		E	F	G		H	I
ITEM	DESCRIPTION OF WORK	SCHEDULED VALUE	WORK CHANGE DIRECTIVE/C.O.	REVISED SCHEDULED VALUE	WORK COMPLETED		MATERIALS PRESENTLY STORED (NOT IN D OR E)	COMPLETED AND STORED TO DATE (D + E + F)	% (G/C)	BALANCE TO FINISH (C - G)	RETAINAGE	
					FROM PREVIOUS APPLICATION (D + E)	THIS PERIOD						
1.	Neptune Meters	\$2,340,211.68		\$2,340,211.68				\$0.00	0%	\$2,340,211.68	-	
2.	Neptune Infrastructure	\$388,100		\$388,100.00				\$0.00	0%	388,100.00	-	
3.	5/8" X 3/4" Meter Installation	\$341,460		\$341,460.00				\$0.00	0%	341,460.00	-	
4.	3/4" Meter Installation	\$7,515		\$7,515.00				\$0.00	0%	7,515.00	-	
5.	1" Meter Installation	\$7,785		\$7,785.00				\$0.00	0%	7,785.00	-	
6.	5/8" X 3/4" Retrofit Installation	\$120,177		\$120,177.00				\$0.00	0%	120,177.00	-	
7.	3/4" Retrofit Installation	\$3,996		\$3,996.00				\$0.00	0%	3,996.00	-	
8.	1" Retrofit Installation	\$2,889		\$2,889.00				\$0.00	0%	2,889.00	-	
9.				\$0.00				\$0.00		-	-	
10.				\$0.00				\$0.00		-	-	
11.				\$0.00				\$0.00		-	-	
12.				\$0.00				\$0.00		-	-	
13.				\$0.00				\$0.00		-	-	
14.				\$0.00				\$0.00		-	-	
15.				\$0.00				\$0.00		-	-	
16.				\$0.00				\$0.00		-	-	
17.				\$0.00				\$0.00		-	-	
18.				\$0.00				\$0.00		-	-	
19.				\$0.00				\$0.00		-	-	
20.				\$0.00				\$0.00		-	-	
21.				\$0.00				\$0.00		-	-	
22.				\$0.00				\$0.00		-	-	
23.				\$0.00				\$0.00		-	-	
24.				\$0.00				\$0.00		-	-	
25.				\$0.00				\$0.00		-	-	
26.				\$0.00				\$0.00		-	-	
27.				\$0.00				\$0.00		-	-	
28.				\$0.00				\$0.00		-	-	
29.				\$0.00				\$0.00		-	-	
30.				\$0.00				\$0.00		-	-	
31.				\$0.00				\$0.00		-	-	
32.				\$0.00				\$0.00		-	-	
33.				\$0.00				\$0.00		-	-	
34.				\$0.00				\$0.00		-	-	
35.				\$0.00				\$0.00		-	-	
36.				\$0.00				\$0.00		-	-	
		\$3,212,133.68	\$0	\$3,212,133.68	\$0	\$0	\$0	\$0	0%	\$3,212,134	\$0	

EXHIBIT 9

PROJECT PHASE SCHEDULE

Exhibit 9 - Project Phase Schedule

Phase	Install Year	Note
1	2013	Phase 1 expected to finish towards the end of 2013
2	2014	Roll right in from Phase 1 to Phase 2
3	2015	Start Phase 3 mid 2015 and finish up towards the end 2015
4	2016	Roll right in from Phase 3 to Phase 4
5	2017	Start Phase 5 in January 2017

* It is the anticipation of the contractor that installation locations will be issued by complete cycle/route/book (whichever is smallest group size). This will allow for ease of installations in an area without skipping around and will create complete installation groups for the City. As these cycles/routes/books are completed, Pedal Valves will submit sign-off documentation to the City. Sign-off procedures and sample forms are outlined on the next pages of this exhibit (Exhibit 9).

Exhibit 9 - Project Phase Schedule

Water Meter Project Sign Off Procedure

Step 1:	Pedal Valves to complete the meter installations in a specified route.
Step 2:	Pedal Valves to provide the City with a substantial completion notification for the route. This is the method to inform the City that we are substantially complete with this route and that we are ready for City inspection. There may be a few meters not complete for various reasons and any not completed will be listed.
Step 3:	The City Representative will then have 30 days to visually inspect the meters in this route. They should note any installations that are not to their satisfaction on a provided punch list form.
Step 4:	During the 30 day inspection period by the City noted in Step 3, Pedal Valves will be commissioning the route and programming meters to ensure proper operation.
Step 5:	The City will turn over the punch list to Pedal Valves for corrections on or before the 30 day inspection period.
Step 6:	Once the corrections are made by Pedal Valves, the City and Pedal Valves will visit the specific meters to verify corrections have been made.
Step 7:	The City Representative and the Pedal Valves IT Specialist will read the route using the AMR system to verify the installations are complete and the meters are functioning. Receiving at least one reading from each meter installed is the criteria for a successful installation at this point.
Step 8:	The route final acceptance documents are signed, the warranty period begins per the contract documents, and the use of the AMR System for the specified route is now available for use by the City.

Exhibit 9 - Project Phase Schedule

Final Completion Notification

Water Meters

Route Number _____ - WATER METERS

Date _____

The above mentioned route contains water meters that have been installed and determined to be operating correctly with the new automatic meter reading system. This document represents completion of this route and its punch list, and customer acceptance. After this document is signed, the warranty period for this route will begin (excluding exceptions).

Customer

Date

Pedal Valves

Date

EXCEPTIONS:

Any items listed in the table below, or on attached sheets will not be considered complete until the signoff representatives have initialed the document.

ID Number	Account Number	Address	Reason	Date/Initials for Signoff

EXHIBIT 10

**RESPONSE FROM PEDAL VALVES TO REQUEST
FOR PROPOSALS**



• 13625 River Road • Luling, LA • 70070 • www.pedalvalve.com • 1-800-431-3668 •

Letter of Transmittal

Pedal Valves, Inc.
13625 River Rd.
Luling, LA 70070

City of Laredo, TX

Re: Water Meter/AMR/AMI System

Pedal Valves Inc. is pleased to propose for the Laredo Water Meter/AMR/AMI System Project.

As you review our proposal, we hope that you see the effort we have put in and the team that we have in place to execute your project. We have been entrenched in the water meter business for the last 10 years and have over 15 years experience in the plumbing business. We have executed automatic meter reading (AMR) projects all over the country, ranging from their simplest form, touch-read, to the most complex fixed base networks.

When considering a partner to help you execute this project, we hope that you recognize that there is more to an AMR project than just installing the meter. In fact, the most complex component of these projects is the IT side of them. Your partner must be able to: gather accurate change out data from the field, update your billing system with that change out data, commission the system to ensure its accuracy, and most importantly, perform these tasks without interfering with your ability to get your bills out accurately and on time. We have perfected this process, and to ensure that we execute flawlessly, we employ a full-time, experienced IT Professional for the entire project. This IT Professional is one that oversees all data transfers for the job, doing nothing but AMR projects and has the sole responsibility of making sure the City of Laredo's project is successful.

Pedal Valves has successfully constructed projects all across the nation implementing the Neptune meters and AMI/AMR technology including current projects in Bay City, TX and Hewitt, TX. Thank you for the opportunity to propose and we look forward to the opportunity to work with you.

Sincerely,

Jason Wilkie
Vice President of Operations
Pedal Valves, Inc.
jasonw@pedalvalve.com



• 13625 River Road • Luling, LA • 70070 • www.pedalvalve.com • 1-800-431-3668 •

Wednesday, December 19, 2012

Pedal Valves, Inc. Company Profile

Pedal Valves, Incorporated (PVI) is a Louisiana based nationally certified WBE Corporation that was founded in 1993, with the development of patented technology for hands free, pedal operation of faucets. PVI manufactures and distributes this technology for sinks of all types throughout the U.S. and abroad, which has brought about involvement into broader water and energy conservation projects, particularly water meter system upgrades. Today, PVI's business includes *three major divisions*, which are described in more detail below:

1) Manufacturing Division

Manufacturing, marketing and distribution of residential and commercial *pedal valve* faucet controllers in the United States and abroad. This award-winning product continues steady growth in homes, food service and medical applications. The *Pedal valve* is simple to operate and, when used as recommended, is guaranteed to save water and hot water energy while also reducing the spread of germs and bacteria (hands-free operation), such as E-Coli and salmonella.

2) Water Conservation Division (Water Retrofit Contractor)

Develops and constructs projects to save water and the associated energy in the building's technology industry. PVI has successfully executed projects in thousands of buildings in the United States such as LSU, CDC, Tulane Medical Center and Lakeland AFB, just to name a few. The building's technology industry is not limited to a particular market segment, so opportunities are widespread ranging from K-12 (schools), Higher education (colleges and universities), Healthcare (hospitals), local and state municipalities (police departments, community centers, fire stations, prisons) and federal municipalities (military facilities, prisons).

3) Utility Meter Division

Develops and constructs projects in municipalities, upgrading metering technology to AMR type systems. As this type of work is relatively new in the United States, PVI detected the need and has independently developed a project and information management system to execute these projects (MPMS). PVI understands the critical nature of the City's need to continue billing for utilities provided and, therefore, developed and possesses the information system skills and experience to work with virtually all known billing systems, meter brands and AMR types on the market.



Project Team

There are many managers here at Pedal Valves that will play an integral role in the execution of the meter project. This includes personnel from the Vice-President of our company down to the Project Superintendent in the field.

ROBBY GILBERT, VICE PRESIDENT

Robby is the Vice President of Pedal Valves and has a degree in Marketing from Louisiana State University. Since the late 1990's Robby has worked in sales and development of water conservation and AMR/AMI metering solutions at Pedal Valves. Robby started the company with his father focusing on water conservation and branched the company in the direction of AMR/AMI metering solutions in the early 2000's. Robby has been involved in every facet of the company from sales to project management to installations.

JASON WILKIE, VICE PRESIDENT OF OPERATIONS

Jason has a degree in Environmental Engineering from Louisiana State University. Jason joined Pedal Valves in 2001 as lead engineer and project manager for the water conservation division. Jason continued on in this role until 2004 and began to oversee the AMR/AMI metering division as Construction Manager. Jason managed numerous installation projects as well as helped develop implementation processes for the meter projects. In late 2006, Jason moved to his current role as VP of Operations and began to oversee both divisions of the company. Since that time, Jason has not only overseen both divisions, but he also is the lead engineer on AMR/AMI metering development for Pedal Valves. Jason performs all internal analyses and project pricing for potential meter projects. In addition, he helps to develop the scope of work on these projects from simple residential meter installations to complex large meter services.

CHAD NUCCIO, METERING CONSTRUCTION MANAGER

Chad has a degree in Marketing from Louisiana State University. Chad joined Pedal Valves in 2001 as Sales Manager. Chad worked in sales of water conservation projects and metering projects until he moved to Metering Construction Manager in late 2006. Since that time, Chad has been responsible for directly overseeing and managing all of Pedal Valves metering projects. This includes direct supervision over onsite management, project planning & scheduling, material acquisition, budgeting, and quality control. Chad has a vast experience with the installation of all meter types and sizes which aides him in managing the day to day operations of the metering division.

DANNY WILKERSON, SUPERINTENDENT

Danny joined Pedal Valves in 2006 after having spent a few years in the meter installation and management business. Danny joined Pedal Valves as a meter installer and quickly moved up to Superintendent after spending only 6 months with Pedal Valves. Danny's first assignment was a Badger Orion installation for Charles County, Maryland. Since that time, Danny has directly managed projects full time having installed countless AMR and AMI systems across the country including manufacturers such as Badger, Neptune, Sensus, and Master Meter. Danny has spent countless hours installing and assisting his installers and has a very direct hands-on approach to meter installations. His projects are ran very smoothly and are extremely well organized allowing Danny to complete all of his projects under schedule.



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DONNIE MATTHEWS, IT MANAGER

Donnie Matthews graduated from Nicholls State University in 1999 with a degree in Computer Information Systems. Donnie has 12 years of experience in the industry and has successfully integrated nearly every major utility billing system on the market. Additionally, Donnie is proficient with all current (and legacy) AMR/AMI technologies. Donnie has extensive database experience in SQL server and has built a state-of-the-art information system for Pedal Valves, Inc. operations. Pedal Valves' information system employs the use of wireless data collection (including GPS), centralized data management, and real-time data to maximize efficiency and productivity of the installation team. Donnie's responsibility at Pedal Valves is to ensure successful, timely, and accurate data transfer into the customer's information system and also the successful setup and integration of newly installed AMR/AMI technology. Prior to employment at Pedal Valves, Inc., Donnie served as National AMI Operations Manager (North America) for Johnson Controls, Inc. and was instrumental in developing and managing many high-profile jobs for the largest metering ESCO in the United States.

Robert Gilbert, Jr.

VP of Pedal Valves, Inc.

Responsible for customer satisfaction and sales of all utility meter projects from inception through completion.

Responsibilities:

We will provide a customer oriented team of competent professionals and mechanics to complete all phases of the project including field surveys, meter replacements or retrofits, and information systems work needed to execute a utility metering system upgrade project in a manner that brings delight to the customer.

Experience:

7 years as VP of Pedal Valves, Inc.

Have lead projects that include nearly every water meter brand and type on the market and all of these manufactures various AMR systems.

Education:

Bachelors in Marketing
Louisiana State University

Major Utility Meter Projects:

- City of Smyrna, GA
- City of Woodstock, GA
- City of Edgewater, FL
- City of Hazlehurst, GA
- City of Hannibal, MO
- City of Levelland, TX
- City of Lamesa, TX
- City of Pecos, TX
- City of Littlefield, TX
- City of Big Lake, TX
- City of Rome, GA
- City of Swainsboro, GA
- City of Fairburn, GA
- City of Bremen, GA

Jason G. Wilkie

Qualifications

- Oversee all aspects of Water Conservation and Water Meter Installations.
- Served as Construction Manager for the Water Meter Division of Pedal Valves Inc. for the past 3 years.
- Oversees all construction and project management aspects of water, electric, and gas meter installations and provides engineering support to these projects.
- Supervises material acquisition, coordination efforts for material storage, installation management, QC, and inventory control.
- Monitor daily progress of the installations and make adjustments to procedures to maximize efficiency of the installation process.
- Served as Construction Manager on meter installation jobs ranging from \$700,000 to larger jobs in excess of \$6,000,000. Hands on and supervisory experience in the installation of well over 50,000 meters ranging in size from 5/8" X 3/4" through 12" and in every type made.
- Served as Engineer and Project Manager for the Water Conservation Division of Pedal Valves Inc. from 2001-2004.
- Engineered and executed water conservation projects as project manager in 100's of buildings including: K-12 Schools, Hospitals, City Buildings, Universities, Military Bases, Prisons, etc.

Education

1998 Louisiana State University Baton Rouge, LA
Bachelors of Science, Environmental Engineering
Registered Engineer Intern - Registration Number T-18721

Professional experience

2007 – Present Pedal Valves Inc. Luling, LA
Vice President of Operations

2004 – 2006 Pedal Valves Inc. Luling, LA
Engineer/Construction Manager – Water Meter Division

2001 – 2004 Pedal Valves Inc. Luling, LA
Engineer /Project Manager – Water Conservation Division

2001 – 1999 Louisiana DEQ Baton Rouge, LA
Environmental Engineer

Chad J. Nuccio

Qualifications

- Served as Construction Manager for the Water Meter Division of Pedal Valves Inc. for the past 3 years.
- Oversees all critical construction and project management facets of water meter installations.
- Supervises material acquisition, coordination efforts for material storage, installation management, QC, and Inventory control.
- Monitor daily progress of the installations and make adjustments to procedures to maximize efficiency of the installation process.
- Manage project budget and finance reports.
- Installed meters of all types and sizes during testing phases of water meter projects.
- Conducted audits for Water Conservation and Water Meter Jobs.
- Established relationships and set up dealers for residential foot pedals.

Education

2000 Louisiana State University Baton Rouge, LA
Bachelors In Marketing

Professional experience

2007 – Present Pedal Valves Inc. Luling, LA
Construction Manager – Water Meter Division

2002 – 2006 Pedal Valves Inc. Luling, LA
Sales Manager – Water Meter Division, Water Conservation Division

2001 – 2002 Pedal Valves Inc. Luling, LA
Residential Sales Manager

2000 – 2001 Kentwood Spring Water Baton Rouge, LA
Outside Sales Representative

Danny Wilkerson

Qualifications

- Served as Project Manager for the Water Meter Division of Pedal Valves Inc. for the past 6 years.
- Communicate Directly with customer contacts on day to day operations of installs.
- Oversees all critical construction and project management facets of water meter installations.
- Supervises material acquisition, coordination efforts for material storage, installation management, QC, and Inventory control.
- Monitor daily progress of the installations and make adjustments to procedures to maximize efficiency of the installation process.
- Monitor daily operations of construction crews
- Installed meters of all types and sizes.

DONNIE S. MATTHEWS

502 MONSANTO AVE.

LULING, LA 70070

(m): 504.470.3282

E-mail: donniem@pedalvalve.com

EDUCATION:

Nicholls State University, Thibodaux, LA 70310	
B.S. in Computer Information Systems , Graduation: December 1999	
• Major GPA: 3.4	• President's List: Spring 1998
• Dean's List: Summer 1998, Spring 1999, Summer 1999	• UNO Founder's Scholarship

COMPUTER / PROGRAMMING SKILLS:

ASP.Net	SQL Server 6.0 and up	Text File Manipulation	Access 97/00/07	VB.Net
HTML	Visual Basic 5.0 and up	Visual Interdev/ASP	VB Script	VBA
Flash (Action Script)	DAO	Outlook Hooks	Excel Hooks	Win32 API
C++	Java Script	Some C#	T-SQL	some mySQL

IIS / Apache	SQL Server	Win Server – NT, 2000, 2003, 2008	Active Directory	DHCP
VM Ware / Citrix	WINS Server	Switches/Routers/Hubs/WAS	TCP/IP	DNS
AD Policy Management	Exchange Admin	SQL 6.0 / 2K ...SSIS and up	PDC/BDC	Linux

WORK EXPERIENCE:

March 2012 to Present – **IT Manager**, Pedal Valves Inc., Luling, LA

And January 2003 to August 2009 – **IT Manager**, Pedal Valves Inc., Luling, LA

- Analyzed, engineered, installed and configured AMR/AMI systems for municipalities across the United States.
- Worked with over 20 different utility billing systems, facilitating in both data extraction for project development and new data integration for contracted projects.
- Managed IT Specialists nationally that served vital role in the implementation of water meter projects.
- Provided water meter data manipulation and transformation services to allow proper import of data for customers.
- Coordinated with project development engineers and project managers to ensure data accuracy/integrity before, during, and after contract.
- Billing system data analysis and manipulation, including: customer data, revenue data, unaccounted for water data, meter accuracy data, produced vs. billed data...etc
- Developed processes to ease access of post-project M&V data for Performance Assurance Managers.
- Extensive database admin work in both SQL Server & MS Access (stored procs, queries, tables, views, relationships)
- Application development in .net environment – vb.net / asp.net / JavaScript / VBScript
- Newest project involved development of TrackPoint™ installation management system to utilize handheld data collectors for all data capture needs along with integration to sql server.
- Developed project management application (MPMS™) to automate and manage multiple project tasks. System managed overall status of project, contact management, inventory, payroll, automated electronic reporting, project statistics, tool inventory, rainout days, etc. Application contained hooks into MS Outlook for automated customer status reporting and hooks into Excel for employee payroll reporting. MS Access back-end.
- Development of a corporate management system to encapsulate all company operations, in each of the three company divisions. Application included a human resource interface, employee and field resource tracking...

Feb 2010 to Feb 2012 – **Nat'l AMR/AMI Operations Manager**, Johnson Controls, Inc., Milwaukee, WI

- Established corporate guidelines on project scheduling, procurement, execution, close out and other best practices
- Supervised all AMR/AMI meter installations in North America including Canada and Hawaii.
- Served as JCI corporate liaison during project kickoffs, project meetings, and reviews.
- Managed and assisted JCI project managers as necessary during project implementation
- Managed project schedules, project scope, slippage, cost overruns, and budgets
- Facilitated in design /development of new AMR/AMI projects
- Worked with JCI PM's to execute projects on time and under budget – ultimately resulting in better customer satisfaction
- Performed post-project customer satisfaction reviews

- Facilitated in procurement on large projects
- Worked closely with most major meter manufacturers to develop implementation strategies, teaming agreements, standardized national pricing...etc.
- Contract review and negotiation
- Monitored projects with self-written software (.asp + sql server) to better control route saturations and schedules

Sep 2009 to Feb 2010 – **Database Applications Manager**, Adams & Reese LLP, New Orleans, LA

- Database administration and management in SQL Server, File Maker Pro, and MS Access Databases.
- Developed DTS Packages (data exports and transformations), stored procedures, and queries in SQL Server as needed to interconnect different mission critical applications.
- Developed, planned, and executed software installation projects for 500+ employees.
- Reported directly to CIO for all database related activities for the firm.
- Worked extensively in NetApp SAN and VM Ware environment.

December 2001 to December 2002 – **Systems Administrator**, P&S Local 60, Metairie, LA

And September 1999 to December 2001-- **Software Developer**, P&S Local 60, Metairie, LA

- Managed all vital functions of Local 60's computer system including benefits administration, pension, contractor hours, death and disability benefits and membership dues.
- Migrated Windows NT PDC and BDC to Full Win 2000 Active Directory
- Migrated SQL 6.5 to SQL 2000 (AD), migrated Exchange 5.5 to AD Based Exchange 2000
- Developed backup scripts, sql server backup procs, stored procedures, triggers, and other programs necessary for efficient management
- Managed company website and associated ASP/CGI web apps
- Developed building lease application, dues transaction packages, security/logging applications and others
- SQL Server, Access, API, DAO, ADO, RDO, ASP, Class Modules, Active X, JavaScript, VB Script, Crystal Reports
- Developed company website and web applications utilizing HTML, Java Script, CGI, ASP and Visual Interdev, multiple ASP applications in conjunction with SQL Server 6.5 & 7.0
- Installed and administered Windows NT 4.0, Exchange Server 5, SQL Server 6.5 & 7.0, MS IIS 4 (BackOffice Suite)

PROJECT MANAGEMENT:

PROJECT	DESCRIPTION
Tulare, CA	Automatic Meter Reading System Installation - Crew of 20-30 mechanics installed over 25,000 water meters (IT Crew configured system)
St. John the Baptist Parish, LA	Automatic Meter Reading System Installation - Crew of 15+ mechanics installed over 18,000 water meters (IT Crew configured system)
Nacogdoches, TX	Automatic Meter Reading System Installation - Crew of 10-15 mechanics installed over 15,000 water meters (IT Crew configured system)
...many (20+) more with great references (references provided upon request)	

OTHER SKILLS:

- Server setup and configuration, RAID hardware management, backup management, server management...etc, firewall management with Remote VPN (IPSec), FTP Server Management
- Project management of large-scale construction projects
- Hardware: Networking, router installations, Cisco switch experience, trouble shooting, card installations
- System Development Tools: Visible Analyst, MS Project, Visio
- Other Skills: Graphic Design, Systems Analysis, Entity Relationship Diagrams, Data Flow Diagrams, Table Normalization, Relational Database Development, Adobe Photoshop, Flash, Macromedia MX Studio

AWARDS AND COMMUNITY INVOLVEMENT:

- 2012 – Luling United Methodist Church – Homework Help Mentoring Program
- 2012 – Luling United Methodist Church – Finance Committee, Technology Committee
- 2006 – Casting For Christ Fishing Club - First Baptist Luling Webmaster (www.castingforchrist.com)
- 2004 – Red Cross volunteer for misc. community activities
- 1st Runner Up – Bell Chase Air Show Poster Design, Discover St. Charles Parish Magazine Cover Design Winner, 1st Place - St. Charles Parish Art Guild Water Color



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City of Arlington, TX

Meters Installed: 17,000

Project Timeline: Started September 19, 2011 finishing May 2012

Point of Contact: John Norman

817-459-6811

john.norman@arlingtontx.gov

Pedal Valves, Inc. was the primary contractor for this project and handled all materials ordering as well as completing all meter installations of water meters varying in size from 5/8" up to 10". Pedal Valves, Inc. worked closely with the billing department to successfully capture all previous billing information, as well as ensuring that all new meters were fully operational with the new AMI technology. Pedal Valves, Inc. is ahead of schedule to complete Phase 1 and begin discussions for Phase 2.



NEPTUNE
TECHNOLOGY GROUP



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City Pompano Beach, FL

Meters Installed: 19,600

Meter and AMR Equipment: Neptune meters with R450 MIU

Project Timeline: Started April 18, 2011 finished April 20, 2012

Point of Contact: Bill Herrman

954-786-5511

william.herrman@copbfl.com

Pedal Valves, Inc. successfully completed the installation of a Neptune AMI upgrade for the meters in the City of Pompano Beach, FL. Pedal Valves, Inc. replaced over 19000 direct read meters and installed Neptune water meters with R450 MIU's and commissioned their current AMI system. We were able to complete this project on schedule.



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City Sarasota, FL

Meters Installed: 20,000

Meter and AMR Equipment: Neptune meters with R900 MIU

Project Timeline: Started May 24, 2011 finished February 1, 2012

Point of Contact: Mike Healy

941-329-6120

michael.healy@sarasotagov.com

Pedal Valves, Inc. successfully completed the installation of a Neptune AMR upgrade for the meters in the City of Pompano Beach, FL. Pedal Valves, Inc. replaced 20000 direct read meters and installed Neptune water meters with R900 MIU's and commissioned their current AMR drive by system. We were able to complete this project on schedule.

City Nacodoches, TX

Meters Installed: 16000

Project Timeline: Started June 2008 finished January 2009

Point of Contact: B.D. Rambin

936-554-9204

rambin@ci.nacogdoches.tx.us

Pedal Valves, Inc. successfully completed the installation of an AMI water meter upgrade for the meters in the City of Nacogdoches, TX. Pedal Valves, Inc. replaced 16000 direct read meters and installed water meters along with MIU's and commissioned their current AMI system. We were able to complete this project on schedule.



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City Bay City, TX

Meters Installed: 8,000

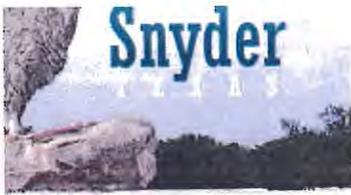
Meter and AMR Equipment: Neptune meters with R450 Pit MIU

Project Timeline: Started September 17, 2012 projected to finish February 8, 2013

Point of Contact: Catherine Ezell

979-245-7597

Pedal Valves, Inc. has started the installation of a Neptune AMI upgrade for the meters in the City of Bay City, TX. Pedal Valves, Inc. will replace 8000 direct read meters and install Neptune water meters with R450 MIU's and commission their AMI system. We are on schedule to complete this project on schedule.



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City Snyder, TX

Meters Installed: 5,000

Meter and AMR Equipment: Neptune meters with R450 Pit MIU

Project Timeline: Started October 18, 2010 finished January 28, 2011

Point of Contact: Teresa Wall

325-573-4960

twall@ci.snyder.tx.us

Pedal Valves, Inc. successfully completed the installation of a Neptune AMI upgrade for the meters in the City of Snyder, TX. Pedal Valves, Inc. replaced 5000 direct read meters and installed Neptune water meters with R450 MIU's and commissioned their current AMI system. We were able to complete this project on schedule.



City Hewitt, TX

Meters Installed: 5,000

Meter and AMR Equipment: Neptune meters with R450 Pit MIU

Project Timeline: Started October 15, 2012 projected to finish February 1, 2013

Point of Contact: James Black

254-666-6171

jblack@cityofhewitt.com

Pedal Valves, Inc. has started the installation of a Neptune AMI upgrade for the meters in the City of Hewitt, TX. Pedal Valves, Inc. will replace 5000 direct read meters and install Neptune water meters with R450 MIU's and commission their AMI system. We are on schedule to complete this project on schedule.



Executive Summary

Neptune Technology Group Inc. and HD Supply Waterworks welcome the opportunity to respond to the City of Laredo's request for proposals for the supply of water meters, registers, and AMR/AMI systems. As the City desires an AMI system for the majority of the services, complemented by an AMR system for the outlying geographical areas, Neptune and HD Supply have developed a responsive proposal that fulfills all the requirements, and will operate on Neptune's N_SIGHT software, providing one interface to the City's HTE billing software.

Neptune is the leading provider of meter reading systems and water measurement products. Since 1892, Neptune has continually focused on the evolving needs of water utilities – revenue optimization, operational efficiencies, and improved customer service. Neptune is committed to be the *most valued partner* of our utility customers and help them manage the world's scarce water, energy, human, and funding resources.

Neptune and HD Supply understand that the City of Laredo desires to automate the meter reading process covering your 65,000 services. Your installed base of Neptune meters provides the foundation for the system Neptune and HD Supply will present to you. We propose an R450 Fixed Network system for the majority of the City's services, with an R900 Mobile system for the outlying rural areas.

Some key elements of our value proposition include:

- Reading technology that fits your needs – Mobile AMR, Fixed Network AMI and N_SIGHT Host Software, in response to the City's request for a combination of AMR mobile and AMI fixed base technology for contrasting elevation and demographic differences.
- Customer Support from HD Supply and Neptune, in response to the City's desire for a vendor with demonstrated experience in the supply and delivery of water meters, registers, automatic meter reading (AMR) endpoints and the supply, delivery, implementation and training of a mobile AMR/fixed network radio frequency (RF) AMI system.
- Neptune T-10 water meters that meet or exceed the latest AWWA C700 Standard

R450 Fixed Network System Overview

Neptune's R450 Fixed Network users can get critical, timely data from the field as well as a daily system-wide, time-synchronized midnight reading from all meters / R450 Meter Interface Units (MIUs) – supporting Non-Revenue Water initiatives such as District Metered Area (DMA) analysis, leak detection and conservation initiatives and eliminating off-cycle readings for high water bill complaints and/or move-ins/move-outs.

The R450 MIU coupled with Neptune's solid-state E-Coder absolute encoder monitors the high 8-digit resolution 15-minute interval data plus the advanced functionality of E-Coder (intermittent leak, continuous leak, reverse flow and zero usage). When the R450 identifies a critical alarm state for continuous leak or major backflow event the system is designed to notify designated utility personnel via e-mail or text message for immediate response. The R450 MIU provides a daily midnight meter reading and 24 hour consumption data to address such issues as consumption disputes, conservation compliance as well as monitoring large commercial and industrial usage.

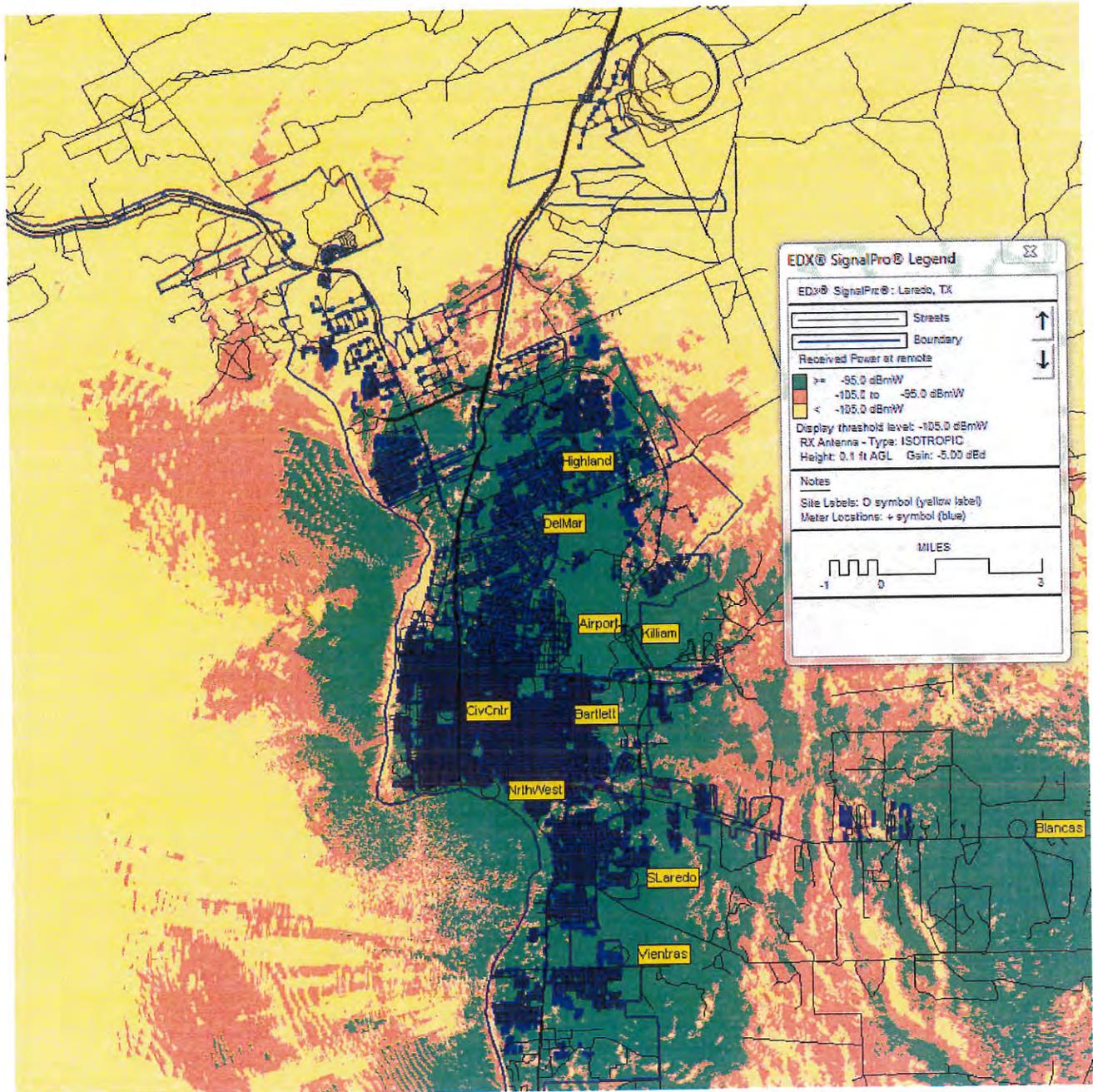
The R450 System also offers auto-discovery over the network, allowing utilities to confirm network communications and MIU and register operation before leaving an installation site. The R450 System optimizes reading success rates through a high-power, two-way licensed transmitter that avoids collisions and interference associated with unlicensed bands. The high power also helps reduce collector infrastructure lowering total deployment costs.

The R450 System operates in the 450-470 MHz licensed frequency band protected by the FCC and licensed to the City of Laredo to ensure maximum meter reading success for the life of the System. Radio messages transmitted by the R450 MIUs are received by a network of R450 Data Collectors (DC) covering the service area. The System is designed to optimize the total number of R450 DCs to ensure overall system performance and maximum meter reading success rates.

R450 Fixed Network System for the City of Laredo

Neptune has performed a propagation analysis to ensure coverage of all required areas. With the utilization of the 10 provided collector locations, the Neptune R450 AMI system will capture approximately 95% of the city addresses. Please see Map on the following page. The remaining 5% are in the extreme North and Northwest sections of the city. These will be addressed with the Neptune R900i AMR system

Note that the entire system works with the City's existing Neptune ARB N_SIGHT software.



R900 Mobile System Overview

Neptune's R900 system utilizes 900 MHz technology. This product has been manufactured since 1998 and is the number one deployed water RF MIU device in the North American market. The Neptune E-Coder)R900*i* features an E-Coder absolute encoder register with integrated R900 radio. This single integrated wireless package can be mounted on any Neptune meter. The E-Coder)R900*i* is comprised of solid state technology – featuring batteryless metrology. The advanced LCD displays a 9-digit high resolution meter reading and icons for leak, tamper and reverse flow conditions to alert both the customer and the City. The E-Coder)R900*i* has been produced since 2006 and nearly three million units have been deployed, of which 60% are installed in pit applications with both under-the-lid and through-the-lid antenna options. Both the R900 stand-alone MIU and E-Coder)R900*i* utilize the same 900 MHz radio technology.

The R450 and R900 systems share a common software platform to allow meter data from our Mobile and Fixed Network data collection devices to flow seamlessly into a single host software suite, with the data collection hardware being deployed based on the application. The seamless flow of data to the City's existing CIS (Sungard HTE), makes for an efficient means of collecting monthly billing information as well as additional reporting and consumer alert capabilities.

Measurement Integrity

At the heart of Neptune's solution is the history-making T-10 water meter. Every Neptune T-10 water meter meets or exceeds the latest AWWA C700 Standard. Neptune guarantees flow rates as low as 1/8 gpm @ 95% accuracy, while other manufacturers only guarantee this level of accuracy to 1/4 gpm. The T-10 has the widest effective flow range to capture maximum revenues. Over 20 million T-10 meters have been installed since 1981, generating more than \$67 billion in utility revenues.

The City of Laredo already benefits from your decision to purchase Neptune water meters. The large installed base of T-10 meters suggests additional savings should you decide to retrofit meters older than 3 years. In our experience, with little degradation of accuracy over time, customers with installed Neptune meters see no need to replace meters that are five or even up to eight years old. The following chart shows the approximate potential savings should the City wish to retrofit meters older than the stated 3 year age.

Age - Meters to Retrofit	Quantity	Savings (\$XX.XX X Δ Meters)
3 years	25,000	
5 years	33,000	\$60 X 8,000 = \$480,000
8 years	55,000	\$60 X 30,000 = \$1,800,000

Customer Service

Neptune is committed to delivering the highest standard of quality service to our clients. To accomplish this goal, Neptune employs a Systems Support Group consisting of highly qualified systems engineers and specialists to address all software and hardware concerns of our customers. HD Supply has a Neptune factory training System Support Implementer (SSI) on staff to provide local support to the City of Laredo. HD Supply's SSI is backed by a team at Neptune that is focused to provide support on existing and new products, who are devoted to customer satisfaction either by phone or by site visit.

We strive to offer the highest level of customer support and service as you implement your system. Supporting your system implementation will be Neptune's Territory Manager, Neptune Regional Support Specialist, HD Supply WW Software System Implementer and HD Supply WW Branch office.

Summary

Neptune has set the standard for quality, reliability, and accuracy since the first Neptune meter was produced in 1892. Neptune's history includes many industry firsts with a proven track record of technological innovation, taking the industry far beyond the basic water meter. When Neptune invented the first absolute encoder in 1964, it became the first supplier of both water measurement products and data collection systems to the waterworks industry. Our leadership extends beyond product innovation to manufacturing excellence and customer support. Product development and manufacturing processes meet the highest standards for quality from foundry to meter assembly and testing. The state-of-the-art facilities are ISO 9001 Certified and audited semi-annually.

Whether it's quality, operational excellence, or dependability, Neptune is dedicated to providing the City with products and services that consistently exceed YOUR expectations. Investing in a System from Neptune and HD Supply guarantees efficiency, long-term value, and peace of mind; and that's good for customer confidence.

Thank you for your interest in Neptune products. We invite you to review the responses to your Technical Requirements, and contact us with any further questions you may have. Neptune and HD Supply look forward to meeting your Automated Meter Reading System needs.



HD Supply Waterworks is privileged to offer the Neptune line of water meters and AMR/AMI technology to Cities and Utilities across the State of Texas. By partnering with Pedal Valve and Neptune Technology Group on the City of Laredo Automatic Meter Reading Project, HD Supply Waterworks would like to present the City a brief summary of our services associated with this package.

In addition to an exceptional product offering, HD Supply Waterworks is also uniquely qualified to offer additional value added services that enhance customer service and reliability throughout the project and beyond. In order to deliver the product properly, we realize that this project will require a partnership with Pedal Valve, Neptune Technology Group and the City in which we work together to implement changes and work to deliver the system that meets the City's needs and performs beyond its expectations. An example of these value added services include:

- **Local inventory locations (22)** within the State of Texas
- Knowledgeable local sales personnel to work with the Utility personnel in order to solve problems early
- **Two (2) dedicated in-house AMI/AMR Product Specialists** to assist the customer with their metering and AMR/AMI needs; Both Product Specialists have been factory trained by Neptune Technology Group and service the central and south regions of Texas.
- **Financial professionals** that can provide timely and cost effective project financing to coincide with any metering project in the event Laredo would like to explore these options; This approach could enhance the system benefits while maintaining costs to coordinate with the City's budget.
- The financial strength of a company with national sales in excess of 1 billion dollars annually
- Meters, AMR/AMI Technology, reading Infrastructure and software manufactured by one company. This prevents "finger-pointing" which can occur when separate companies manufacturer the meters and technology, respectively.
- Meters are **made in the United States**. Neptune's foundry is located in Tallassee, AL.

HD Supply Waterworks understands the importance of a Utility's metering system. We will work closely with Pedal Valve, Neptune Technology Group and the City to ensure Laredo is not only getting the best product in the market today, but will position themselves for a more cost-effective direction into AMR/AMI technologies moving into the future.

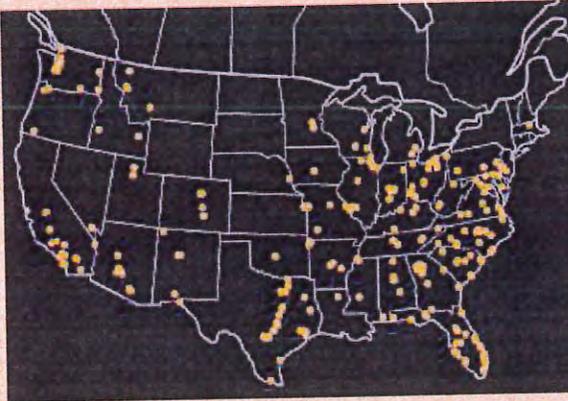
We look forward to supplying the Neptune water products and technology to the City of Laredo and positioning you for the future in regards to your metering infrastructure. HD Supply Waterworks is confident we can meet any requirement the Utility may have regarding the implementation of water meters and related technology. Again, take care and we look forward to working with your City on this project.

Sincerely,

Loren Miller

Loren Miller
District Manager
HD Supply Waterworks
(210) 860-2041

COMPANY BACKGROUND



About HD Supply Waterworks:

HD Supply Waterworks is part of the HD Supply family of businesses. HD Supply Waterworks is located in 45 States with approximately 265 locations and is the largest waterworks distributor in the United States. HD Supply Waterworks is the nation's largest waterworks distributor providing products integral to building, repairing, and maintaining water and waste water systems. Last year AMR/AMI and meter sales exceeded \$160 million in sales.

We are proud to count the City of Laredo, Texas among our loyal customers.

About HD Supply:

HD Supply, Inc. ("HD Supply") is one of the largest and most diversified wholesale distributors in the U.S. and Canada, providing top quality products and value-added services to professional customers in the Infrastructure & Energy, Maintenance, Repair & Improvement and Specialty Construction markets.

We are owned by three of the world's leading private equity firms: [The Carlyle Group](#), which is No. 1 in the world with \$81 billion in assets under management; [Bain Capital](#), which is No. 4 in the world with \$50 billion in assets under management; and [Clayton, Dubilier & Rice](#), one of the oldest, most respected firms in the world, which has invested over \$9 billion of capital in 42 U.S. and European businesses, with an aggregate transaction value of more than \$50 billion. HD Supply has made selected financial information publicly available and this information may be found at www.sec.gov under the HD Supply S-4 filing.

EXPERIENCE

Years in Business

HD Supply Waterworks was formed in 2006 with the combination of the number one and number two water products distribution companies in the United States (National Waterworks and Hughes Supply respectively) in addition to several other companies. The companies were then combined under one company – HD Supply. Hughes Supply traces its roots back to 1928. National Waterworks history goes back many decades as well.

Our history in AMI/AMR sales and service date back to its infancy, selling TouchRead systems since approximately 1985, and RadioRead AMR since the early 1990's. We are now proud to sell and service all three technologies (TouchRead, RadioRead, and Fixed Base).

Our company is the authorized Neptune water meter and AMR/AMI distributor for the state of Texas. We have sold the Neptune product across Texas and multiple other states for many years. In fact, HD Supply Waterworks is the #1 Neptune distributor nationally and our relationship with Neptune Technology Group serves to fulfill our role in development. As a company our focus is on customer service, project sale and execution and most importantly – **continued service for all of your metering needs.**

HD Supply Waterworks will assign the necessary support staff required to make this project a success by providing assistance to Pedal Valve and the City of Laredo. HD Supply Waterworks maintains both local and national support staff to allocate to this project. Locally we maintain two branches in San Antonio. In addition to our local presence HD Supply Waterworks formed the National Services Group, a diversified team solely focused on automated metering sales, implementation, support and training. We feel our company is uniquely situated to deliver not only the best equipment but also the best diversity of options and support.

Loren Miller (HD Supply Waterworks/District Manager)

Kevin Clagget (HD Supply Waterworks/Municipal Sales)

Shellie Brinkman (HD Supply Waterworks/Meter Specialist): Shellie brings approximately 25+ years of Utility and Municipal experience to our metering team – fifteen years as the owner/manager of a utility service company and ten years holding various municipal leadership positions. Shellie has managed and implemented Neptune Metering Systems during her time in municipal/utility management. She has been factory trained by Neptune Technology Group professionals. Shellie holds bachelor and master's degrees from Texas A&M University.

Jason Sides (HD Supply Waterworks/Meter Specialist): Jason has approximately 16+ years of Neptune Metering and Computer Technician experience – eight years as the AMR/AMI Product Support Specialist for our HD Supply Waterworks team in West Virginia, Virginia and Maryland; two years as a System Support Specialist for Neptune in Tallassee, AL and six years as a computer technician in Alabama. Jason is instrumental in training other HD Supply Waterworks Neptune Product Specialists along with a large number of Utilities across the country.

Ryan Johnson (HD Supply Waterworks/National Services Group) – Ryan designs AMR/AMI Meter Projects and provides analytical support and cost-benefit analysis. In his capacity to bring Turn-Key AMI/AMR sales to the customer, he has served in AMI sales, project oversight, implementation and funding solutions. Ryan graduated from Hendrix College with a bachelor's degree in Economics. Upon graduation, Ryan went to work for a Regional Investment Banking Firm as an Analyst where he structured numerous performance contracting and water related projects for municipalities and utilities across the nation. Ryan brings his vast knowledge of municipal government and financial structuring to assist Utilities in turn-key AMR solutions as well as offering project management during the installation process.



References

Account: **Atlanta, GA**
Name: Ben Kuku
Phone: 404-982-1427
Email: benjaminkuku@atlwater.com
Start Date: October 2006
of services: 150,000
Products Used: PR/R-900 and EZgate II

Account: **Florida Keys Aqueduct Authority**
Name: Kerry Shelby, Deputy Director
Phone: 305-296-2454
Email: kshelby@fkaa.com
Commencement Date: Oct. 2006
of Services: 50,000
Products used: All meter sizes with E-Coder)R900i.

Account: **City of Cape Coral Florida**
Name: Kevin McGee
Phone: 239-574-0851
Email: kmcgee@capecoral.net
Commencement Date: October 2002
of Services: 50,000
Products used: R900 Pit and E-Coder)R900i

Account: **Raleigh, NC**
3304 Lake Woodard Drive
Raleigh, NC 27604
Name: Karen Hanny
Phone: 919-250-7779
Email: karen.hanny@ci.raleigh.nc.us
Commencement Date: 2006

of Services: 190,000 total services
Products used: MRX920, Equinox, R-900's, ProRead

Account: **Greater Cincinnati Water Works**

Name: Dave Bennett
Phone: 513-591-7802
Email: dave.bennett@cincww.rcc.org
Commencement Date: 2003
of Services: 230,000 Services
Products used: R900

Account: **City of Pearland, TX**

Name: Pam Thorson
Phone: 281-652-1603
Email: pthorson@ci.pearland.tx.us
Start Date: 2003-2004
of services: 30,000 meters
% Completed: 100%
Products Used: MRX920, R900

Account: **City of Pasadena, TX**

Name: Sylvia Mourtakos (Utility Billing Manager)
Phone: 713-475-7857
Email: Smourtakos@ci.pasadena.tx.us
Start Date: 1999
of services: 36,000
% Completed: 100%
Products Used: MRX920, R900

Account: **Opelika, AL**

Name: Dan Hilyer, P.E., Director
Phone: 334-705-5500
Email: dhilyer@owwb.com
Services: 15,000 Services
% Completed: 70% Mobile/ 30% Fixed (converting to R450)
Products used: ARB Mobile – R900 and ARB FixedBase – R450 pit

Account: **Rosenberg, TX**

Name: Janice Edmonds, Director of Utilities
Phone: 832-595-3439

Services: 8,540
% Completed: 100%
Products used: ARB FixedBase – R450 Pit

Account: **Enid, OK**
Name: Scott Morris
Phone: 580-616-7251
Email: smorris@enid.org
Services: 20,000 installed
% Completed: 100%
Products used: ARB FixedBase – R450 Pit

Account: **City of Pompano Beach**
Name: Bill Herrmann
Phone: 954-786-5511
Email: William.Herrmann@copbfl.com
Services: 20,500
% Complete: 88%
Products used: ARB Fixed Base – R450 Pit MIU

Account: **City of San Angelo, Texas**
Name: Ricky Dixon (Director of Utilities)
Phone: 325-657-4209
Services: 35,000
% Complete: 50% complete
Products used: ARB Fixed Base – R450 Pit MIU

Account: **City of Bay City, Texas**
Name: Catherine Ezell (Director of Finance)
Phone: 979-245-7597
Services: 8,000
% Complete: 80% complete
Products used: ARB Fixed Base – R450 Pit MIU

Account: **City of Snyder, Texas**
Name: Teresa Wall (Director of Customer Service)
Phone: 325-573-4960
Services: 5,000
% Complete: 100% complete

Products used: ARB Fixed Base – R450 Pit MIU

Account: **City of Hewitt, Texas**

Name: James Black (Director of Utilities)

Phone: 254-666-6171

Services: 5,000

% Complete: 50% complete

Products used: ARB Fixed Base – R450 Pit MIU



Project Implementation Methodology

City of Laredo, TX

Re: Automatic Meter Reading System

Proposer's Understanding of Scope of Work:

To give The City of Laredo a better understanding of how Pedal Valves interprets the scope put forth in an AMR project, we believe it beneficial to divide the project into four sections:

1. **Installation of the meters** – Pedal Valves, Inc. employs approximately 60 professional meter installers (10-15 whom will be on your project), that will be responsible for correctly installing the meter, mounting the transmitter, programming the meter, collecting GPS Coordinates, capturing digital photos of the old and new meter, and collecting the data. These installers will be managed by an on-site Project Manager that has many years of AMR experience. The Project Manager will hold daily toolbox meetings covering safety, quality, and any item's he deems necessary at the time, and will ensure all installers are performing their jobs professionally and courteously. Some insurance companies require documentation of these safety meetings. PVI can provide certified documentation when required and requested. PVI is not planning on subcontracting out any portions of the labor at this time. When it is requested by the City, PVI will hire and train local labor to be used on the installations of the meters.
2. **Billing System Integration** –The change out data that is gathered in the field (New Serial Number, New MXU ID, New Register Number and old reading) must be transferred into your billing system. Pedal Valves, Inc. employs the use of tablet pc's to ensure accurate, secure, and timely collection of data and immediate (real-time) transfer of data to our redundant centralized servers. Custom software called TrackPoint and a custom built Certification and Rules engine will analyze installations within seconds of the physical install to provide feedback to our installers on successful installations – eliminating the need for additional field visits. The IT liaison assigned to your project will use this software to manage and transfer the data to your system; eliminating any need for manual updates.
3. **Commissioning of the system** – Once all of the data is in the billing system and the meter installations have been quality inspected (and certified), the IT Professional will commission the AMR or AMI system. In doing so, they will make sure that all of the meters are coming on-line. Any meter not reporting, will be visited and repaired or replaced as necessary. Pedal Valves has developed fault detection software that can be used as part of system commissioning and monitoring.
4. **Training** – The City of Laredo will get plenty of formal training from Neptune and their distributor. Additionally, because Pedal Valves' IT Professional has ample experience with this product, we will provide you with very important, hands-on training. We will suggest to you that as the City of Laredo employees that will be responsible for maintaining this system have time, they train with our IT Professional while they are commissioning the system. This time spent will allow you to see and resolve any maintenance item that could occur with the system, and prove invaluable in the future.

Although these are the four major areas of a fixed base installation project as we see them, there are definitely other components to the project, such as: an effective customer notification plan, daily reporting (TrackPoint automatically emails out daily reports), responsible communication between our management team and the City of Laredo project manager, and many others.

Please be assured that our attention to customer satisfaction will ensure we are successful in these and all areas of the project.



Outline of implementation plan:

Elements to a true “Turn-key” Project

I. Customer Notifications “Beginning with the End in Mind”:

A well executed customer notification plan is the key to reducing the number of likely phone calls that the City of Laredo will field from an uninformed customer base. In an effort to dramatically reduce this encumbrance, our team uses all forms of media (television, radio, newsprint, etc.), to inform the water authorities residential, commercial, industrial and institutional customers of the date and time their service will be affected. Additionally, where the above mentioned forms of media are insufficient, and where the water authority prefers, we exercise a “knock on every door” policy before the meter is changed out. For non-residential customers each meter change-out is scheduled in advance and performed at the appropriate time scheduled by the customer. PVI can also provide schedule notification emails for those customers that provide their email address and elect pre-appointment email notification.

II. Identification of Team Members:

Safety and security are paramount when engaging the community of end-users that comprise your water utility. Every member of the change-out team, as well as all vehicles, are marked with the PVI Meter Team logo. This signage ensures that we are recognizable to the City of Wichita citizens when we are working on or about their property, and when our crews and vehicles are within the community. Our project managers will be differentiated in dress from the change-out crew so that they remain visibly accessible to the City of Wichita staff at all times. Instant accessibility allows the water authority to streamline ongoing requests during installation.

III. Meter Change Outs:

A detailed discussion of meter change-out procedures will be presented during our preconstruction meetings. In short, the below topics present a general overview of our strategic approach to efficiently maximizing our installation efforts while minimizing disruptions to the utility. These topics range from what types of materials you want us to use, to the exact process that we follow for shutting the water off and on. Going over all details would be too lengthy for this document; however, there are a few worth mentioning.

- a. **Training** – We begin with an experienced installation group. Every installer receives initial and ongoing training on the proper way to change a meter, as well as detailed training on the Itron transmitter. Each installer knows the importance of carefully handling the new meter and AMR device with care so as to protect the integrity of critical technology components. We require all installers to attend a daily morning tool box meeting, where we discuss safety topics and installation best practices. Furthermore, these daily meetings allow us to voice issues brought to our attention by the water utility in a productive “sharpening of the saw” manner.
- b. **Responding to Problems** – As with all construction projects, we recognize that when we are installing between 150 and 200 meters a day, a small percentage of those installs are going to require a revisit. Therefore, we staff a 24 hour on-call person. Their primary job is to respond to any call that may come into the City of Wichita regarding any issue with the meter installation. The on-call person is available 24 hours a day and carries with him an on-call phone that is available to every person in the water authority affected by the project.
- c. **Digital Pictures** – For verification of old reading, accurate new meter installation, and location of meter years after the project is complete, we take digital pictures of each meter changed. These digital pictures are linked to the customer’s account in the billing system and are available literally seconds after the installation is complete.



- d. **GPS Coordinates** – To aid the City of Wichita in locating meters, our installers gather the GPS Coordinates of each meter pit. These coordinates are transferred into the billing system or GIS Software as we work our way through the project. Sub-meter accuracy is available upon request.

IV. Quality Control Inspection:

To ensure the City of Laredo receives as few calls as possible and that all installations are performed according to plan, we quality control inspect every meter installed. When an issue is exposed, a work order is generated in our system and addressed immediately. PVI's custom built Meter Certification and Rules engine ensures that even the most complex data elements are handled correctly. Pedal Valves, Inc. will host a meeting with the customer's IT and billing staff to ensure that all scenarios (use cases) are properly defined and answered. The results of this meeting will provide inputs for our Certification and Rules engine to ensure data integrity throughout the project. Other installation companies use very simple (if any logic) to determine the many requirements of a successful installation. We understand that simply sending a serial number and radio id (...etc) doesn't mean the system will work.

V. Data Handling and AMR Commissioning – The difficult and often times overlooked part of a Meter Change-Out Project:

It is our opinion that the next 8 bullet items are some of the major areas that separate our team from any other installation effort. Adherence to these proven practices is critical to a smooth project with little head ache on the water authority. A lack of discipline to the below items may result in a project that requires large amounts of time from the water authority's personnel. We stress these issues, because we are proud of the countless hours we have put into developing and perfecting the processes used. Each of these processes are led and managed by our IT person that will be assigned to your project from start to finish. All of our IT personnel work on these types of projects on a daily basis; and therefore, have received a great deal of experience maintaining the integrity of billing information. They understand that our installation effort cannot t interfere with the current acquisition of data or process to create and distribute bills.

- a. **Leveraging Technology to Help Our Customer Succeed** - Each installation mechanic at Pedal Valves is equipped with a state-of-the art and water proof tablet pc. This tablet pc (similar to an iPad) helps maximize efficiency and drive down overall projects cost in order to deliver the most competitive price possible on our projects. The tablet pc provides many benefits to both our installation team and the customer, ultimately resulting in a lower per-point cost of installation for our customer. Other installation companies use Trimble Nomads, Intermecs, Symbol, Radix, (or like) devices that are good at basic data and gps capture, but fall short in nearly every other facet of performance. By leveraging tablet pc technology, PVI provides the following advantages to our customers:
1. Mobile workforce management – Industry experience tells us that one of the biggest challenges in AMR/AMI deployment is knowing where your staff is...and making sure the customer knows. Time is money, especially when we are asked to assist during major line breaks or unexpected emergencies. PVI and our customers always knows where we are during deployment. We have access (and can provide our customers access) to mapping software that displays current work force locations at all times. Our installation methodology is taking the guess work out of operations.
 2. Real time scheduling – our installers can schedule installations on the spot using the tablet pc's. Even better, if the customer elects to provide an email address, we can automatically notify them 24 hours before the scheduled installation.



3. Barcode scanning – for accurate data capture and to eliminate manual data entry.
4. Hi-res (Color) digital camera and flash – Other installation firms often use black and white photos without a flash, so images are often dark and have illegible register pictures. PVI uses a hi-res (5-megapixel), color, flash-enabled built in camera for image capture of the old register, the newly installed meter, the final “wide-angle” installation picture, and a digital photo of the work area prior to installation. All photos are stamped with the account # and address as part of the file name and are immediately available to the customer upon capture. Camera can produce images up to 2560 x 1920.
5. Voice navigation instructions are native to our data collection application so installers can quickly and safely get to each account while minimizing fuel costs and air pollution.
6. Internet access – in order for our large meter mechanics to research installation specifications unique to each manufacturer– typically associated with large meter installations to insure warranty
7. GPS for capture of lat/long – sub meter available upon request.
8. Schedule Email Notification – if desired, PVI can collect email addresses from your customers during appointment scheduling to provide an email notification of the scheduled installation 24 hours (or other time interval) before the install is scheduled.
9. Real-time data collection – as meters are installed, a work order is filled out on the tablet pc (complete with GPS, photos, barcode scans...etc) and sent real-time to PVI’s centralized and redundant server. A custom-written server-side application called “TrackPoint” then evaluates the data sent using a certification engine to validate the installation. During project setup, PVI coordinates with the customer to build a customer-rules profile within our system to help maintain near perfect data accuracy. All non-certified records are returned to our installers within minutes for correction – further eliminating the need to access the same pit and/or facility multiple times.
10. Training – with the use of tablet pc’s, PVI can make training and policy adjustments nearly real time. PVI has the capability of rolling out new company documents and safety guidelines within seconds of adjustment. Additionally, our HR and training department can host impromptu training sessions with installation mechanics utilizing video conferencing software. By leveraging technology at this capacity, PVI has unsurpassed reaction time in challenging situations.

b. Handling of Meter Swap Out Data – Pedal Valves, Inc. will work closely with your information system provider to procure the data necessary to build a meter installation database. In order to maintain scope control, the database is built before the project and updated as necessary during the course of implementation. After the database is built and the project is ready to start, work orders are dispatched electronically to our installers. PVI is capable of deploying 100’s (and even 1000’s) of work orders “over the air” within seconds of notification using our custom TrackPoint management software. All data disbursements and returns are logged, eliminating the need for paper and promoting an eco-friendly installation. Each work order sent out contains the following data: account information, serial number of old meter, most recent read of old meter, change out instructions, and boxes for the installer to record the information from the new and old meter that we need to perform the meter swap out in the billing system. All installers are trained on how to correctly use our tablet computers. Unlike our competitors, the PVI TrackPoint software provides immediate feedback to the installer on the status of the installation. Our Certification and Rules engine makes sure the data is “just perfect” for each unique record in our customer’s database. This means that PVI does not apply “blanket logic” to validate installations, unlike our competitors.



When our mechanics complete the electronic work order, we make every effort to reduce the opportunity for recording error. In fact, the only number that they have to manually record is the existing reading from the old meter. All other numbers are collected via barcode scanner and validated against the meter inventory file using our TrackPoint software. By using the barcode number as our inventory key, we can minimize installation time and maximize data accuracy by inputting less data and pulling data from file. By scanning the bar code, we receive the AMR number, the Serial Number, manufacture date, ship date (for warranty), test certification (up to 6 different flow rates), and a host of other data specifically for that meter. Due to the potential for manual error in recording the existing reading, we will request high and low reading thresholds for each account. If this data is not available, we can often analyze historical data to define baseline values. If the final reading of the old meter exceeds the threshold value, TrackPoint flags the account and sends out a warning for that meter and we recheck the data from the old meter. We control this functionality through our meter Certification and Rules engine. The above steps ensure a smooth transition of accurately maintained data used in updating the billing system.

c. Updating the Billing System with New and Old Meter Data:

Once all of the change out information is in TrackPoint and has been checked for accuracy, it is sent to City of Wichita's billing system in one of two methods – depending on the customer's preference. Both interfaces provide a return log file indicating the status of the update.

Option 1 –Automatic Update. With this option a pre-determined update schedule is set and all processing is performed automatically, without user intervention. Automatic updates are recommend for projects larger than 5,000 accounts. Our TrackPoint software (and the project IT Liaison) will monitor update performance and send alerts in the event of error or failure.

Option 2 – Manual Batch Processing. With this option, user intervention is required to perform the update. This method is preferred for projects with 5,000 accounts or less. Our IT liaison will provide support with this function.

The batch update is basically our way of updating your billing system with the change out information, without having to manually enter in the numbers for all 150-250 meters changed daily. In order to complete this task successfully, our IT people work with the water authority's billing system to write a programming modification in your billing system. The modification is tested before deployment and a backup of the water authority's billing system is maintained throughout the project. All updates are completed and monitored by our IT Personnel.

This batch update process ensures that we get accurate information into the billing system and saves months of data entry time normally left to your billing personnel.

- d. Digital Photos** – As mentioned earlier, our photo procurement process is literally 1000 X's better than other installation firms. Our data collectors are equipped with 5 mega-pixel cameras capable of capturing images at a resolution of 2560 x 1920; in comparison to low-res, non-flash, black and white Nomad, Symbol, Radix, and other ruggedized field units.

All photos are made available for download to our customers via FTP within seconds of the installation. If preferred, we can provide custom scripting via our TrackPoint software to send them to your FTP server as well. Photos are labeled with the address of the installation



and photo type for ease of location amongst thousands of photos at the end of the project. Our installers can take as many photos as they want on a given installation (to make sure the customer sees everything). At minimum our installers are required to take 4 digital pictures:

1. **Old Meter (and Reading) with House in Background** – Many Water Authorities meet a significant challenge in successfully communicating meter change-out data from the field into the water billing department. By providing digital photos of the old meter with the house or facility captured in the background, we accomplish three things for the Water Authority: 1) Provide proof to the customer of the out reading at the time the meter was removed, 2) By using the house or facility as the backdrop, we can provide proof that the meter was installed at the correct location, and 3) Redundancy is provided because the reading is also collected on the meter change-out work order. If one piece of the data is lost (either the work order, or the photo), we will have a simple recourse to collect the data.
2. **New Installation** –By collecting digital photos of new installations, PVI can provide several invaluable services including: installation quality control, proof of meter condition upon installation (in event of vandalism), and proof of fixture installation (in event of back-flow projects).
3. **Radio-To-Lid Mount** – In order to protect our customer, and to help our customers protect their investment, we capture a digital photo of every pit set illustrating that the radio is securely mounted to the lid (or mounted properly and neatly for indoor basement installations). This photo provides protection in the event a customer reports that the radio was broken due to a loosely mounted radio unit.
4. **Closed-And-Clean** – In order to protect our customer, and to help our customers protect their investment, we also capture a photo of the work area and surrounding space to illustrate that the area was left clean and the meter lid was properly secured and/or locked as to mitigate any tripping hazard. This photo provides protection in the event a customer reports a hazardous open-pit condition and/or the customer reports an unclean work area.
- e. **Warehousing Installation GPS Coordinates** – **GPS coordinates provide not only a great QC tool for PVI, but will also give the City of Wichita a new resource to utilize for infrastructure changes, future reference, and future growth.** Our team can use the GPS coordinates to confirm if a meter was installed at the correct location. If there is any question as to the installation location, we can always return to the provided Lat and Long coordinates with a water authority official to confirm. Upon request PVI can also provide enhanced GIS services such as sub-meter accuracy.
- f. **Commissioning the AMR (Automatic Meter Reading) System** –One of the other tasks managed by the IT specialist is commissioning the AMR system. Each billing system book is commissioned as it is installed, to ensure that all meters are reading correctly and transmitting their readings accurately back to the fixed base network. By the end of the project, we will be able to turn over a 100% operable AMR system to the City of Wichita.
- g. **Automated Commissioning and Fault Detection for AMI Systems** – Pedal Valves, Inc. has built great working relationships with nearly every meter manufacturer. We've worked closely on past projects and developed certain synergies that bring added value to our mutual customer (you, the municipality). This is another way PVI is different from your "average" installation group. Pedal Valves, Inc. has built a commissioning database system that monitors the AMI system's status throughout the course of the meter installation. Our system works real-time in capturing important diagnostics that help identify problems and automatically send out alerts (in many cases) before anyone realizes there is a problem. A few examples of past problems detected were AMI tower outages, exponential read-rate



drops, loss of data connectivity, and intermittent communication. Since PVI sets up automated data flow for AMI commissioning, we minimize the burden that OTHER contractors place on the billing department by requesting timely reports on a weekly (or more frequent) basis. By automating system fault detection, our IT specialists can focus on making your system better instead of reacting and responding to problems.

VII. Sign Off Procedure:

As previously mentioned, we commission the books as the installations are completed. Once we have commissioned a book, we will ask a representative from The City of Wichita to join our IT Person and Project Manager in witnessing each meter in that book reporting into the AMR/AMI system. After the meters read, we supply the water authority with an Initial Completion Notification Form. This form states that we are complete with the book and it is ready for visual inspection. At that time the water authority has 30 days, or the length between readings by the meter readers, to visually inspect the meters for proper installation. At the end of the 30 days, any punch list items are presented and resolved, and the book is signed off.

This process will allow us and the City of Wichita to have the time necessary to be comfortable with the installations and their accuracies without having to rush through signoff's at the end of the project.

It is important to note that all of the above best practices are just that, best practices, not mandates that we insist on following. We realize that the best way to make this a successful project is to work with the City of Wichita personnel to make sure we are executing the project the way you would have us. Your input will play a vital role in shaping the way that we go about implementing all of the above practices. As a team, we are confident that this project will be successful.



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In order to show the City of Laredo our gameplan on managing your project, we thought it might be beneficial for you to see the checklist that our on-site project manager and IT personnel go through to ensure they execute your project according to plan. Obviously, any project of this magnitude is going to take some involvement on your part, so we have also listed the City of Laredo on the Matrix. As with any plan, it is flexible to meet your ideas of how the project will run, but is a great place for us to all start. Additionally, please see organization chart that follows this matrix for an idea of the staff directly involved and their experience relative to these types of projects.

Pre-Installation Phase Tasks

	Who	
	PVI	Laredo
Initial Project Execution Planning Meeting		
1 Set up a meeting with City and PVI to develop project execution plans at Customers Facility.	X	
2 Provide Agenda for meeting listing all tasks that need to be completed during the pre-installation phase.	X	
3 Participate in Meeting	X	X
4 Conduct Meeting	X	
5 Issue Minutes of Meeting	X	
Project Execution Database		
1 Obtain latest city database to be used to execute project	X	
2 Work with City and PVI to cleanup and reconcile data base with project scope	X	X
3 Issue minutes and correspondence with all involved parties till process is complete.	X	
4 Transfer Database to and from participants either electronically and or via print until all necessary issues are resolved.	X	
5 When all issues are resolved upload final project execution database into Meter Project Management System Program (MPMS)	X	
6 From MPMS, print the multipart work orders with instructions on changing or retrofitting each meter and any other task like installation of a strainer, bypass, etc.	X	
Engineering Services		
1 Review all meter plans to insure change instructions developed for the meter are consistent with the scope and in the best interest of the city and project.	X	
2 Review all meter retrofit plans to define retrofit parts needed and that retrofits are possible.	X	
3 Review all large meter work relative to vault, strainer, bypass, and test ports and design assembly of piping and components consistent with AWWA Standards	X	
Material Ordering		
1 Develop and Issue Purchase Orders For Meters, Meter Retrofit Parts, and AMR equipment. Ensure all necessary labels and data required is supplied by Meter Mfg	X	
2 Develop and Issue Purchase Orders For gaskets, fasteners, and other materials needed to execute project	X	
3 Develop and Issue Purchase orders for repair material that need to be on hand .	X	
Meter and Supplies Inventory Management System		
1 Set up and Customize the inventory management system for the specific project	X	



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2 Utilizing information from the project execution database load Inventory requirements into system	X		
From information obtained about cities water distribution hardware, develop inventory of repair hardware that			
3 needs to be on hand	X		
Media Campaign, Outdoor Meter Customer Notifications, Indoor Meter Scheduling			
1 Set up Meeting with City and PVI to plan Media Campaign, Notifications and Indoor Meter Scheduling	X		
2 Provide Agenda for Meeting	X		
3 Conduct Meeting	X		
4 Participate in Meeting	X		X
5 Develop Media Campaign	X		X
6 Develop Customer Notification Pland	X		X
7 Develop Indoor Meter Scheduling Plan	X		X
8 Issue Minutes of Meeting	X		
9 Customise Media Kit for City	X		
10 Generate Schedule for Media Campaign	X		
11 Assist City to execute media campaign	X		X
12 Design any needed door hangers required during installation phase	X		
13 Print needed door hangers for installation phase	X		
Project Schedule Development			
1 Work with City, Suppliers and PVI to obtain data to develop the project schedule	X		X
2 Prepare Preliminary Project Schedule	X		
3 Publish Preliminary Schedule for approvals	X		
4 After feedback is obtained Prepare Final Schedule	X		
5 Publish Final Schedule	X		
Warehouse, Office, and Waste Removal Requirements Meeting			
Set up Meeting with City and PVI to discuss these items (These should have been pre-determined during			
1 contract preparation)	X		
2 See what can be provided by city and resolve any problems that exist	X		X
3 Provide any needed facilities that cannot be provided by city	X		



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Plan Processes to be used during installation Phase

1 Meet with City and PVI to plan processes:	X		X
2 Route order	X		X
3 On-going Meter Reading	X		X
4 Communications	X		X
5 Data Uploads	X		X
6 Problem Resolution	X		X
7 Contingency Fund	X		X

Contract with Water Billing Software Provider

Contract with Billing Software provider to write a program to batch upload meter change out data into billing system software	X		
2 Work with city and billing system provider to test program prior to requiring any data uploads	X		X
3 Verify that test was successful and program is ready for use	X		X

Monitor Readiness to Begin Installation Phase

Communicate with City, Suppliers and PVI to insure all pre-installation phase tasks are executed and are on schedule.	X		
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Installation Phase Tasks

	Who	
	PVI	Laredo
Mobilization completed		
1 Mobilize crew, managers, and equipment to job site	X	
Installation Phase Kick Off Meeting (Usually 1st thing, Monday Morning)		
1 Set up Meeting with City and PVI to Kickoff Installation Phase	X	
Prepare Agenda for meeting to cover (1) all processes developed, and tasks completed during pre-installation phase (2) What to expect during the installation phase (3) PVI and City Responsibilities during the installation phase. (4) Periodic Meeting Schedule	X	
3 Assemble all pre construction materials needed for Kickoff Meeting	X	
4 Conduct meeting	X	
5 Issue Minutes of Meeting	X	
Receive Materials (Monday late Morning)		



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1 Receive materials planned for Delivery this day	X		
2 Quality Check and Inventory Materials Received	X		
Set up Field Office and Warehouse			
1 Set up Superintendent office using Customer or PVI Supplied facility	X		
2 Set up Information Systems office using Customer or PVI Supplied facility	X		
3 Set up Warehouse using Customer or PVI Supplied facility	X		
4 Procure Dumpster	X		
5 Obtain Internet service for offices, and all utilities to offices and warehouse	X		
Meter Mfg Training			
1 Set up meeting with Badger and PVI to go over any special installation procedures unique to this job.	X		
Residential Meter Installations			
1 Install water meter correctly and communicate with residential customer in professional manner	X		
2 Provide new gaskets, and fasteners to install meter	X		
3 Record old reading, old meter serial # new meter serial #, new AMR #, new meter reading	X		
4 Record GPS Coordinates of meter installation location	X		
5 Capture digital photo of old meter with close-up of register and house in background	X		
6 Capture digital photo of new meter installed in meter box.	X		
7 Repair all leaks and/or breakage, caused by the installer, within 2' of the meter	X		
8 Repair or replace any meter box damaged during the installation	X		
9 Repair any sidewalks, curb stops, or roadways damaged during the installation	X		
10 Pressure test installation	X		
11 Cleanup installation site	X		
Commercial Meter Installations			
1 Coordinate with city and customer a planned shutdown for water meter replacement	X		
2 Install water meter correctly and communicate with commercial customer in professional manner	X		
3 Provide new gaskets, and fasteners to install meter	X		



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4	Record old reading, old meter serial # new meter serial #, new AMR #, new meter reading	X		
5	Record GPS Coordinates of meter installation location	X		
6	Capture digital photo of old meter with close-up of register with business in background	X		
7	Capture digital photo of new meter installed in meter box.	X		
8	Repair all leaks and/or breakage, caused by the installer, within 2' of the meter	X		
9	Repair or replace any meter box damaged during the installation	X		
10	Repair any sidewalks, curb stops, or roadways damaged during the installation	X		
11	Pressure test installation	X		
12	Cleanup installation site	X		
Repair Services				
1	Maintain a supply of repair parts needed to quickly repair failures occurring during meter installations	X		
2	Execute repairs to customers lines, valves, meter boxes and vaults as needed during meter replacements	X		
3	Document and photograph problems and repair steps and materials used.	X		
AMR System Training				
1	Set up On Site Factory Provided Training for City Personnel on use of the AMR system.	X		
2	Participate in training to help communicate and facilitate training of City Personnel	X		X
Provide Field training				
1	Provide additional non factory training in field and office with city personnel to develop city expertise in use of AMR equipment, troubleshooting and problem resolution of inoperative meters and AMR transmitters.	X		X
Data Processing and Information Systems				
1	Provide on site Information System Specialist throughout the project to execute and coordinate all data processing requirements for the project.	X		
2	Electronically record all meter change out data into MPMS	X		
3	Troubleshoot all change out data problems arising from high/low reads, database inaccuracies, installer errors.	X		
4	Upload all digital photos from cameras into MPMS system, renaming photo files to create easy access of photos for customer verification needs.	X		
Route Commissioning				
1	As Routes become substantially complete, PVI will use AMR equipment to: (1) read the route and (2) troubleshoot meter problems.	X		



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2 Meters that have problems will be repaired.	X		
Route will be read again to confirm repairs are complete and double check all meters that correctly worked on the first read.	X		
4 Any other repairs will be made.	X		
5 Additional reads may be completed until all meters in a route have been successfully read	X		
6 PVI will analyze meter data to confirm the route is ready for customer acceptance.	X		
PVI will prepare the route acceptance documents including the list of any exception meters (uncompleted meters)	X		
Equipment Problem Troubleshooting and Resolution			
1 Trouble shoot meter/register/transmitter problems and correct or replace the defective hardware or condition	X		
2 Return defective hardware to manufacturer for replacement	X		
3 Make appropriate records in Inventory management system to track returns	X		
Route Acceptance and Signoffs			
Once route is verified by PVI that it is ready, PVI will demonstrate its operation to City representative (city meter reader) for route acceptance and sign off. The route will likely have a few exception meters that are not yet ready. These will be presented for acceptance at a later time	X		X
		Who	
	PVI		Laredo
Change out Data Uploads into Water Billing System			
<i>After meters have been changed and it is time for City to send water bills out, Data upload must occur first</i>			
1 PVI to submit each batch of meter data for upload into billing system on the agreed upon time schedule.	X		
2 City to upload data from MPMS into Cities water billing software. PVI assists	X		X
3 Monitor data uploads into Cities water billing software; verifying the uploads for accuracy and completeness.	X		X
4 City to work with Billing software provider to solve any upload problems. PVI Assists	X		X
5 City to generate list of questionable data.			X
6 City and PVI meet to begin solving questionable data issues.	X		X
7 PVI provides printout of any needed data and/or photos	X		
8 City obtains any field data needed utilizing meter readers (City Problems)			X
9 PVI obtains any field data needed (PVI Problems)	X		
City makes manual entries into billing software as needed to solve questionable data problems (PVI provides guidance as needed)			X
10 Recommend process for correcting discrepancies/ inaccuracies of manually data entered into the billing system, so that problems don't repeat during next cycle	X		
11			



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Reading Completed Routes with AMR equipment

After a route is substantially complete and officially accepted (signed off), the AMR equipment can be used to read those meters

1 PVI will assist the city to prepare the AMR equipment for reading the routes(training)	X		X
2 PVI will assist the meter readers in trouble shooting any reading problems (there are always a few problems)	X		X
3 PVI will assist the billing dept upload of the meter reads file into the billing system(training)	X		X
4 City to generate list of questionable data.			X
5 City and PVI meet to begin solving questionable data issues.	X		X
6 City obtains any field data needed utilizing meter readers (City Problems)			X
7 PVI obtains any field data needed (PVI Problems)	X		
8 City makes manual entries into billing software as needed to solve questionable data problems (PVI provides guidance as needed)	X		X

On Site Management

1 Provide on site management throughout the project to coordinate all work and communications with City	X		
2 Generate Daily Reports of Meter Installations in a form that keeps running totals of progress	X		
3 Supervise technicians monitoring quality, productivity, and professionalism	X		
4 Monitor Inventory with focus on security, availability, and organization	X		
5 Set up field shop if needed for meter lid modifications when needed.	X		
6 Supervise handling of old meters with respect to security and scrap disposal.	X		
7 Work with City and commercial customers to schedule large meter replacements	X		
8 Provide 24 hour on-call service to respond to problems.	X		
9 Respond to problems in a professional manner and work to resolve these as quickly as possible.	X		
10 Report problem resolutions to City and Water Customer, as requested	X		

Off site Management

1 Monitor Project Execution and provide management, leadership, information systems expertise, and engineering expertise on an ongoing basis.	X		
2 Purchase and Coordinate delivery of meters to meet the needs of the project schedule considering storage, production, and changing requirements	X		
3 Purchase and Coordinate delivery of installation supplies to meet the needs of the project schedule considering storage, production, and changing requirements	X		
4 Coordinate replacement of defective materials with meter manufacturer	X		
5 Coordinate resolution of technology problems with Manufacturer	X		
6 Communicate City Project Management, and City Water Billing Office Representatives on a weekly basis to insure project is going smoothly.	X		



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7 Travel to Job site on an as needed basis when challenging problems arise.	X		
Project Closeout Tasks			
1 Ensure that all routes have been signed off including any meters that were once on an exceptions list.	X		
2 Meet with City Representatives to see if there are any new punchlist items.	X		X
3 Generate Final Database of MPMS system and transfer copies to City	X		
4 Generate electronic report of all meters showing correct operation of AMR System and transfer copies to City	X		
5 Transfer any planned inventory for City to the appropriate personnel with an appropriate inventory transfer report	X		
6 Transfer all AMR equipment and Manuals to the City with appropriate transfer report	X		
7 Provide all needed contacts to appropriate city personnel.	X		
8 Meet with Meter Readers, Water Dept managers, Billing Dept Personnel To see that all open issues have been resolved.	X		X
9 Clean up and return any facilities provided by city to the city (offices, warehouses, waste disposal dumpsters)	X		
10 Demobilize all equipment, supplies, crew members, and management from Job Site	X		
Post Project Tasks			
1 Follow up with City billing dept after 1st month of independent operation to insure all work went smoothly	X		
2 Advise as needed the resources needed to resolve problems.	X		

18.0 Water Meter And Register Specifications

Please respond to each requirement by stating "Yes/No" in the Yes box. If the responder feels a clarification is necessary, please add in the description/clarification box.

Requirement	Comply?	Description/Clarification (if necessary)
Controlling Specifications		
The water meters to be furnished shall equal or exceed the requirements of AWWA Standard C-700-02 for Cold Water Meters- Displacement Type, AWWA C-701-07 Standard for Turbine Meters and AWWA C-702-017 Standard for Compound Type or most recently revised standards.	Yes	
Certification		
All meters must meet NSF Standard 61 Certification and NSF 61 Annex F and G (lead requirements) requirements in 01/04/14. Documentation verifying NSF certification or compliance with TCEQ interim standard must be submitted with RFP.	Yes	
Size and Length		
5/8"x3/4", 3/4"x3/4", 1", 1 1/2" and 2" turbine meters and 2", 3", 4", 6" and 8" compound meters. The 3/4"x3/4" must be 7 1/2" in length. The compound meters must meet the following length requirements: 2" meters-15 1/4", 3" meters-17", 4" meters-20", 6" meters-24" and 8" meters-55 3/8".	Yes	

Requirement	Comply?	Description/Clarification (if necessary)
Cases		
All meters shall have a non-corrosive waterworks bronze outer case with a separate measuring chamber which can be easily removed from the case. All meters shall have cast on them, in raised characters, the size and direction of flow through the meter. Bronze bottoms shall be provided on 5/8"x3/4", 3/4"x3/4", 1", 1 1/2" and 2" meters. The 1 1/2" and 2" meters can be the split case type with bronze lower and upper shell assemblies. All water meter cases must be equipped with a frost protection bottom plate to prevent meter damage due to freezing temperatures. Matching Laredo designated numerals	Yes	
External Bolts		
All external bolts shall be stainless 316 steel material and be easily removed from the main case. Note: Meters 1 1/2", 2", 3", 4", 6" and 8" shall include bolts, nuts, gaskets	Yes	
Registers-absolute encoders		
Registers must be an integrated register and transmitter with no external wires, except for a quick connect to the external antenna and meet AWWA C707 Standards or most recently revised for absolute encoded registers.	Yes	
The encoder register shall provide a digital output based on solid state technology. It shall read in U.S. gallons.	Yes	
The encoder technology shall incorporate features that eliminate dashed readings.	Yes	
The encoder register must be constructed of a scratch resistant glass face, non-corrosive metal bottom and a permanent seal.	Yes	
The encoder register shall have a plastic or bronze lid that covers the glass face for added protection with a serial number for identification.	Yes	
All reduction gearing shall be contained in a permanently hermetically sealed, tamperproof enclosure made from a corrosive resistant material.	Yes	
Registers shall have leak detection and the manufacturer shall furnish some form of tamper resistance register at no additional cost.	Yes	
The date of manufacture of the register shall be clearly indicated on the face of the register.	Yes	

Requirement	Comply?	Description/Clarification (if necessary)
Registers must come with a 20 foot pig tail wire connected to the meter endpoint if ordered by Owner for inventory, otherwise Bidder will evaluate what length is needed. If register is already set for AMR/AMI, the endpoint must have a 6 foot pigtail. They must be factory potted connections to the meter and pre-wired to the endpoint. Connection wires shall be in the form of a cable in a single protective jacket or fused as a single cable unit suitable for direct burial and exposed mounting. The register and connections must be waterproof and corrosion proof.	Yes	
The register shall have a bar code indicating the register serial number.	Yes	
Magnetic Chamber		
The measuring chamber shall be of a suitable synthetic polymer and shall not be cast as part of the main case. The chamber's division plate shall be of synthetic polymer. The chamber's bottom plate shall be held in place without the use of fasteners.	Yes	
Magnetic Coupling		
The motion of the piston or disc will be transmitted to the sealed register through the use of a direct magnetic drive without any intermediate mechanical coupling.	Yes	
Strainers		
All meters must be provided with a corrosive resistant strainer. 1 1/2" meters and larger must be provided with strainers that are easily removable from the meter.	Yes	
Accuracy and Head Loss		
Meters shall conform to current AWWA test flow and accuracy standards.	Yes	
Pressure Capability		
Meters shall operate up to a working pressure of 150 pounds per square inch, without leakage or damage to any parts. The accuracy shall not be affected when operating at this pressure due to possible distortion.	Yes	

Requirement	Comply?	Description/Clarification (if necessary)
Warranty		
Bidders should have a minimum of 10 years' experience with their meters and be actively engaged in the manufacturing of their meters in the United States of America. All meters shall be guaranteed against defects in material and workmanship for a period of fifteen (15) years from the date of shipment. All absolute encoders, registers and endpoints will be warranted against defects and workmanship for a period of 20 years with 10 fixed and 10 at a prorated rate from the date of the shipment. In addition, the manufacturer must provide a meter maintenance plan in writing and state the warranty on the meters and absolute encoder registers.	Yes	

19.0 AMR/AMI SYSTEM REQUIREMENTS

Any vendor submitting a proposal must satisfy the following minimum criteria.

Please respond to each requirement by stating "Yes/No" in the Yes box. If the responder feels a clarification is necessary, please add in the description/clarification box. The vendor must submit documentation for technical questions that are listed under this section.

Requirement	Comply?	Description/Clarification (if necessary)
AMR/AMI System		
The AMR/AMI system shall be capable of remotely collecting alpha and numeric meter identification, hourly readings, premise leaks, no flow, tamper information and unauthorized usage from the Owner's existing and new water meters.	Yes	
The City requires (a) radio-based AMI and AMR system(s). The proposed system must operate as a point to point communication. <u>No mesh RF type systems will be accepted.</u>	Yes	
AMI fixed location data collection units that are capable of forwarding and capturing, respectively, the signals from the endpoints.	Yes	
The proposed system shall be fully two-way all the way to the meter endpoint, allowing for over the air programming of the endpoint remotely.	Yes	Full two way capability applies to the portion of the system deployed under the AMI network.
The fixed network may utilize one or a series of data collector units (DCU) located strategically throughout the City's service area for retrieving meter data. It should not incorporate a series of repeaters to assist the fixed network system with meter reading data collection.	Yes	

<i>Requirement</i>	<i>Comply?</i>	<i>Description/Clarification (if necessary)</i>
The DC must be powered via 110V AC. If AC power is not available at City facility, then the vendor must provide power to generate DC. Vendor must submit proposal of work needed to owner for approval. Upon start-up after power failure, the DC must restore databases, tables, and logs to the previous operational state. Upon power failure, the DC shall retain the past (three) days of meter data in a non-volatile memory. DC must have UPS backup power solution to provide continuous power. Vendor must provide UPS if unavailable.	Yes	
A secure communication or data transfer system infrastructure capable of transferring the data from the data collection units to a meter reading system control computer located at the City's office.	Yes	
A meter reading system control computer into which the data from the endpoints and other information necessary to operate and maintain the AMI and AMR system may be uploaded, downloaded and stored. The purchase of the control computer may be done independently of this request.	Yes	
The software necessary to operate the system and communicate meter reading data to the City's customer information system; the City intends to locate the software on a network server. The information transmitted from the meters will be accessed from several locations within City departments.	Yes	
If the system is designed to obtain normal meter readings more often than monthly, a database of meter reading data, and the software to operate the database.	Yes	
Ongoing support of the system hardware and software, and ongoing user support.	Yes	
The AMI system shall automatically provide the Owner with metering data at the network control computer at least one time per day with 24 one hour totals without having to interrogate the endpoint or data collector. Meter readings, premise leak, no flow, tamper information and unauthorized usage shall be transmitted at least one time a day. This should have the ability to alert the utility via email or text in real time when meter tampering, unauthorized usage, leaks, reverse flow occurs, and loss of communication with endpoint.	Yes	
The AMI system should also provide on demand reads.	Yes	For "move-in/move-out" demand read requirements, the system provides the most recent midnight reading upon request from the database.

The proposed system must provide for leak detection on the customer side, and help support leak detection capabilities on the distribution side.	Yes	
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<i>Requirement</i>	<i>Comply?</i>	<i>Description/Clarification (if necessary)</i>
The proposed system must provide analytics based software that informs the utility of utility defined exception conditions; such as leaks, reverse flow conditions, no flow, tampering, unauthorized use, loss of communication in real time, via email.	Yes	Email notification is currently only available with the AMI system.(TN)
The proposed AMR/AMI system must be capable of reading Neptune, Hersey, Sensus and Badger encoders.	Yes	
The billing software needs to be able to import data from the current Laredo system to the new AMR/AMI system simultaneously with the existing handheld reading system, or Bidder must provide handhelds to collect readings from non AMR/AMI accounts.	Yes	AMR system has the ability to run in parallel with the AMI system.
The AMR/AMI system must comply with all applicable Federal Communication Commission (FCC) Rules & Regulations. The requested AMR/AMI system must operate in a licensed frequency band (please specifically comment on how proposed system complies).	Yes	The AMI Network is licensed (450-470 MHz, FCC Part 90)
The system shall have the capability of AMR in case of region failure of AMI or have a self-healing feature within the system.	Yes	Neptune N_SIGHT system incorporates the use of R900 radios of AMR capability.
Ability to retrofit AMR/AMI technology to existing meters in the system.	Yes	
All AMR/AMI equipment and system components shall be labeled in accordance with the FCC.	Yes	
The output power of the AMR/AMI system will be governed by the relevant FCC standards for the operating frequencies used.	Yes	
Must provide hand held meter reading device/data collector/portable interrogator to collect readings from AMR meters.	Yes	
The AMR drive-by system should communicate with the AMI system and the Laredo billing system.	Yes	
All vendor supplied software must be supplied with a perpetual, irrevocable license indicating the software's designer, owner and licensor, and detailing the terms and conditions, including annual cost of maintenance by the vendor.	Yes	
All Radio frequency (RF) products must be protected against water and moisture.	Yes	

The Vendor must provide assistance and/or support for successful interface of their AMR/AMI software to the billing system.	Yes	
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<i>Requirement</i>	<i>Comply?</i>	<i>Description/Clarification (if necessary)</i>
A software package shall be provided and be available via the Owners network or local client-based application for up to 50 PCs, connected to the city's network.	Yes	
Custom report building shall be such that it utilizes standard query operators. At a minimum, all of the collected metering data should be used for custom reporting capabilities to allow the City to easily design reports to monitor and analyze many aspects of the metering system. If any additional software is needed to create custom reports, the application software must be provided and included in the bid.	Yes	Custom reports for AMI will be available in Q2-Q3 2013. Custom reports for AMR currently available.
The software shall show and retain a minimum of three years of hourly usage history.	Yes	Long term data storage is available through Neptune's Data Repository and Customer Web Portal - N_SIGHT IQ. N_SIGHT IQ Software can be provided at an additional charge.
The software shall be provided as a perpetual license to use the software with the supplied system, provided the annual maintenance agreement is upheld.	Yes	
Ability to generate error reports and identify which endpoints and data collectors have been inactive for a certain period of time.	Yes	
The software should include the following standard reports: Meter Reading History, Daily Leak Detection, Daily No-Use Meter, Daily Tamper Detection, High / Low Consumption, Unauthorized consumption, Backflow, Area or Group Leaks and ability to create user-defined Reports. Vendor must provide software/third party to create or modify reports.	Yes	
The AMR/AMI system should include a provision for Proposer to remotely connect to the control computer or database server to diagnose problems, load patches and upgrades, etc.	Yes	
A toll-free telephone Help Desk shall be available between the hours of 7AM and 6 PM, Central Standard Time. The Help Desk services shall include: fixed network device problems/questions; software operations problems/questions; equipment returns and repairs; loaner equipment processing; evaluation of information for updates or revisions; evaluation of personnel training needs. Response time shall be within 30 minutes. Prospective Bidder shall provide an issues escalation provision in order to address Owner's unresolved issues within a reasonable time frame.	Yes	

The prospective bidder shall provide yearly maintenance costs and how maintenance cost is determined after 5 year warranty period.	Yes	Please see Infrastructure Pricing Sheet
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<i>Requirement</i>	<i>Comply?</i>	<i>Description/Clarification (if necessary)</i>
The system must contain tamper detection capability which, when the meter, endpoint or any wiring between components has been tampered (cut wire, tilting of meter, etc.) with, shall cause a tamper message to be indicated when the endpoint transmits its data. The City desires the system to communicate to the control computer immediately upon tamper. Indicate how quickly tampering with each component will be reported and how will it be reported. How many times will the tamper indication be provided to the DCU or to the system operator? Indicate whether the tamper indication must be reset or reprogrammed, and how this is accomplished.	Yes	Details depend on tamper type: Cut wire: system transmits colons to Host. Tamper indication on daily report basis, resets automatically when condition is resolved. Meter removal: daily reporting of no flow condition. Meter backwards: Priority Alarm to Host, with additional email/text message notification available. Condition resets after 24 hours.
The system should give an indication of unauthorized usage; that is, when the customer account record indicates that the customer has been shut off, the system will flag and specifically report any unauthorized usage. Describe how this is accomplished.	Yes	AMI only – the system provides the capability to mark an account as virtually disconnected and report if any usage occurs during the virtual disconnected time period
The system should monitor water consumption through the meter and specifically indicate if there is an abnormal increase in water consumption, if there is no time interval (e.g., at night) when the rate of consumption is zero, or if there is a -running continuously” condition.	Yes	N_Sight Host software has Add Hi/Lo Reporting capability provided this function is available in the Laredo CIS/Billing system. E-Coder registers check for usage every 15 minutes. A continuous consumption (e.g. LEAK) alarm is set upon 24 hrs of continuous flow. This alarm is transmitted to the Host immediately
The system shall include provisions to ensure data transmission accuracy (for example, error checking), security (for example, encryption) and immunity from outside (electromagnetic) interference as well as fading and other forms of signal degeneration or attenuation, to prevent accidental loss or interception of customer or meter reading data.	Yes	
The system must ensure data integrity (so that the readings from the meters, ID numbers, and other data are always associated with the correct meter and customer) and data security (so data cannot be accessed by unauthorized parties). The system must ensure against loss of data.	Yes	
Each endpoint shall have a unique, permanent ID number that is transmitted with the meter readings.	Yes	

The endpoint must operate in conditions subject to water submergence (i.e., meter boxes or vaults). The endpoint enclosure shall be composed of UV-inhibiting ABS or similar material. All materials used in the endpoint must be non-hazardous.	Yes	
The endpoint shall be permanently labeled with manufacturer's name, model number, "City," a tamper warning, endpoint identification number, required FCC labeling, input/output connections, and date of manufacture. The label should contain a bar code of the endpoint identification number.	Yes	
Proposer shall be responsible for obtaining all necessary licenses on behalf of the City. Licenses must be obtained and assigned radio frequencies verified as suitable for use with the AMR/AMI system(s) before any AMR/AMI equipment may be installed. If Proposer is unable to obtain the necessary licenses, the City reserves the right to cancel the contract and orders for all or part of the system, and receive a full refund from Proposer of all amounts paid.	Yes	
The City requires handheld meter reading devices, cradle/data transfer units, control computer, software, etc., to read meters equipped with endpoints as well as capture manual meter readings. The handheld device must present to the meter reader unambiguous and appropriate information needed to locate a water meter. It must also inform the meter reader of the next meter to read, any upcoming hazard (e.g., dog), special routing information, and special instructions (including the presence of an AMR/AMI-equipped meter, which is not manually read).	Yes	
The handheld device must automatically time stamp each meter reading with unalterable date and time of read.	Yes	
The handheld device must allow for searching and viewing of data within the handheld meter reading device, by several fields or keys, including meter location address, meter number, unread account, sequence number and manually-entered flag/tag/bookmark.	Yes	
The handheld device must visually and audibly warn the meter reader of a meter reading entry that is out of range, including no consumption for an active account, or of an inactive account that has consumption since the previous reading. The device must allow the meter reader to override an out-of-range warning, to enter an unusual reading, or skip a reading and make a notation of the fact, if a meter has been removed from service. Two high and low out of range limits, the second requiring more verification than just the meter reading, are preferred.	Yes	
The system should enable the system operator to select or customize the fields (such as previous unable-to-read code) that appear.	Yes	

The handheld device must allow for field entry of data, including meter readings, and information on meters that are out of sequence. The handheld device must allow the meter reader to modify or correct certain fields, including meter access notes, hazard, and special instructions to update the associated billing system data. The system must provide a capability for review and approval of any changed data by a supervisor before these changes may be applied to the meter reading database in the handheld control computer or the City's customer information system.	Yes	
The handheld device must allow for entering an unable-to-read code, at least one additional special reporting code, and comments for each meter reading record.	Yes	
The handheld meter reading device must automatically be configured, and programs and data uploaded, whenever the state of the handheld meter reading device changes, such as when a memory card is removed and/or installed.	Yes	
The handheld unit must be able to withstand an impact of a five-foot drop onto a concrete surface without breaking or losing data.	Yes	
The handheld units must have a multi-line alpha/numeric display, large enough for easy reading of route data, readable in normal daylight, and have an internal display light for reading the display under low-light conditions.	Yes	
The handheld device must be able to be carried by hand (left or right hand equally) and secured by a hand strap or supported by a belt and/or shoulder strap, to free up both hands when device is not in use.	Yes	
The handheld device must have alpha/numeric/special function keys that allow a meter reader to easily enter data correctly while wearing gloves.	Yes	
The portable interrogator unit should be capable of accommodating a bar code reader to capture meter or endpoint numbers from bar codes pasted on these components.	Yes	
Proposer shall include firmware for all system components, including endpoints, DCUs and portable interrogator/programming/testing units, at no additional cost. Proposers shall provide any available upgrades or patches to such firmware to correct problems, add new standard features, and ensure system compatibility and full functionality for 5 years at no additional cost. Indicate how firmware patches or upgrades would be applied to each system component. There shall be no annual maintenance fees for component firmware.	Yes	
Must provide ongoing software licenses, which cover patches and upgrades to ensure that the system and its software continue to perform to design criteria;	Yes	
Must provide ongoing maintenance and service contracts for the certain system components, including data collection units, handheld devices, etc.	Yes	
The system should indicate when there is an extended period (e.g., 10 days) of no flow through the meter.	Yes	

<p>Proposer is responsible for providing a sufficient number of DCU's so that 100% of all expected reads are obtained, unless there are temporary physical barriers beyond the control of the City of the Proposer. Please provide estimated number of DCU's.</p>	<p>With the utilization of the 10 provided collector locations, the Neptune R450 AMI system will capture approximately 95% of the city addresses. Please see Map on the following page. The remaining 5% are in the extreme North and Northwest sections of the city. These will be addressed with the Neptune R900i AMR system. Take note that the entire system (100%) will work with the City's existing Neptune ARB N_SIGHT Software.</p>
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<p>The AMR meter reading device must not automatically delete its meter reading data after transfer to the control computer, so that the transfer can be reinitiated if problems occur. Data sent to the handheld meter reading device must overwrite existing data, with proper warning and the opportunity to cancel the action before the transfer begins, so as not to allow the accidental erasure of non-transferred meter reading data. The handheld meter reading device must display a message or other indications when data transfer is taking place and when the transfer is complete.</p>	<p>Yes</p>	
<p>The data transfer method must synchronize the meter reading data with the associated handheld meter reading device, through identification validation, so that the handheld meter reading device has the appropriate route data for its assigned meter reader.</p>	<p>Yes</p>	
<p>The DC must be capable of using the following as WAN backhauls for data:</p> <ul style="list-style-type: none"> · GPRS (Cell Phone) · Ethernet (Hard Wire) · CDMA (WIFI) <p>If backhaul does not exist at a City facility, then the proposal must present a solution to solve the problem.</p>	<p>Yes</p>	

<p>The Prospective Bidder shall prepare and submit as part of the technical proposal a propagation study for reading all accounts in the system. The Proposer may request from the Owner an Excel database containing the service addresses for water accounts along with potential infrastructure. Not all services may be on this list and some locations have multiple meters. For the purposes of the propagation study, the Prospective Bidder shall assume there is at least one meter at each property. The Prospective Bidder may be able to install equipment on any City owned infrastructure. Prospective Bidder must provide a list of locations identified as possible sites to Owner for approval. Prospective Bidder shall include all necessary requirements to install AMR/AMI equipment at site. Proposer must include the costs of mounting. It should be noted that the existing cell phone towers are not City property. If a City facility is used, then the equipment must be esthetically compatible with the surroundings. The City reserves the right to inspect any installation and clean-up work within 30 days before payment is made to the Contractor. The City reserves the right to inspect any installation and clean-up work within 90 days after installation in response to customer complaints of damage. Contractor shall be responsible for claims resulting from damage caused by installation.</p>	<p>Yes</p>	<p>Please see attached Propogation Study</p>
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<p>Endpoints</p>		
<p>The proposed system endpoint shall allow migration from walk-by to drive-by to fixed base without the need to physically visit each unit.</p>	<p>No/Yes</p>	<p>R450/AMI is fully optimized for fixed network. The R900i/AMR is migratable.</p>
<p>All endpoints shall be warranted to be free of defects in material or workmanship for a period of at least twenty (20) years.</p>	<p>Yes</p>	
<p>Batteries must be Lithium batteries and must be fully potted.</p>	<p>Yes</p>	
<p>The battery for each AMR/AMI endpoint must be warranted for a minimum period of 10 years with full warranty and vendor pays shipping costs to replace if battery fails within the first 10 years when the system provides a minimum of 24 daily reads.</p>	<p>Yes</p>	
<p>All AMR/AMI endpoints equipment must be rated non-condensing from -22°F to +149°F and operate in conditions of water submergence.</p>	<p>Yes</p>	
<p>The AMR/AMI endpoint shall have capabilities to indicate damage or tampering with the wire connection between the AMR/AMI endpoint and the register.</p>	<p>Yes</p>	

The AMR/AMI endpoint must have an internal clock that is synchronize through the DCU(s).	Yes	MIUs operating in AMR mode provide readings that are time stamped upon receipt by the collection device.
Training		
All City field staff must be trained properly prior to the commencement of installations.	Yes	
System shall include onsite training for the AMR/AMI system and the schedule shall be coordinated with the Owner. Training must include office, Administrative (DCU, endpoints, software, backups, troubleshooting) and field training (installation, diagnostics and maintenance). Bidder must provide all materials necessary including training aids, trainee work books, etc.	Yes	
The office and administrative training on operation of the AMR/AMI system shall not occur until after the software has been installed and the billing interface file has been written, tested, and is working successfully to transfer meter reading data to the billing system.	Yes	
Prospective Bidder shall provide manuals and written procedures sufficient for complete operation and maintenance including installation, configuration, diagnostics and repair of the system, its software and its components. This shall include 5 complete versions hard copy sets as well as 5 copies on CD-ROM.	Yes	
The Proposer shall provide trained and experienced instructor(s), and ensure that they do not perform other duties during the training period that will interrupt instruction. Instructor will provide a checklist to trainees to evaluate presentation of course materials for effective feedback to the City.	Yes	
Proposer shall restore, repair or replace any City equipment damaged in training, and restore any hardware or software modified in training.	Yes	
Project Management		
The selected vendor shall provide project management for their scope of work as detailed below. The Project Manager shall be required to coordinate activities with the Owner and Owner's representative.	Yes	
The vendor shall provide their proposed statement of work and project management responsibility documentation which includes system installation, configuration, and testing.	Yes	

The vendor shall submit a project schedule that includes: securing a FCC license (if required), network delivery, installation, configuration (including transfer file with billing system), meter and AMI endpoint delivery, system testing, and training.	Yes	
Proposer will designate a Project Manager, who shall be responsible for managing the entire installation project on behalf of the proposer/bidder and for seeing that all installations are carried out in a professional manner and in compliance with the procedures required by the system vendor/manufacturer, the City, and all other applicable local, state and federal regulations. The project manager shall be available throughout the duration of the project, except for holidays and vacations, during which the proposer/bidder shall provide a qualified substitute. The Project Manager shall be experienced in supervising AMR/AMI meter installation contracts, and familiar with applicable regulations and safe and proper installation procedures. The City shall approve the Project Manager or a change in the Project Manager.	Yes	
Proposer shall provide resumes for key employees, including Project Manager, and other staff who will be assigned to the project.	Yes	
Short listed proposers must provide sufficient information to enable the City to assess relative financial strength.	Yes	
Vendor shall indicate if there are any anticipated or pending lawsuits against it, or any litigation within the past five (5) years or bankruptcy filings within the past ten (10) years, and, if so, shall describe them.	Yes	
The City will not store any project materials at their facilities pertaining to the installation requirements of this RFP (coaxial cables, antenna's, DCU's etc.).	Yes	
Warranty		
The prospective vendor shall provide to the Owner on-call assistance services and warranty services for a period of five (5) years.	Yes	
The prospective vendor of the AMR equipment shall warrant the system against failures. Should the system substantially fail to perform such that the City cannot reliably use the system for billing, the City will notify the Vendor of this condition, whereupon Vendor shall be responsible for promptly restoring the system to its normal level of reliability and accuracy at its sole cost and expense.	Yes	
All other AMR/AMI system components shall be guaranteed against failure for one year from the date of installation.	Yes	

The proposed meter manufacturer must ensure that it will stock a sufficient supply of repair parts to fulfill the warranty requirements for the entire warranty period. All parts shall be available from the meter manufacturer for a period of 20 years from the date of purchase.	Yes	
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**SYSTEM INFORMATION
QUESTIONS**

Documentation adequately describing the operation and maintenance of the system and its components, including data management and back-up, for use by City employees or agents in carrying out such operation and maintenance:

Neptune will provide "Installation and Maintenance Guide" for each key piece of equipment. Neptune will also provide "New Customer Guide" which is a comprehensive manual for utilities implementing a Neptune AMI or AMR system for the first time.

Describe any options for the frequency (that is, number of reads per time interval) at which meter readings may be obtained. Are these options user-settable? If so, how is this accomplished?

The AMI portion of the network provides daily readings and hourly consumption data daily. Each meter reading is synchronized with the network and taken at midnight. The MIU uses time diversity when communicating/transmitting to the data collectors to avoid collisions and increase message success rate. Hourly consumption data can be used to address such issues as billing disputes, conservation compliance as well as monitoring large commercial and industrial usage.

Indicate any provisions in the database for integration with City's GIS data related to meter or premises location.

N_SIGHT host software application incorporates a mapping component that utilizes the ESRI GIS solution that provides users with the capability of viewing endpoint and collector locations, defining public and private layers, and querying the map to display alert information such as leaks and backflow data. Latitude and longitude information are required for accurate data presentation.

Describe the schedule for a typical training program.

Comment [MK1]: HD Supply should review and insert their text here if they are going to provide training.

Training Outline

Neptune will provide a training program for utility personnel including end point installers, Data Base Administrators, Customer Service Representatives, and in-house technical support personnel. The training will cover the overall system management requirements, data collection device operations and maintenance, end point installation and maintenance, and interpretation of customer service reports, including system health monitoring. All training classes will be conducted utilizing actual equipment installed in the City's production meter reading system. The City's training facilities will be utilized to conduct all training classes.

Neptune proposes training all personnel involved with the data collection system including Customer Service Representatives, installers, field technicians, and supervisors. The functions required to operate the data collection meter reading software will be covered extensively for the utility personnel. In addition, all in-house technical support personnel will be trained on basic system functionality, software configurations, and communication hardware and software requirements. Neptune will provide the in-

house technical support personnel with system configuration documentation as part of the training classes. Neptune will supply the City with training documentation for use during training classes.

The following is an outline of the training to be provided on-site at the City's facilities.

The training normally begins with end point installation training, which requires the installation personnel and supervisors to attend. Customer Service Representatives are welcome to attend but are not required to do so. The Trainer will provide both classroom and field instruction to installation personnel so the installers can practice their learned classroom procedures. Items covered in the Training Agenda will include but are not limited to:

- ◆ Hardware components, maintenance and care
- ◆ Proper installation procedures
- ◆ Capturing successful install data from end points
- ◆ Completion of work orders

The next phase of training consists of ARB N_SIGHT AMI Customer Service Representative training, questions and answers, review and final project implementation.

Items covered will include but are not limited to:

- ◆ System Overview
- ◆ Reading Cycle Operation (import files, obtaining Data from collectors, backup, export)
- ◆ Generating Meter Reading, exception, diagnostic, and special reports including system health monitoring
- ◆ Review of all read cycle operations
- ◆ Questions and Answers
- ◆ Practice Time on cycles for all operators

The final phase of training consists of ARB N_SIGHT AMI Server Administration training, questions and answers, review and final project implementation.

Items covered will include but are not limited to:

- ◆ System Overview
- ◆ Component Overview
- ◆ E-mails, Event Alarms, Diagnostics
- ◆ Backup requirements and procedures
- ◆ System Monitoring

Prospective vendors must describe any other unique features that their software provides to Owner to improve overall utility operational efficiency and management of the AMR/AMI system. If roadmap features are discussed, they must be available within the next twelve months.

N_SIGHT host software

The N_SIGHT™ host software provides the most advanced AMI functionality of any fixed base system on the market today. Whether your information requirements are a daily read to support billing and off-cycle reads, or hourly consumption/usage profile data to support customer service inquiries, N_SIGHT host software provides all of this information at your fingertips.

Neptune recognizes there is a difference between the amount of data and the value of data communicated through a fixed base AMI system. Data can be left for interpretation or data can be interpreted and displayed in a way that adds value to utility personnel. The N_SIGHT host software is designed to support key departments within your utility organization (Customer Service, Billing, Operations) by providing high-value data in user-friendly screens and reports to help utility personnel manage their day-to-day operations. N_SIGHT host software provides users with easy system monitoring and control, over-the-air system upgrades, auto-discovery over the network, synchronized midnight meter readings, monthly/daily/hourly customer usage graphs, enhanced reporting, priority alarms, mapping functionality and account grouping analysis of consumption patterns to assist with water conservation initiatives.

Most importantly, N_SIGHT R450 host software integrates seamlessly with N_SIGHT R900 host software allowing both fixed network and mobile AMR systems to operate in parallel. This functionality provides utilities with a choice to select the AMR/AMI system technology that makes the most sense, where it makes sense, and to easily migrate from mobile to fixed base AMI when the business case justifies the transition.

Auto-Discovery Over Network

N_SIGHT host software provides unique installation functionality by providing installers the ability to confirm MIU transmissions to the AMI network, MIU signal strength (RSSI), and correct wiring and register reading prior to leaving the installation site. The system installers receive this information via an e-mail or text message eliminating costly return service calls.

Synchronized Midnight Reads

N_SIGHT host software synchronizes meter readings at midnight and provides these meter readings for billing, off-cycle reads, and mass balancing of production water versus revenue water. For the first time utilities will have a system-wide tool to identify and manage non-revenue water.

Customer Usage Profile Data

Customer usage can be monitored in monthly, daily or hourly intervals. On-screen graphs display the usage profiles for quick and easy interpretation in managing high water bill complaints and supporting conservation initiatives. With built-in email functionality N_SIGHT host software allows customer service personnel to quickly provide customers via email with consumption graphs to explain unusual water usage patterns.

Leak Detection: In addition to high resolution 15-minute interval leak detection provided by Neptune's solid state E-Coder, N_SIGHT host software provides leak detection monitoring for standard 6-wheel encoder registers based on hourly consumption monitoring via the R450 MIU.

Reverse Flow Detection: In addition to high resolution 15-minute interval reverse flow detection provided by Neptune's solid state E-Coder, N_SIGHT host software provides reverse flow monitoring for standard 6-wheel encoder registers based on hourly consumption monitoring via the R450 MIU.

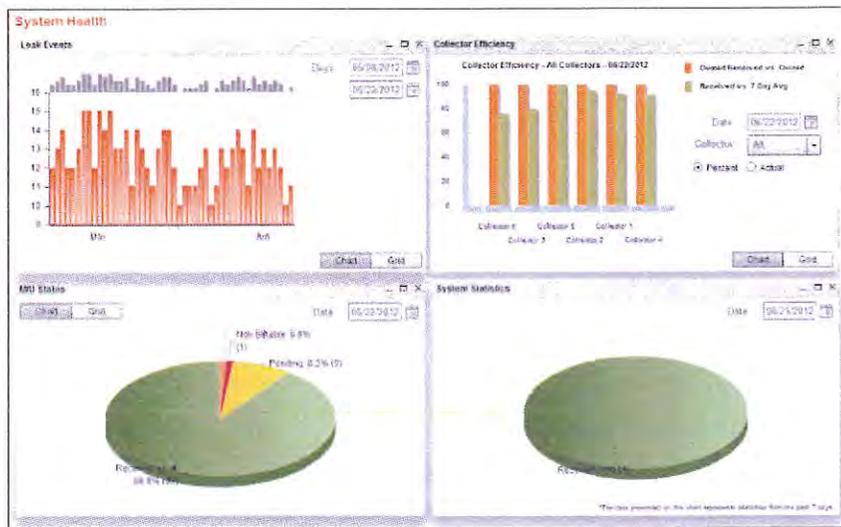
Priority Alarms

N_SIGHT host software features configurable priority alarm functionality allowing critical system alarms (such as 24 hr. continuous leak, major backflow event, distribution main leak) to be immediately communicated through the system for near real-time email notification of proper utility personnel. This priority alarm functionality supports conservation, non-revenue water, emergency response and public safety

initiatives.

Prospective vendors must describe any unique features that their software provides to assist in Customer Service efforts.

The “System Health Screen” is designed to provide utility personnel with an at-a-glance view of the overall system daily operation and performance. By utilizing this single screen utility personnel can view MIU efficiency, collector efficiency, and the communication link with the host allowing ease of system control and monitoring. ARB N_SIGHT AMI provides a remaining battery life report for viewing battery life status across the system.



Describe the capacity of each system component in terms of the number of meter readings stored (in total and per meter) and/or the number of meter readings that can be transmitted or received in a given time interval. What happens as capacity is approached? What happens when it is exceeded? (For example, does new data overwrite old data?) Describe how old data is archived.

The R450 System is designed to handle data for in excess of 500,000 meters. The database is designed to retain 2 years of data history. This data history will be overwritten at the end of 2 years, or can be archived at another location on the server for reference purposes. Each Data Collector (DC) supports 25,000 meters with AMR modules (midnight meter reading and 24-hour consumption data from all modules). The DC retains the past (three) days of meter data in a non-volatile memory and in the case of a power outage either at the data collector or at the host server, when power is restored, up to the past three days of data is communicated from the data collector to the host server.

Briefly indicate any capabilities or limitations of the system to separate meters into groups (e.g., by routes, types of customer billing cycles) for reading.

For residential and commercial, groups can be customized to allow a separation of residential from commercial accounts. The database cannot be queried by an assigned code in order to group all accounts

simultaneously. A manual process will be required by the utility to group each MIU that meets the residential criteria from the MIU's that meet the commercial criteria. Criteria will be set by the utility.

Can the system provide reads on demand? Describe how the system obtains "off-cycle", special or on-demand readings from a particular meter.

The R450 System provides a daily meter reading time-synchronized at midnight and the previous 24 hour hourly consumption totals. Each day a utility can select an hourly meter reading for a specific customer from the previous day to support off-cycle reads.

Can the system obtain multiple readings at short intervals (e.g., hourly or several times per day) to monitor water consumption patterns from a particular meter or group of meters? If so, describe what and how. Are such short interval readings stored in memory at the endpoint or DCU, transmitted all at once, or transmitted as they are received?

Graphical and data grid formatted consumption information can be generated for analysis by customer or groups of customers. Hourly consumption data as well as hourly reading data is available for analysis.

Indicate what radio frequencies are used for interactions between the endpoints and DCUs. What licenses are required? The proposer shall assist the City with obtaining necessary licensing.

The R450 System operates in the licensed 450-470 MHz frequency band. The 450-470 MHz frequency band is licensed and is protected by the FCC to ensure maximum message success rate and minimal interference.

The R450 System components are approved by the FCC as Part 90 components and must operate under an FCC license (due to the high power transmitter that enables bi-directional communications from the host to the MIU).

Once the FCC license is recorded, all future radio channel assignments are to be reviewed to avoid interference with the system. Neptune will secure the FCC license based on a frequency determined to be the best for the coverage area and transfer the license to the utility upon request.

Is the endpoint intended to be mounted away from the meter and attached to the register only by wire, or can it be integrated with the meter and/or register? Describe the physical characteristics of the endpoint, including dimensions and weight. Provide pictures or drawings to scale.

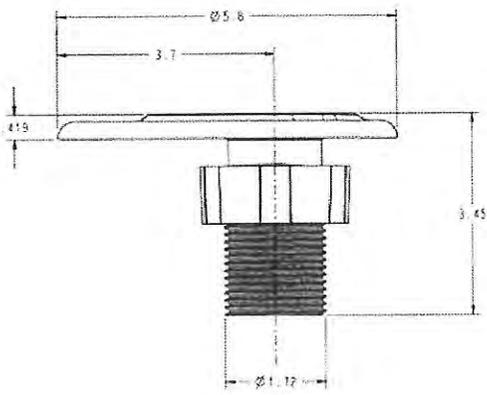
The R450 Wall MIU may be placed indoors or outdoors, mounted on or near meter, or inside basement rafters. The R450 Pit MIU is designed for installation in meter pits (submersible) with a thru-the-lid pit antenna that is suitable for use on cast iron, plastic, concrete or composite pit lids. The R450 MIU can be located (wired) up to 500 feet from the register.

For pit applications, an integrated register/MIU solution is also available. E-Coder)R450i provides a "no-wires inside the pit" alternative.

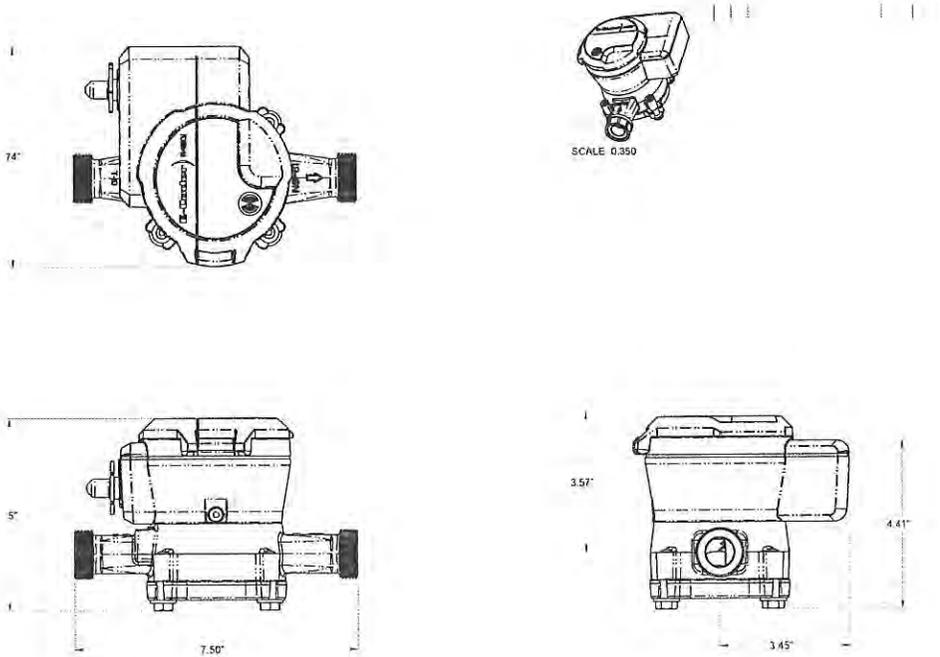
For inside basement set applications the best approach is to position the R450 MIU on a ceiling joist and near an outside wall or window for best signal propagation. For maximum RF signal propagation it is recommended to mount the R450 MIU on an outside wall of a home or building connected to the wires that lead from the meter inside to the outside of the building.

Dimensions and Weights:

Dimensions:



R450 Pit Antenna Dimensions



E-Coder)R450i Integrated unit dimensions.

Can the endpoint distinguish different makes and models of meter registers? Does the endpoint have to be programmed or modified to accept different makes or models of meter registers? How and where is this accomplished? Are different endpoints required for different makes and models of registers? If so, how are these distinguished?

The R450 MIU features “auto-detect” functionality meaning it automatically detects the encoder register type it is connected to, configures itself for that register type with “no-programming” required. The same endpoint is used for different makes and models of registers.

Does the endpoint have the capacity to handle more than one register? How many ports for meter registers does the proposed endpoint have? Describe any provisions of the endpoint to handle dual register compound meters, and multiple meters in close proximity. Indicate any restrictions on installing endpoints in close proximity to each other.

The R450 leverages the networking capability of Neptune’s ProRead or E-Coder absolute encoder registers and a single MIU can be connected to two of these register when the registers are configured in network mode. All R450 MIUs feature two ID numbers (a high-side and low-side ID number for dual set meters).

The R450 can only be connected to a single Sensus register as Sensus registers are not network capable.

What type of battery does the endpoint use? What is the expected battery life? Is the battery removable and replaceable? If so, what is the current cost of replacement batteries? Can the battery be replaced in the field? Does battery replacement require soldering or special tools? How will the system prevent loss of programming or data if the battery expires? Does the AMR/AMI system provide a warning well in advance of battery failure? If so, what is it and how is this accomplished? Is battery life affected by the type of meter register the endpoint is reading? If so, indicate the differences in expected and guaranteed lives from one type of register to another.

The ARB FixedBase R450 MIU utilizes a powerful Lithium Thionyl Chloride battery with a capacitor to ensure long-term performance. The R450 MIU has an expected battery life of 20 years in the field and features a 20 year battery warranty (see attached). Battery life calculations are provided in attachment. The 20 year warranty is not affected by polling frequency (same warranty whether the MIU is in daily read or 24-hour usage/consumption mode). The MIU electronics and battery are fully potted. The battery is field replaceable.

Describe any special endpoint battery disposal provisions, and indicate the current cost of providing battery disposal if special handling is required.

Under federal, state and local laws, there may be certain requirements governing the proper storage, transportation, and disposal of such batteries and meters. Please check with your local or state solid waste officials (or other appropriate experts) for details about applicable laws and regulations concerning the handling of these materials, including available recycling options.

Neptune has used "The Big Green Box" program from TOXCO. www.biggreenbox.com Prepaid shipping via UPS as a Universal Waste.

The endpoint shall be able to be initialized or programmed during or prior to field installation. Describe all endpoint programmability options, features and procedures. Can the endpoint store an account or meter number? Will this number be transmitted with the meter reading data? Can this number be programmed into the endpoint from a field programming unit based on information downloaded from an installation work order database? Indicate capabilities and procedures. Indicate field length of account number.

The MIU ID numbers that are assigned to R450 units are unique identifiers. The unique identifier is placed on each customer record within the CIS system. On import into N_SIGHT R450 software, a unique key is assigned to each customer record. This ensures the relational data integrity once the data is exported and sent back to CIS. Meter register number is not transmitted.

Describe how the endpoint will protect itself, the meter and the customer's premises against electrical surges or magnetic fields. Describe any risks of surges from endpoint batteries.

All Neptune endpoint batteries are equipped with capacitors that insulate the battery from the electronics. They are also fully potted. This configuration provides proven protection from electric surges that can damage the endpoint or other external devices.

Describe features, including physical characteristics (seals, tamper resistant bolts, etc.) to minimize, detect and report tampering with the endpoint.

The N_SIGHT host software provides a tamper report that identifies all of the potential tamper conditions.

- 1) A cut wire between the MIU and the register is identified by the transmission of colons (: : : :) in place of a numeric meter reading.
- 2) Reverse flow is flagged which can indicate a meter that has been reversed to steal water.
- 3) Consecutive days of Zero Consumption is flagged which can identify meters or registers that have been removed from the system.

Describe features of the endpoint that prevent corrosion or degradation of mechanical or electrical performance (e.g., encapsulation or coating).

Neptune's R450 MIUs, batteries and electronics are fully potted to prevent moisture intrusion.

Describe requirements for mounting endpoint (elevation, orientation, etc.) to ensure adequate radio propagation. Endpoint installation procedures must be simple and easy to perform. Briefly describe installation procedures. Indicate design provisions to avoid installers' mistakes in installation, connection to meters, and programming.

The R450 Wall MIU may be placed indoors or outdoors, mounted on or near meter, or inside basement rafters. The R450 Pit MIU is designed for installation in meter pits (submersible) with a thru-the-lid pit antenna that is suitable for use on cast iron, plastic, concrete or composite pit lids. The R450 MIU can be located (wired) up to 500 feet from the register.

For inside basement set applications the best approach is to position the R450 MIU on a ceiling joist and near an outside wall or window for best signal propagation. For maximum RF signal propagation it is recommended to mount the R450 MIU on an outside wall of a home or building connected to the wires that lead from the meter inside to the outside of the building.

Installation guides will be provided to ensure proper procedures.

If the data communication system consists of different levels of receiver/concentrators (e.g., data collection units, small area collectors, large area collectors). Proposer shall provide responses for the equipment in each level.

In addition to the standard R450 Data Collector, Neptune offers the R450 Mini Collector (R450 MC).

The R450 MC is the perfect complement to the R450 DC and can be deployed as part of the infrastructure of the R450 System.

While supporting the two-way functionality of the R450 System, the R450 MC has also been designed for flexible deployment. A solar power option simplifies the deployment process by eliminating the dependency on AC power availability.

The R450 MC maximizes installation flexibility by offering roof-mount and pole-mount options to simplify the process of finding installation assets.

With backhaul options such as GPRS and wired Ethernet, the R450 MC also provides you with flexible and reliable choices on how you want your data delivered

Indicate the mode of operation and schedule by which the DCU captures, stores and re-transmits data received from endpoints back to the AMR/AMI control computer. Do DCUs relay data through each other to the control computer?

The R450 System is two-way which enables daily time-synchronization from the host down to the MIU. Each R450 MIU is programmed to read the meter it is connected to at midnight. Each R450 MIU is also pre-programmed to transmit its meter data randomly between 12:01AM and 7:15AM. When a R450 MIU transmits its meter data it listens for an acknowledgement from the Data Collector.

When it receives confirmation from the Data Collector that its meter data was received correctly/accurately it goes back to sleep until the next scheduled transmission. When a R450 MIU does not receive confirmation that its meter data was received properly, it is designed to transmit up to 3 more times (total of 4 times per day possible for a MIU) to ensure maximum daily system message success rate.

This transmission scheme is called the "Aloha Model". Theoretically, message success rate (MSR) should exceed 99.5% if system hardware infrastructure guidelines and recommendations are followed and meter location and tower site information furnished for the propagation analysis is accurate.

Proposer shall be responsible for communication network or provisions to deliver meter readings and other AMR/AMI system data to the control computer. Proposer must specify the capital, installation, operation and maintenance costs of such network or provisions. Indicate available options and proposed method for transmitting data.

Two options are being provided to the City of Laredo for a communication network to allow metering data to be transferred to the control computer. In our proposal, the following are the two options:

- 1) GPRS/Cell Phone Modem (Installation Option 1) – This type of communication utilizes GPRS/Cell Phone Modems that would be located at each water tank location. These modems would transmit the data to the control computer. Our installation price includes installing the respective cell phone modems at the water tank sites but does not include the price of the actual modems or monthly charges incurred by Laredo. Based on experience, it is found that the respective City/Utility can negotiate more optimal terms with their local phone company (i.e. Verizon, AT&T, Sprint, etc.) than that of the installer.
- 2) Point-to-Point ("P2P") Connections (Installation Option 2) – This type of communication utilizes P2P radios for data backhaul by transmitting the data to either the two existing water tank locations that are served by a LAN connection, the City Utility Office (i.e. where the control computer is located) or a combination thereof. There is a one (1) year warranty on the P2P radios. Our installation price includes installing the respective P2P radio units and the price for respective units (8 out of 10 sites).

The two options above are utilized by numerous Utilities that have a Neptune R450 System deployed with great success. The pros and cons of each center around cost – Option 1 would be a less at the beginning of the project but would consist of reoccurring charges on a monthly basis (i.e. monthly cell phone charges) for the collector sites. Option 2 would have a higher upfront cost as we included the price of the P2P radios in our proposal, but there would not be monthly charges associated with this type of backhaul communication.

How is the DCU powered? What are the estimated one-time and continuing costs for powering DCUs? How does the system preserve data should power to a DCU be lost?

The DC requires 110VAC. The cost to supply power to each collector site varies depending on the individual requirements. It entails the costs involved with installing electrical cabling from breaker box to the Data Collector plus the connection by a certified electrician. The maximum ongoing costs to supply

power to the Data Collector are approximately equivalent to 130 Watt light bulb

If there is a power outage at the DC it will not collect data. If environmental/business drivers require zero downtime for DCs, Uninterruptable Power Supplies or backup generators should be considered as an option for each collector site.

The Utility is required to assist the contractor with providing 110VAC power supply to the DC site. The DC retains the past (three) days of meter data in a non-volatile memory. In the case of a power outage at the host server, when power is restored, the past three days of data is communicated from each DC to the host server.

Describe any programmable features, such as data reporting schedules, for DCUs, and procedures for programming or configuring. Do DCUs install themselves onto the system as they are powered up?

The only programming required is the setup of the GPRS modem upon installation. Otherwise, the collector installs itself onto the system on power-up. DC's are pre-programmed for hourly synchronization with the host, but can be configured for more frequent synchronizations if desired.

Indicate how the DCU is protected against electrical surges such as lightning.

The DCU meets or exceeds the following standard for surges: EN61000-4-5, Level 3. In addition, the DCU meets UL60950 which also addresses surge protection.

The R450 Data Collector (DC) has been designed to withstand 21KV AC Electrical Surge. It has one of the best grounding schemes (single point ground with Tinned Copper Flat Braid Ground Strap between the door and the main enclosure) to handle 3 times more ESD Surge than the MILS810 E specifies (MILSTD 810 E calls for only 8KV direct electrical Surge). We also have incorporated a surge suppressor from line to line and line to ground to protect the power supply from the voltage surge that may come through the power line. During the high voltage surge this will cause the circuit breaker to trip protecting the DC power supply and the surge suppressor.

Indicate recommended fixed DCU maintenance intervals and procedures. Indicate maintenance procedures in the event of physical accident or damage.

Utility general maintenance personnel can be trained to handle maintenance of the RCUs. Detailed I&M guides are provided with step by step procedures for general maintenance. Neptune recommends that utilities purchase a replacement RCU to have on the shelf in the case a RCU has to be pulled and returned for factory maintenance and repair. The ARB FixedBase AMI System is designed for easy RCU removal and replacement when necessary.

Indicate what FCC or other regulatory agency licenses, if any, the system will require. Indicate the expected length of time to acquire such licenses. Indicate what problems can occur in the process of obtaining such licenses.

The R450 System components are approved by the FCC as Part 90 components and must operate under an FCC license (due to the high power transmitter). Neptune will secure the FCC license based on a frequency determined to be the best for the coverage area and transfer the license to the utility following system deployment.

Indicate any provisions offered by the Proposer or its system to identify and remove interlopers on its licensed frequency.

The FCC license process results in an assignment of an RF channel that does not conflict with any other legitimate radio device. In addition, filters are utilized in the R450 Data Collectors to reduce outside interference. The system utilizes a ALOHA model wherein the transmitters randomly transmit their synchronized midnight meter readings so as to avoid interference with other transmitters in the AMR network. High-end propagation analysis software as well as area terrain and clutter data are used to design the most robust system for your coverage area.

The handheld meter reading device shall be capable of alerting (if necessary) and receiving the signals from endpoints. Can the handheld meter reading device interrogate meter registers (if so, which ones)? The handheld meter reading device should be capable of downloading consumption profile data, if that is a capability of the system.

For the mobile portion of the solution, Neptune offers the CE5320B handheld meter reading device, which reads Neptune's R900® MIU. The CE5320B is just one component of Neptune's hybrid meter reading approach, allowing the meter reader to collect meter readings manually (keyed entry), probed, or via RF. Utilities also have a choice with respect to RF AMR capabilities. The CE5320B is equipped with a HR2650i integrated receiver. This receiver is designed to automatically read Neptune R900® radio transmitters.

The CE5320B handheld is loaded with meter reading routes through an Ethernet communication/charging cradle using Neptune's meter reading software. Communication/charging cradles are connected directly to a PC, to a server supporting multiple computers, or to the company LAN. To retrieve meter reading data, the CE5320B is again inserted into the cradle at the office. Data is then downloaded to the meter reading software and prepared for transfer to the billing system. The CE5320B remains in the cradle to recharge so it is ready for work the next day.

What is the maximum distance at which a portable interrogator will reliably receive the complete meter reading signal from an endpoint?

The R900 MIU is designed to deliver performance. It features a high power 100mW transmission. This transmission power proves very effective in receiving meter readings out of any pit environment. Meter pit conditions and components (meter box/lid) can also have an effect on signal and this would apply to any manufacturer. The sensitivity and other performance characteristics of the receivers used in both the handheld and mobile data collectors also impact the read success of the MIUs. See below for average readings distances from the above described scenarios:

R900 MIU transmission to Handheld below the lid with polymer lid:	300 feet
R900 MIU transmission to Handheld below the lid with metal lid:	100 feet
R900 MIU transmission to Mobile Data Collector below the lid with polymer lid:	1500 feet
R900 MIU transmission to Mobile Data Collector below the lid with metal lid:	500 feet

Typically meter readers can drive the speed limit of the area and pick up 99.5% to 100% of the readings. Further improvements to reading distances (and read success rates) are possible if the optional through-the-lid antenna is used. Typical range to the Mobile Data Collector is in excess of one mile when using that option.

Describe any provisions for mounting and operating the portable interrogator within a vehicle.

Neptune does not recommend the use of the handheld in a vehicle. The CE5320B is intended to be used as a walk-by data collector. However, Neptune also offers the MRX920 drive-by data collector, intended for use mounted in a vehicle.

Indicate the size and weight (with batteries installed) of the handheld meter reading device.

Dimensions	Without AMR RF Receiver Height: 1.53" min., 2.36" max (39 mm min., 60 mm max.) Width: 3.53" min., 4.08" max (90 mm min., 104 mm max.) Length: 9.74" (248 mm)
	With AMR RF Receiver Height: 1.53" min., 3.25" max (39 mm min., 83 mm max.) Width: 3.53" min., 4.08" max (90 mm min., 104 mm max.) Length: 10.5" (267 mm)
Weight	Without AMR RF Receiver 1.94 lbs (880g) with battery pack
	With AMR RF Receiver 2.0 lbs (907g) with battery pack

Indicate the temperature and humidity operating ranges for the handheld unit. The unit must be capable of being submerged for up to 20 seconds without loss of functionality.

Temperature Range	Operating: -4°F to +122°F (-20°C to +50°C) Storage: -22°F to +140°F (-30°C to +60°C) Humidity: 95% non-condensing
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Describe the capacity of the handheld device, in terms of the number of meter readings that may be captured under normal circumstances.

The CE5320B capacity for meter readings is approximately 5000 accounts.

Indicate the method(s) (e.g., memory card, data cradle, communication port, etc.) used to transfer data between the handheld device and the control computer.

The CE5320B communicates with the N_SIGHT R900 software via an Ethernet communications and charging cradle. Each cradle is independent, allowing the loading/unloading function to process simultaneously. The utilization of cradles with networked routers allows up to 150 handhelds to be supported by the N_SIGHT R900 host system. The cradles can communicate with the host computer at 10 Mbps providing fast upload and download of route information.

The handheld devices can be configured to synchronize manually or through an automated process.

Indicate how long it normally takes to upload the data from a 200-meter route, and how long to download the next 200-meter route. How long for a 400-meter route?

It is possible to both upload and download data for a 500 meter route in less than 1 minute.

Describe the mechanism and procedure for downloading data from and uploading data to the AMR/AMI control computer.

Handheld – Each handheld is synchronized through TCP/IP communications via an Ethernet communications cradle. Each sync will load/unload the connected handheld. This can be setup to be a manual process or automatic whenever the handheld is docked.

Describe the capacity of each unit. If the unit stores work order information, how much data, or how many work orders can it accommodate? How many meter readings can a portable interrogator accommodate?

The CE5320B capacity for meter readings is approximately 5000 accounts.

What is the maximum distance at which a portable interrogator will reliably receive the complete meter reading signal from an endpoint?

The R900 MIU is designed to deliver performance. It features a high power 100mW transmission. This transmission power proves very effective in receiving meter readings out of any pit environment. Meter pit conditions and components (meter box/lid) can also have an effect on signal and this would apply to any manufacturer. The sensitivity and other performance characteristics of the receivers used in both the handheld and mobile data collectors also impact the read success of the MIUs. See below for average readings distances from the above described scenarios:

- R900 MIU transmission to Handheld below the lid with polymer lid: 300 feet
- R900 MIU transmission to Handheld below the lid with metal lid: 100 feet
- R900 MIU transmission to Mobile Data Collector below the lid with polymer lid: 1500 feet
- R900 MIU transmission to Mobile Data Collector below the lid with metal lid: 500 feet

Typically meter readers can drive the speed limit of the area and pick up 99.5% to 100% of the readings. Further improvements to reading distances (and read success rates) are possible if the optional through-the-lid antenna is used. Typical range to the Mobile Data Collector is in excess of one mile when using that option.

Indicate portable unit interrogator weight and dimensions. Describe any features, such as shoulder or belt strap, to facilitate carrying and preventing it from being dropped.

<p>Dimensions</p>	<p><u>Without AMR RF Receiver</u> Height: 1.53" min., 2.36" max (39 mm min., 60 mm max.) Width: 3.53" min., 4.08" max (90 mm min., 104 mm max.) Length: 9.74" (248 mm) <u>With AMR RF Receiver</u> Height: 1.53" min., 3.25" max (39 mm min., 83 mm max.) Width: 3.53" min., 4.08" max (90 mm min., 104 mm max.) Length: 10.5" (267 mm)</p>
<p>Weight</p>	<p><u>Without AMR RF Receiver</u> 1.94 lbs (880g) with battery pack <u>With AMR RF Receiver</u> 2.0 lbs (907g) with battery pack</p>

Accessories include an ergonomic hand strap adjustable for either left or right handed users, and a shoulder carrying strap.

What connecting hardware and software, including cables, modem, cradle, battery, charger, etc. are required for the portable interrogator unit to be fully functional?

The CE5320B includes an Ethernet communications and charging cradle and 110 V AC power supply.

Does the portable interrogator unit use rechargeable batteries? If so, what type? If not, what does it use? How long does it take to fully recharge a battery after a full day of normal use? Can the batteries be recharged in charger cradles separate from the unit cradles? Can the battery be recharged from a 12 volt vehicle system? The unit must ensure against accidental data loss in case of a dead battery.

The CE5320B handheld features:

- Rechargeable lithium ion battery pack -2600 mAH capacity
- Intelligent fast charge system (4 hours)
- Power management system
- Integrated charge status and low battery indicator
- Typical 7-9 hour work day
- Rechargeable nickel metal hydride backup battery
- ON/OFF switch, manual and automatic shutoff
- 5 volt power for external devices

Indicate the portable interrogator display's overall dimensions, the number of characters displayed, and the height and width of the characters. Does the display allow alphanumeric characters? Include an illustration of the display screen and keypad. How does the unit enable the display to be easily readable in bright or dim light? Indicate the angular range readability.

Dimensions	
	<u>Without AMR RF Receiver</u> Height: 1.53" min., 2.36" max (39 mm min., 60 mm max.) Width: 3.53" min., 4.08" max (90 mm min., 104 mm max.) Length: 9.74" (248 mm)
	<u>With AMR RF Receiver</u> Height: 1.53" min., 3.25" max (39 mm min., 83 mm max.) Width: 3.53" min., 4.08" max (90 mm min., 104 mm max.) Length: 10.5" (267 mm)

The display is 3.5" (89mm) QVGA TFT touch screen transreflective color LCD with backlighting 320 x 240 pixels with full graphics.



Describe any audible tones used by the portable interrogator unit, and their function (e.g., confirming a reading or successful programming, warning of an out-of-limits condition, low battery, etc.)? Can the volume be adjusted?

During meter reading operations the handheld offers tactile and audible feedback to the meter reader. The type of audible feedback is programmable using N_SIGHT software.

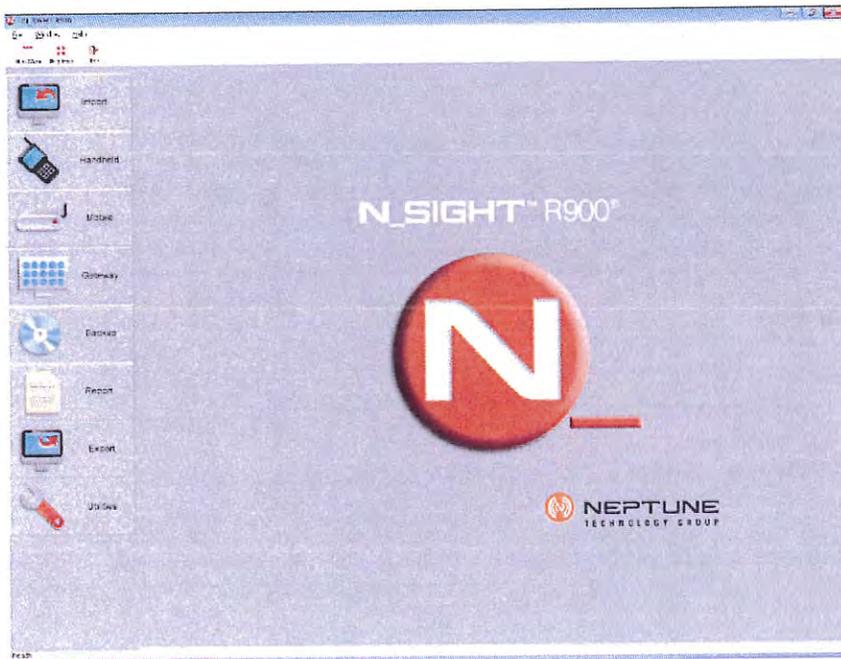
Does the portable interrogator unit permit manual entry of meter readings and other information (for example, the information necessary to complete a meter or endpoint investigation or repair work order)? If so, what other information? Describe its capability to record notes or comments. Describe how the unit processes and interfaces with the City's customer information system in the case of a meter change, register change, endpoint change or any combination thereof

The CE5320B offer true multi-tasking capability allowing the meter reading to automatically move from a manual entry meter to a R900 meter sequentially without having to press any special keys to move from manual to AMR mode. The N_SIGHT software in the CE5320B provides all the functionality necessary to record coded notes and free form note comments. This information can then be added to the billing database by a supervisor. Other types of information such survey information can also be captured while in the field.

Proposer shall include menus, navigators and major screen shots of system in its proposals. Describe provisions and guidelines for customizing screens, menus and navigators.

The main screen for N_SIGHT Mobile is shown in the figure below. The large buttons follow the meter reading process:

- importing routes
- loading routes into the handheld or drive by unit
- work orders
- mobile
- backing up data
- reporting



How many concurrent users can the system accommodate? Can the system process batch transfer of meter reading data in the background while allowing users to conduct queries and other transactions?

N_SIGHT software is client server configurable. There is no limit to the number of users that can access the data at one time. The iAnywhere database is capable of supporting multiple users. All clients must be licensed per our agreement with iAnywhere.

What provisions exist for data entry and editing by users in system? What restrictions are placed on such functions to ensure security and data integrity? Are edits traceable by the City? Are restriction settings customizable by the City?

The N_SIGHT host software provides multi-user access through user IDs and password connections to the database server. 4 pre-defined security levels are integrated within the software application.

Describe any provisions for allowing customers to access their own consumption history and profiles, and comparisons for their usage to groups of similar customers, through the system.

ARB N_SIGHT IQ

ARB N_SIGHT IQ, a new software product designed specifically to address the challenges of managing and utilizing the vast amount of meter related information being captured by our AMR and AMI solutions¹. And since

N_SIGHT IQ was designed specifically to address the data management and reporting needs of water utilities, it accommodates all the intricacies of water, such as two- and three-register compound meters, deduct meters, check meters, input/output meters, etc. It even incorporates AWWA water loss algorithms into its district metering analysis.

N_SIGHT IQ was designed from the ground up to store vast amounts of meter usage data. It is capable of maintaining any interval reading data for real time online access. All data is de-normalized automatically for consistent reporting and analysis over time. The system also replicates and optimizes all data received into separate data marts specifically designed for online analysis and report generation. N_SIGHT IQ employs no archiving, instead keeping all data available for real-time access for three years, with optional upgrades of up to ten years of online access.

N_SIGHT IQ also provides the capability to deliver all your metering data directly to your utility customers. With its optional smart utility customer portal, IQ delivers powerful detailed usage information to your customers. The customer portal allows your customers to view their own data and take control of their usage. Some of the utility configurable features of the IQ customer portal are:

- Detailed online access to a customer's own usage
- Inclusion of weather data synchronized against interval usage
- Comparison of usage against utility defined groups
- Leak alert monitoring and notification
- Backflow monitoring and notification
- Setting, monitoring, and notification for a daily water budget

Describe any capacity limitations on the number of accounts, number of readings per account, etc. for the configuration proposed. Describe any provisions for archiving and retrieving additional data.

The System is engineered to retain two years of meter data for the population of endpoints. Meter data can be extracted and stored externally for future use.

The software shall include a security system, incorporating multiple levels of authorization and access. Describe security features, logging and levels.

The System supports significant security measures. The degree of security can be implemented based on user identification, user location, or mixtures. Starting with the R450 MIU radio transmission (which is protected with a proprietary data format) to the Data Collectors (which add additional encryption) the meter data is protected and secure.

Describe data back-up capabilities and procedures to ensure that system and consumption data is not corrupted or lost.

N_SIGHT provides a database back-up function that is a single button press to perform. The back-up function can be run at anytime.

Provide a list, with brief descriptions and screen shots or sample pages, of the standard reports provided for system and component performance; missing or late data; errors, anomalies and alarm conditions; data transfer, management and administration; analysis of consumption for individual customers or groups of customers; and other major report categories.

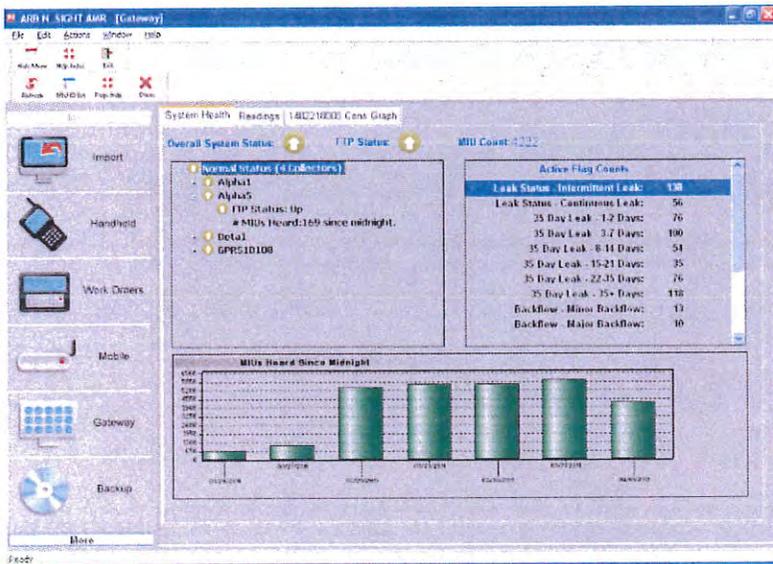
Neptune's N_SIGHT software is an extremely flexible software application that provides significant scalability and the ability for utilities to manage and analyze metering data. N_SIGHT provides utilities with the tools needed to migrate from handheld and mobile meter reading to more advanced fixed network technologies. Neptune designed N_SIGHT to provide the highest level of data integrity and system integrity to the utility industry.

Some of the system features and benefits include the following:

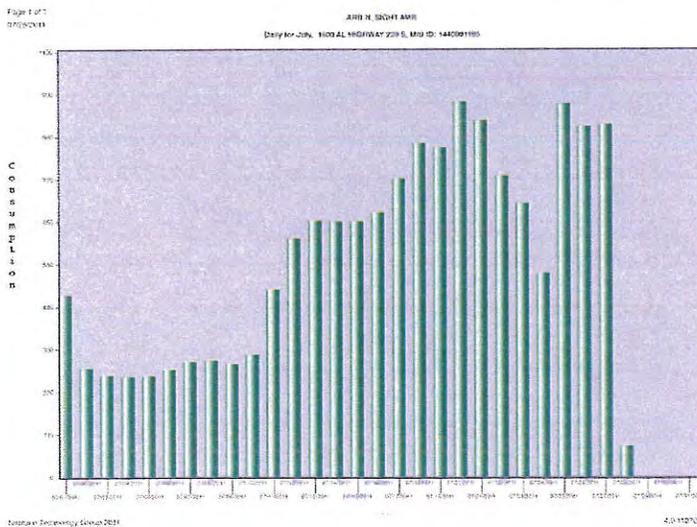
- Crucial information such as major reverse flow events and continuous leaks are displayed in a graphical format when used with the E-Coder)R900i
- Graphical display of monthly, daily, and hourly consumption information
- System health screen for viewing system status
- Integrated meter reading processes
- Supports handheld, mobile, and R900 Gateway data collection devices
- Multi-level security
- Standard and Customizable Reporting



Home Screen provides an intuitive user interface for easy use.



The system health screen provides easy viewing of system status and quick access to leak and backflow information.



Daily consumption reporting

Describe any system capabilities to validate meter readings for reasonableness, unusually high or low readings, and potential meter rollovers.

Neptune's N_SIGHT software provides water utilities with event notification for high consumption periods. A configurable option is provided within the application in order for the utility to define the percentage parameters required for high consumption notification. Email notification is sent to all recipients that are identified by the utility to receive notification. No flow meters and invalid meter readings can also be configured to receive event notification via email.

Indicate the nature and extent to which standard reports can be customized. Permissible customization shall not void any software product warranties, nor prevent any overlay of future software releases. The City desires that the software or its associated database management system include a custom report generator.

N_SIGHT R450 currently does not have a custom reporting tool but the next version will contain a custom report builder that will be built on SAP's Business Object platform. This version of the R450 application will be available Q2 2013.

N_SIGHT R900 currently contains an embedded custom reporting tool that will allow modifications to existing reports.

Documentation shall be provided with the software and shall include at a minimum: system overview description, system flow charts, file descriptions and record layouts, database structure diagrams, description of program function and logic, back-up and recovery procedures, operating procedures, screen layouts, data entry procedures, report descriptions, descriptions of all user options, and descriptions of all error messages.

Neptune will provide documentation with the software that will fulfill these requirements.

All vendor supplied software must be supplied with a perpetual, irrevocable license indicating the software's designer, owner and licensor, and detailing the terms and conditions, including annual cost of maintenance by the vendor. Indicate how many servers or workstations the software license will cover and the cost, if any, of additional server or workstation licenses.

The City of Laredo has already purchased a server and the Neptune ARB N_SIGHT software that was part of the pilot study. Four (4) licenses came with the purchase of this software to be utilized on four (4) separate work stations. In the event Laredo would like additional licenses/work stations, it would cost \$250 per license/work station. A server upgrade was included in this proposal to allow for the entirety of Laredo's metering system to be processed.

Indicate any third party provider of software specifically designed to support Proposer's software. Indicate the warranty, licensing and support provisions for any such packages.

ARB_N_SIGHT was completely designed by Neptune but it utilizes iAnywhere as a third-party package to support ARB_N_SIGHT's database application. The same warranty, licensing and support applies.

Indicate any provisions in the database for integration with City's GIS data related to meter or premises location.

Mapping

N_SIGHT host software application incorporates a mapping component that utilizes the ESRI GIS solution that provides users with the capability of viewing endpoint and collector locations, defining public and private layers, and querying the map to display alert information such as leaks and backflow data. Latitude and longitude information are required for accurate data presentation.

Proposer shall describe in its proposal recommendations and requirements for AMR system preventative maintenance, back-up, archiving, etc.

The N_Sight meter reading software can be configured to back up to an external device, such as an external hard drive or memory stick, or to a network drive. Archiving of the data can be done by retaining the system reports electronically either by saving the reports to an external device or network drive. Maintenance of the system is very minimal and can be done once a quarter.

List other conditions the system can detect. Describe these capabilities and how they are accomplished.

Describe any additional capabilities of the AMR/AMI system(s) proposed, such as remote controlled shut-off or turn-on, pressure monitoring, etc.

The N_SIGHT host software provides a soft-disconnect (virtual disconnect) functionality that allows a Customer Service Rep to mark an account or schedule a date for the system to automatically mark an account as disconnected. When usage is reported on an account that has been marked as disconnected within the software, a report is generated to reflect the account information associated with usage.

All responses must reflect current capabilities. Indicate any planned future capabilities for the equipment being proposed, the anticipated development and availability schedule, expected unit incremental costs, and the expected procedures for upgrading equipment already installed.

Neptune and HD Supply comply with this requirement. All responses reflect current capabilities.

Indicate the proposed mode of data transfer between the DCUs and the AMR/AMI control computer.

Data collectors communicate to the host server via various backhaul options. The R450 DC offers the following backhaul options: GPRS, CDMA, and Ethernet. The data collectors communicate via the WAN with the host software application, ARB ARB N_SIGHT AMI host software that runs on a server at the utility office.

Indicate the maximum distance in feet the endpoint and DCU can be apart and still always obtain meter readings.

While the system was designed for long range performance, there are many environmental factors that can impact performance, such as topography, density, MIU placement, etc. An RF propagation study has been performed to predict the anticipated range of the endpoint to the DCU and results are reflected by the number of DCUs being proposed.

Indicate how the system will obtain readings from meters in subbasements.

Meters located in sub-basements should be equipped with remote mounted radios (external wall mounted). This is a common configuration for any/all basement installations.

Geopositioning Coordinates. For each meter installed in an outdoor pit, box or vault, Contractor shall capture Survey Grade GPS positioning using a geopositioning device. In the event the meter's GPS position cannot be acquired (because the GPS receiver is blocked), Installer must manually enter the descriptive location of meter into handheld data entry unit. Describe how Proposer intends to provide GPS data for each meter.

The proposer intends to provide standard GPS accuracy which ranges from 3-5 meters. Our handheld equipment automatically detects the GPS coordinate for each meter location in this format. If the City of Laredo desires, we can provide submeter accuracy using specialized equipment and post-processing for an adder of \$3.00 per installation/retrofit location.

ARB® UTILITY MANAGEMENT SYSTEMS™



T-10 METER

SIZES: 5/8", 3/4", and 1"



T-10 water meters are warranted for performance, materials, and workmanship.



Every T-10 water meter meets or exceeds the latest AWWA C700 Standard. Its nutating disc, positive displacement principle has been time-proven for accuracy and dependability since 1892, ensuring maximum utility revenue.

CONSTRUCTION

The T-10 water meter consists of three major assemblies: a register, a lead free high copper alloy maincase, and a nutating disc measuring chamber.

The T-10 meter is available with a variety of register types. For reading convenience, the register can be mounted in one of four positions on the meter.

The corrosion-resistant lead free high copper alloy maincase will withstand most service conditions; internal water pressure, rough handling, and in-line piping stress.

The innovative floating chamber design of the nutating disc measuring element protects the chamber from frost damage while the unique chamber seal extends the low flow accuracy by sealing the chamber outlet port to the maincase outlet port. The nutating disc measuring element utilizes corrosion-resistant materials throughout and a thrust roller to minimize wear.

WARRANTY

Neptune provides a limited warranty with respect to its T-10 water meters for performance, materials, and workmanship.

When desired, maintenance is easily accomplished either by replacement of major assemblies or individual components.

GUARANTEED SYSTEMS COMPATIBILITY

All T-10 water meters are guaranteed adaptable to our ARB®V, ProRead™ (ARB VI) AutoDetect, E-Coder® (ARB VII), E-Coder|R900i™, TRICON®/S, TRICON/E®3, and Neptune meter reading systems without removing the meter from service.

KEY FEATURES

- Register
 - Magnetic drive, low torque registration ensures accuracy
 - Impact-resistant register
 - High resolution, low flow leak detection
 - Bayonet style register mount allows in-line serviceability
 - Tamperproof seal pin deters theft
 - Date of manufacture, size, and model stamped on dial face

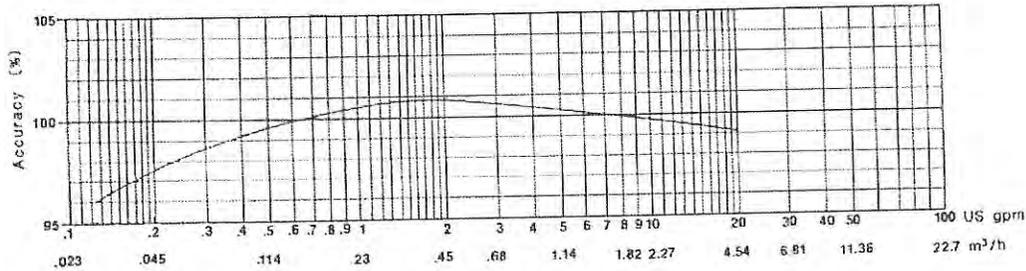
- Lead Free Maincase
 - Made from lead free high copper alloy
 - NSF/ANSI 61 certified, Annex F and Annex G compliant
 - Lifetime guarantee
 - Resists internal pressure stresses and external damage
 - Handles in-line piping variations and stresses
 - Lead free high copper alloy provides residual value vs. plastic or composite
 - Electrical grounding continuity

- Nutating Disc Measuring Chamber
 - Positive displacement
 - Widest effective flow range for maximum revenue
 - Proprietary polymer materials maximize long-term accuracy
 - Floating chamber design is unaffected by meter position or in-line piping stresses

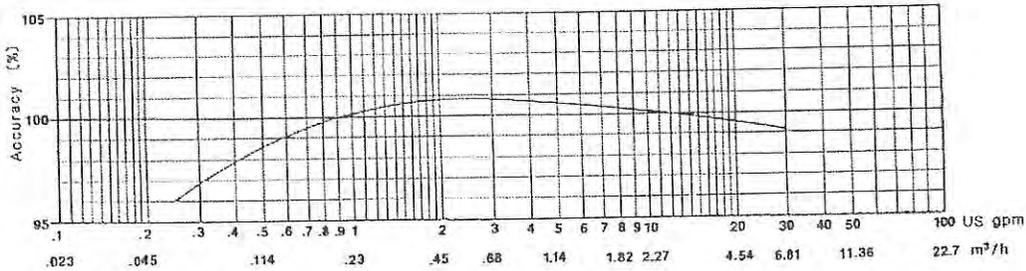
SYSTEMS COMPATIBILITY

Adaptability to all present and future systems for flexibility is available only with Neptune's ARB® Utility Management Systems™.

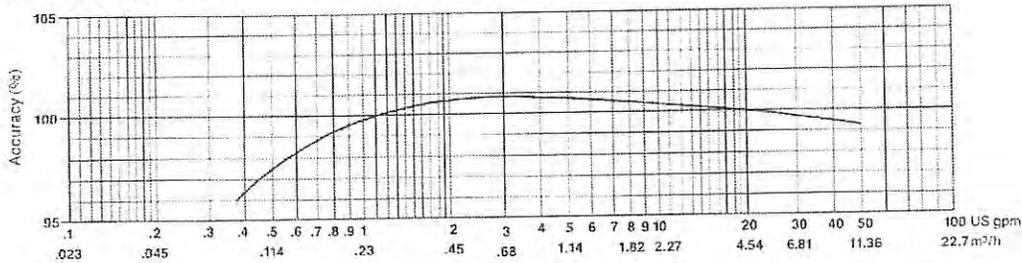
5/8" ACCURACY



3/4" ACCURACY



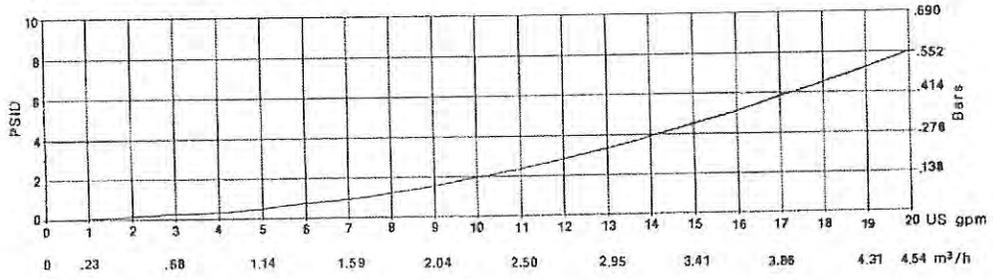
1" ACCURACY



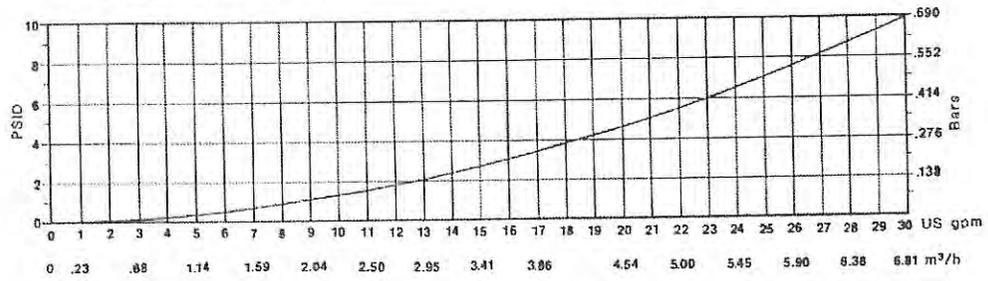
DIMENSIONS

Meter Size	A in/mm	B in/mm	C-Std. in/mm	C-ARB in/mm	C E-Coder) R900i	D Threads per inch	D-OD in/mm	E in/mm	F in/mm	Weight lbs/kg
5/8"	7 1/2 191	3 5/8 92	4 3/8 111	5 1/4 133	6 7/8 175	14	1.03 26	1 1/2 38	2 1/2 64	3 1/4 1.4
5/8" x 3/4"	7 1/2 191	3 5/8 92	4 3/8 111	5 1/4 133	6 7/8 175	11 1/2	1.29 33	1 1/2 38	2 5/8 67	3 3/8 1.5
Circa 2011 5/8"	7 1/2 191	3 5/8 92	4 7/8 124	5 3/4 146	7 3/8 187	14	1.03 26	1 5/8 41	2 1/2 64	3 3/4 1.7
Circa 2011 5/8" x 3/4"	7 1/2 191	3 5/8 92	4 7/8 124	5 3/4 146	7 3/8 187	11 1/2	1.29 33	1 5/8 41	2 5/8 67	4 1.8
3/4"	9 229	4 3/8 111	5 1/2 140	6 1/4 159	7 7/8 200	11 1/2	1.29 33	1 7/8 48	2 5/8 67	6 2.7
3/4" SL	7 1/2 911	4 3/8 111	5 1/2 140	6 1/4 159	7 7/8 200	11 1/2	1.29 33	1 7/8 48	2 5/8 67	5 1/2 2.5
3/4" x 1"	9 229	4 3/8 111	5 1/2 140	6 1/4 159	7 7/8 200	11 1/2	1.62 41	1 7/8 48	2 3/4 70	6 1/2 2.9
1"	10 3/4 273	6 1/2 165	6 3/8 162	7 1/8 181	8 3/4 222	11 1/2	1.62 41	2 1/8 54	2 3/4 70	9 3/4 4.4
1" x 1 1/4"	10 3/4 273	6 1/2 165	6 3/8 162	7 1/8 181	8 3/4 222	11 1/2	1.86 47	2 1/8 54	2 13/16 71	10 1/4 4.6

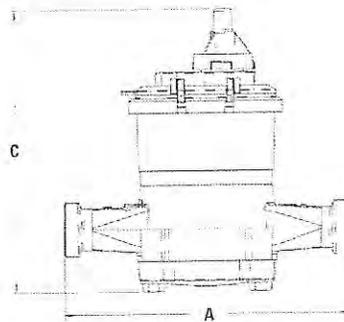
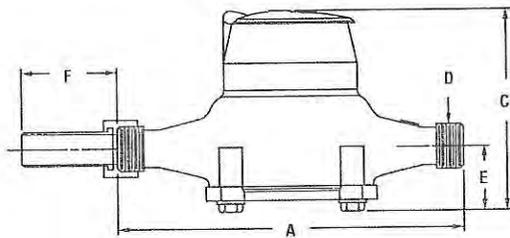
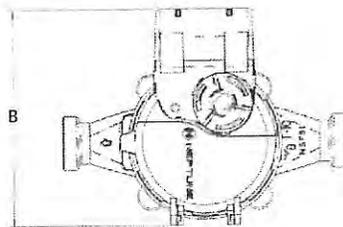
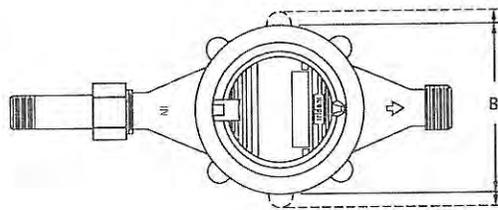
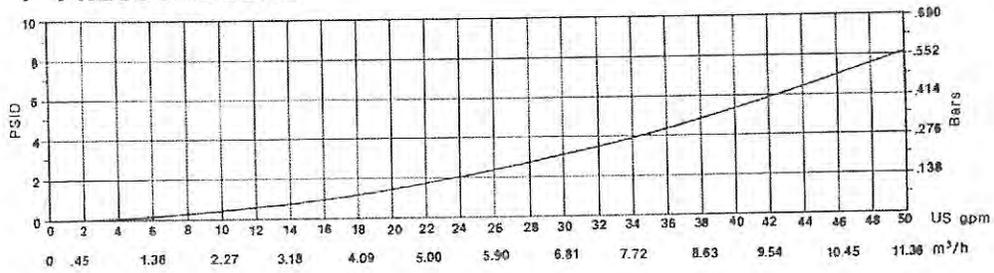
5/8" PRESSURE LOSS



3/4" PRESSURE LOSS



1" PRESSURE LOSS



OPERATING CHARACTERISTICS:

Meter Size	Normal Operating Range @ 100% Accuracy (+/- 1.5%)	AWWA Standard	Low Flow @ 95% Accuracy
5/8"	1/2 to 20 US gpm 0.11 to 4.55 m ³ /h	1 to 20 US gpm 0.23 to 4.5 m ³ /h	1/8 US gpm 0.03 m ³ /h
3/4"	3/4 to 30 US gpm 0.17 to 6.82 m ³ /h	2 to 30 US gpm 0.45 to 6.8 m ³ /h	1/4 US gpm 0.06 m ³ /h
1"	1 to 50 US gpm 0.23 to 11.36 m ³ /h	3 to 50 US gpm 0.68 to 11.4 m ³ /h	3/8 US gpm 0.09 m ³ /h

REGISTRATION:

Pro Read Registration (per sweep hand revolution)		5/8"	3/4" & 1"
10	US Gallons	✓	✓
10	Imperial Gallons	✓	✓
1	Cubic Foot	✓	✓
0.1	Cubic Metre	✓	✓
0.01	Cubic Metre	✓	

Register Capacity ProRead & E-Coder		5/8"	3/4" & 1"
10,000,000	US Gallons	✓	✓
10,000,000	Imperial Gallons	✓	✓
1,000,000	Cubic Feet	✓	✓
100,000	Cubic Metres	✓	✓
10,000	Cubic Metres	✓	

E-Coder High Resolution (8-digit reading)		5/8"	3/4" & 1"
0.1	US Gallons	✓	✓
0.1	Imperial Gallons	✓	✓
0.01	Cubic Feet	✓	✓
0.001	Cubic Metres	✓	✓

SPECIFICATIONS

- Certification: NSF/ANSI 61 certified, Annex F and Annex G compliant
- Application: Cold water measurement of flow in one direction in residential service applications
- Maximum operating water pressure: 150 psi (1034 kPa)
- Maximum operating water temperature: 80°F
- Measuring chamber: Nutating disc technology design made from proprietary synthetic polymer

OPTIONS

- Sizes:
 - 5/8", 5/8" x 3/4"
 - 3/4", 3/4" SL, 3/4" x 1"
 - 1", 1" x 1 1/4"
- Units of measure: U.S. gallons, imperial gallons, cubic feet, cubic metres
- Register types:
 - Direct reading: Bronze box and cover (standard)
 - Remote reading: ProRead Encoder, E-Coder, E-Coder/R900i, TRICON/S, TRICON/E3
 - Reclaim
- Bottom caps:
 - Synthetic polymer (5/8" only)
 - Cast iron
 - Lead free high copper alloy
- Connections:
 - Lead free high copper alloy, straight or bent
- Environmental conditions:
 - Operating temperature: 33° F to 149° F (0° C to 65° C)
 - Storage temperature: 33° F to 158° F (0° C to 70° C)

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neptuneitg.com



NEPTUNE
TECHNOLOGY GROUP

T-10 METER

SIZES: 1 1/2" and 2"



T-10 water meters are warranted for performance, materials, and workmanship.



Every T-10 water meter meets or exceeds the latest AWWA C700 Standard. Its nutating disc, positive displacement principle has been time-proven for accuracy and dependability since 1892, ensuring maximum utility revenue.

CONSTRUCTION

The T-10 water meter consists of three major assemblies: a register, a lead free high copper alloy maincase, and a nutating disc measuring chamber.

The T-10 meter is available with a variety of register types. For reading convenience, the register can be mounted in one of four positions on the meter.

The corrosion-resistant lead free high copper alloy maincase will withstand most service conditions: internal water pressure, rough handling, and in-line piping stress.

The innovative floating chamber design of the nutating disc measuring element protects the chamber from frost damage while the unique chamber seal extends the low flow accuracy by sealing the chamber outlet port to the maincase outlet port. The nutating disc measuring element utilizes corrosion-resistant materials throughout and a thrust roller to minimize wear.

WARRANTY

Neptune provides a limited warranty with respect to its T-10 water meters for performance, materials, and workmanship.

When desired, maintenance is easily accomplished either by replacement of major assemblies or individual components.

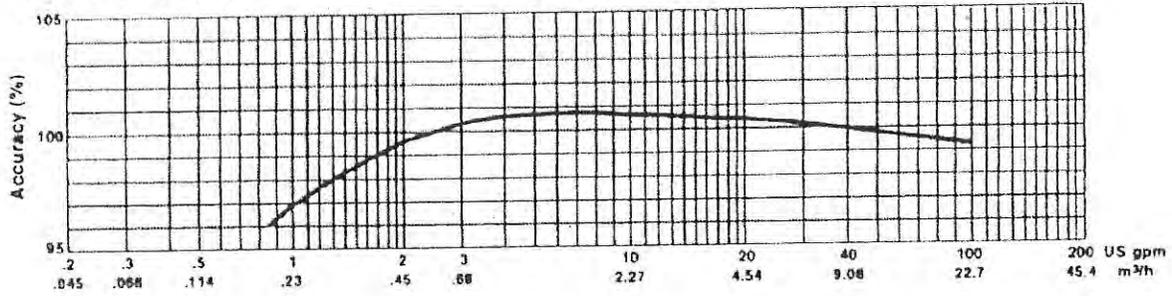
KEY FEATURES

- Register
 - Magnetic drive, low torque registration ensures accuracy
 - Impact-resistant register
 - High resolution, low flow leak detection
 - Bayonet style register mount allows in-line serviceability
 - Tamperproof seal pin deters theft
 - Date of manufacture, size, and model stamped on dial face
- Lead Free Maincase
 - Made from lead free high copper alloy
 - NSF/ANSI 61 Certified, Annex G and Annex F compliant
 - Lifetime guarantee
 - Resists internal pressure stresses and external damage
 - Handles in-line piping variations and stresses
 - Lead free high copper alloy provides residual value vs. plastic
 - Electrical grounding continuity
- Nutating Disc Measuring Chamber
 - Positive displacement
 - Widest effective flow range for maximum revenue
 - Proprietary polymer materials maximize long term accuracy
 - Floating chamber design is unaffected by meter position or in-line piping stresses

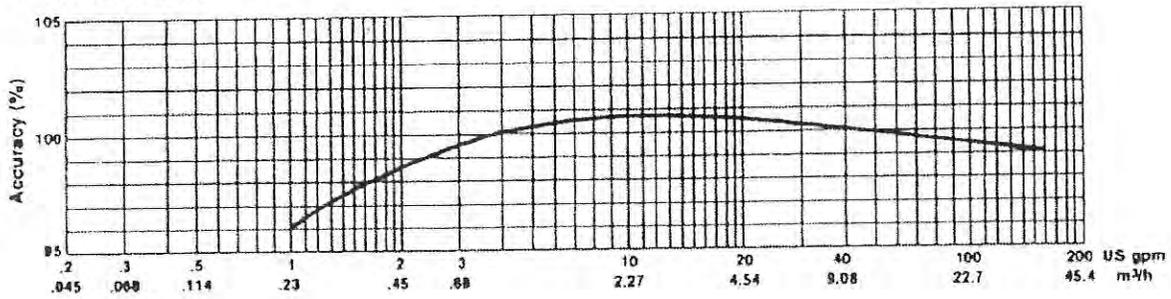
SYSTEMS COMPATIBILITY

Adaptability to all present and future systems for flexibility is available only with Neptune's ARB® Utility Management Systems™.

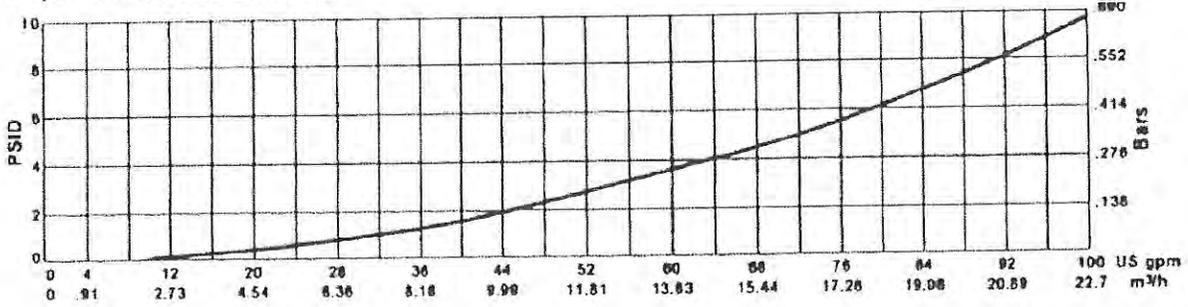
1 1/2" ACCURACY



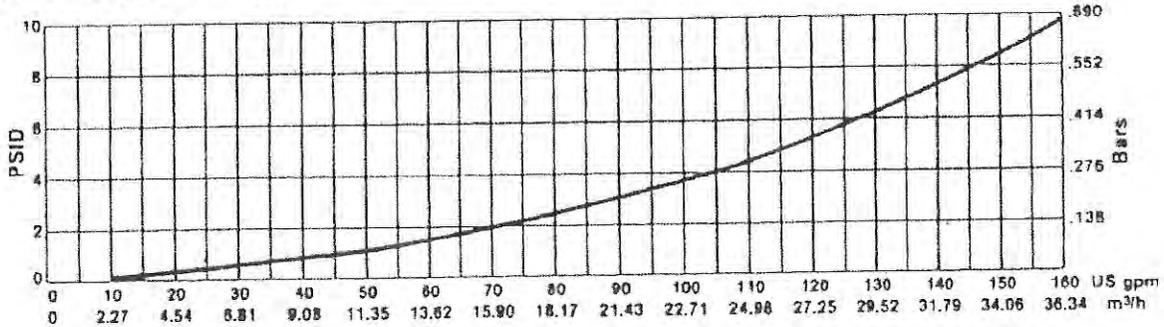
2" ACCURACY



1 1/2" PRESSURE LOSS



2" PRESSURE LOSS



These charts show typical meter performance. Individual results may vary.

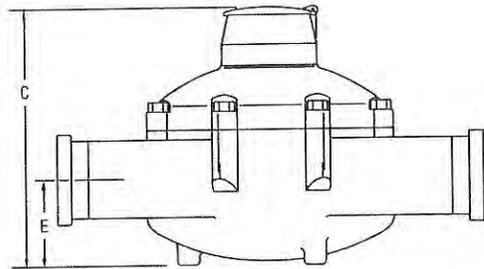
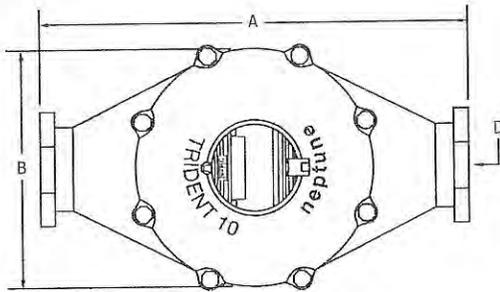
OPERATING CHARACTERISTICS

Meter Size	Normal Operating Range @100% Accuracy ($\pm 1.5\%$)	AWWA Standard	Low Flow @ 95% Accuracy
1 1/2"	2 to 100 US gpm 0.46 to 22.73 m ³ /h	5 to 100 US gpm 1.1 to 22.7 m ³ /h	3/4 US gpm 0.17 m ³ /h
2"	2 1/2 to 160 US gpm 0.57 to 36.36 m ³ /h	8 to 160 US gpm 1.8 to 36.3 m ³ /h	1 US gpm 0.23 m ³ /h

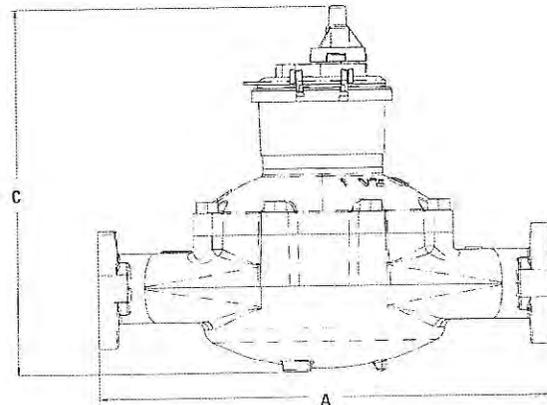
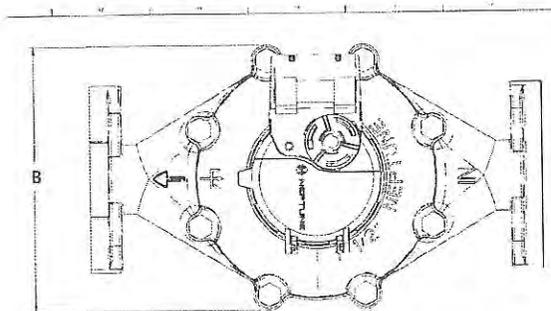
DIMENSIONS

Meter Size	A in/mm	B in/mm	C-Std. in/mm	C-ARB in/mm	C-E-Coder) R900/ TM PIT	D-Threads per inch	D-Thread Type	E in/mm	Weight lbs/kg
1 1/2" Screw End	12 5/8 321	8 1/8 205	8 3/8 206	8 13/16 220.3	10 1/8 225.4	11 1/2	1 1/2 NPT	2 3/8 65	31 14.1
1 1/2" Flanged End	13 330	8 1/8 205	8 3/8 206	8 13/16 220.3	10 1/8 225.4	—	—	2 3/8 65	35 15.9
2" Screw End	15 1/2 387	9 1/8 240	9 3/8 237	9 13/16 248.4	11 3/8 289	11 1/2	2" NPT	3 3/8 79	40 18.1
2" Flanged End	17 432	9 1/8 240	9 3/8 237	9 13/16 248.4	11 3/8 289	—	—	3 3/8 79	44 20.0

T-10 WITH STANDARD REGISTER



T-10 WITH E-CODER)R900/PIT REGISTER



GUARANTEED SYSTEMS COMPATIBILITY

All T-10 meters are guaranteed adaptable to our ARB®V, ProRead™ (ARB VII), E-Coder® (ARB VII), E-Coder®R900/i™, TRICON®/S, TRICON/E®3, and Neptune ARB Utility Systems without removing the meter from service.

REGISTRATION

ProRead Registration			
(per sweep hand revolution)			
		1 1/2"	2"
100	US Gallons	✓	✓
100	Imperial Gallons	✓	✓
10	Cubic Feet	✓	✓
1	Cubic Metre		✓
0.1	Cubic Metre	✓	
Register Capacity			
ProRead & E-Coder			
		1 1/2"	2"
100,000,000	US Gallons	✓	✓
100,000,000	Imperial Gallons	✓	✓
10,000,000	Cubic Feet	✓	✓
100,000	Cubic Metres	✓	✓
E-Coder High Resolution			
(8-digit reading)			
		1 1/2"	2"
1	US Gallons	✓	✓
1	Imperial Gallons	✓	✓
.01	Cubic Feet	✓	✓
0.001	Cubic Metres	✓	✓

SPECIFICATIONS

- Certification: NSF/ANSI 61, Annex G and Annex F
- Application: cold water measurement of flow in one direction
- Maximum operating water pressure: 150 psi (1034 kPa)
- Maximum operating water temperature: 80°F
- Measuring chamber: nutating disc technology design made from proprietary synthetic polymer

OPTIONS

- Sizes:
 - 1 1/2" flanged or threaded end
 - 2" flanged or threaded end
- Units of measure: U.S. gallons, imperial gallons, cubic feet, cubic metres
- Register types:
 - Direct reading: Bronze box and cover (standard)
 - Remote reading: ProRead Absolute Encoder, E-Coder, E-Coder®R900/i, TRICON/S, TRICON/E3
 - Reclaim
- Measuring chamber: synthetic polymer
- Companion flanges: cast iron or lead free high copper alloy
- Environmental Conditions:
 - Operating temperature: 33°F to 149°F (0°C to 65°C)
 - Storage temperature: 33°F to 158°F (0°C to 70°C)
- Test Ports: 1"

Neptune engages in ongoing research and development to improve and enhance its products. Therefore, Neptune reserves the right to change product or system specifications without notice.

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ARB® UTILITY MANAGEMENT SYSTEMS™



TRU/FLO® COMPOUND METER

SIZES: 2" HP, 3", 4", 6", AND 6" X 8"

TRU/FLO® meters combine the low-flow sensitivity of a disc-type meter with the high-flow capacity of a turbine-type meter.



All TRU/FLO® Compound water meters meet or exceed the latest performance and accuracy requirements set by the AWWA C702, and maximum continuous flow rates may be exceeded by as much as 25% for intermittent periods.

APPLICATION

The TRU/FLO Compound water meter is designed to register wide flow ranges where varying flow rates are typical. TRU/FLO meters combine the low-flow sensitivity of a disc-type meter with the high-flow capacity of a turbine-type meter.

OPERATION

The hydraulic valve transfers flow smoothly between the disc section and turbine section of the meter, minimizing the loss of accuracy in the crossover range. The turbine measuring element registers high flows and the disc measuring element registers low flows, ensuring accurate measurement at all flow rates.

CONSTRUCTION

The TRU/FLO consists of a durable lead free high copper alloy maincase, Neptune High Performance (HP) or Trident® Turbine measuring element, Neptune T-10 chamber, and two magnetic-driven, roll-sealed registers.

The 6" x 8" TRU/FLO assembly consists of two 6" x 8" concentric reducers, a 6" Neptune strainer, and a 6" Neptune TRU/FLO Compound meter.

The lead free high copper maincase is corrosion resistant, lightweight, and easy to handle.

A calibration vane allows field calibration of the UME to lengthen service life and to ensure accurate registration.

The two magnetic-driven, roll-sealed registers simplify the meter's design and reduce long term maintenance by eliminating complicated combining drive mechanisms. For reading convenience, the registers can be mounted in any one of four positions on the meter.

WARRANTY

Neptune provides a limited warranty with respect to its TRU/FLO Compound water meters for performance, materials, and workmanship.

When desired, owner maintenance is easily accomplished by in-line replacement of major components, or a factory calibrated UME.

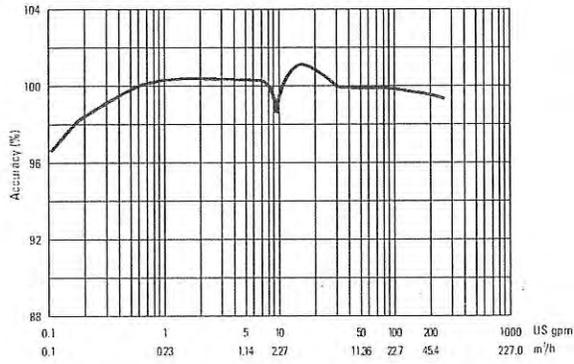
KEY FEATURES

- Minimum loss of accuracy in the crossover range increases revenue
- Spring-loaded valve eliminates need for frequent adjustment and service
- Combined Turbine and Disc Measuring Elements
 - Industry-leading flow ranges at 98.5%–101.5% accuracy ensure maximum revenue
 - Direct coupling of rotor to gear train ensures accurate registration
 - Unitized Measuring Element (UME) makes maintenance easier and faster with less downtime
 - Calibration vane allows in-line service to extend life and ensure accurate registration
- Compact Maincase
 - Made from lead free high copper alloy
 - NSF/ANSI 61, Annex G certified and Annex F compliant
 - Lifetime guarantee
 - Compact, lightweight design provides for easy installation and in-line serviceability

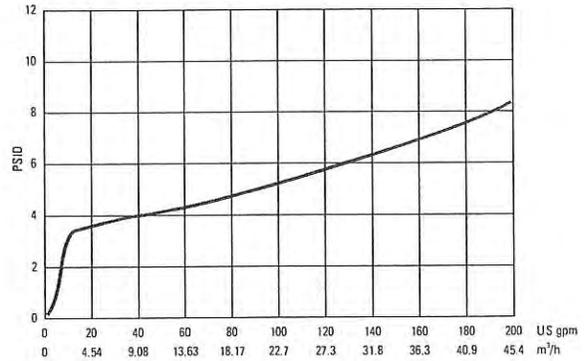
SYSTEMS COMPATIBILITY

Adaptability to all present and future systems for flexibility.

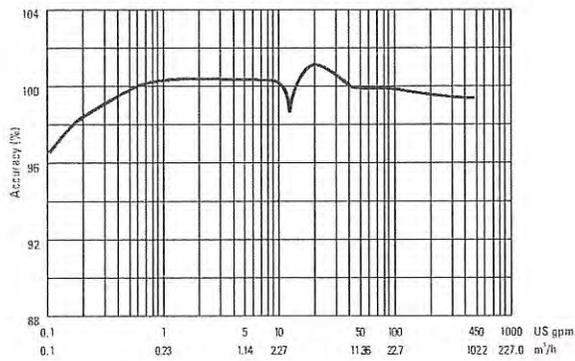
2" ACCURACY



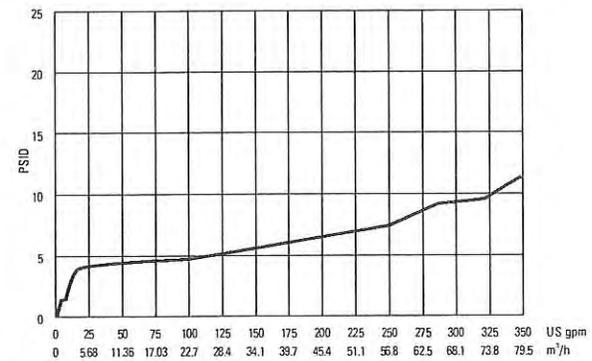
2" PRESSURE LOSS



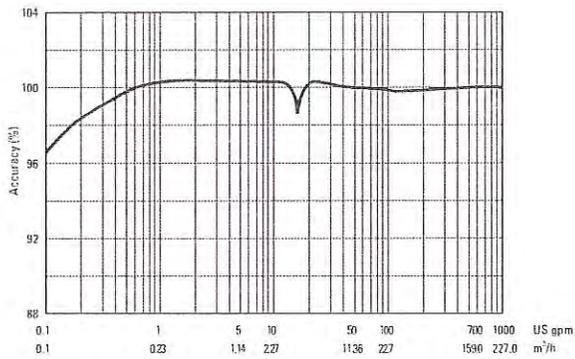
3" ACCURACY



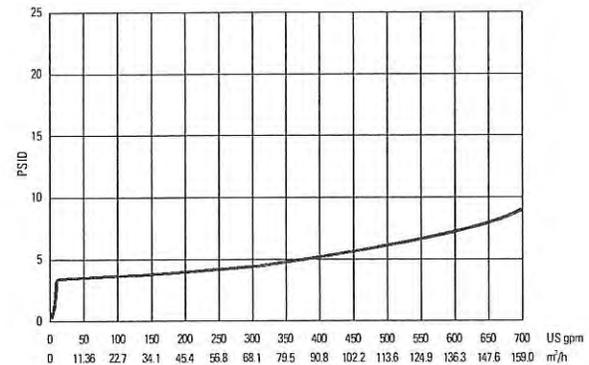
3" PRESSURE LOSS



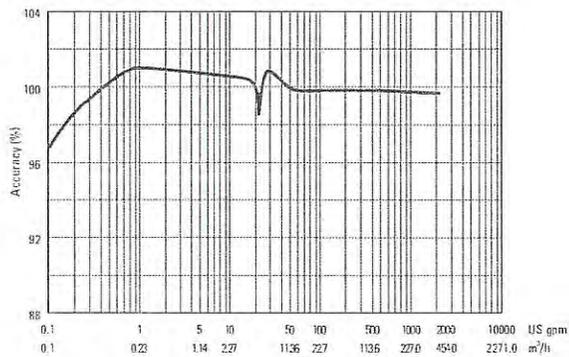
4" ACCURACY



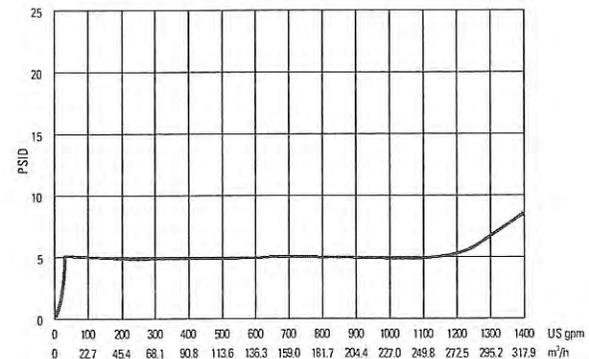
4" PRESSURE LOSS



6" ACCURACY



6" PRESSURE LOSS

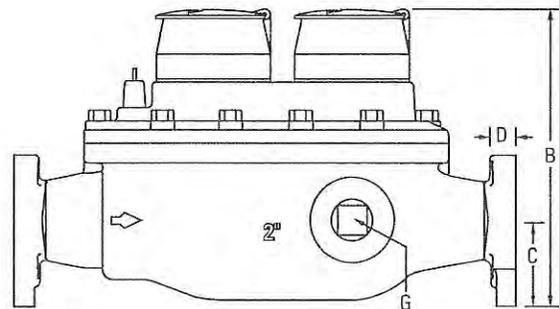
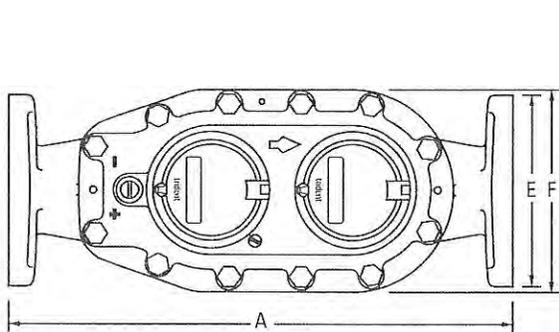


OPERATING CHARACTERISTICS

Meter Size	Normal Operating Range @100% Accuracy (±1.5%)	AWWA Standard	Low Flow @ 95% Accuracy
2"	½ to 200 US gpm 0.11 to 45.4 m³/h	1 to 160 US gpm .227 to 36.34 m³/h	¼ US gpm 0.03 m³/h
3"	½ to 450 US gpm 0.11 to 102.2 m³/h	2 to 350 US gpm .454 to 79.5 m³/h	¼ US gpm 0.03 m³/h
4"	1 to 1000 US gpm 0.23 to 227.1 m³/h	3 to 600 US gpm .68 to 136.3 m³/h	½ US gpm 0.11 m³/h
6"	1 ½ to 2000 US gpm 0.34 to 454.2 m³/h	5 to 1350 US gpm 1.14 to 306.6 m³/h	¾ US gpm 0.17 m³/h
6" x 8"	1 ½ to 2000 US gpm 0.34 to 454.2 m³/h	16 to 1600 US gpm 3.63 to 363.4 m³/h	¾ US gpm 0.17 m³/h

DIMENSIONS

Meter Size	A in/mm	B-Std in/mm	B-PRO in/mm	B-E-Coder) R9007™ in/mm	C in/mm	D in/mm	E in/mm	F in/mm	G in/mm	Flange Type	Weight lbs/kg
2" HP	15 ¼ 387	8 ¾ 219	9 229	12 ½ 308	2 ½ 64	1 ½ 21	5 ⅞ 149	6 152	1 ½ NPT 38	2" Oval 150 lb	32 14.5
3"	17 432	10 ½ 267	11 279	14 ¼ 362	3 ¾ 95	5 ⅞ 16	7 ½ 191	8 ½ 216	1 ½ NPT 38	3" ANSI 150 lb	72 32.7
4"	20 508	12 ½ 318	13 330	16 ¼ 413	4 ½ 114	1 ½ 17	9 229	9 ⅞ 232	2 NPT 51	4" ANSI 150 lb	100 45.4
6"	24 610	15 ¾ 400	16 ¼ 413	19 ½ 495	5 ½ 140	1 25	11 279	12 ¾ 324	2 NPT 51	6" ANSI 150 lb	208 94.3
6" x 8"	55 ¾ 1407	15 ¾ 400	16 ¼ 413	19 ½ 495	5 ½ 140	1 25	11 279	12 ¾ 232	2 NPT 51	8" ANSI 150 lb	460 208.50



GUARANTEED SYSTEMS COMPATIBILITY

All Neptune TRU/FLO Compound meters are guaranteed adaptable to our ARB®V, ProRead™ (ARB VI), E-Coder®)R900/™, E-Coder®, TRICON®/S, TRICON/E®3, and Neptune meter reading systems without removing the meter from service.

REGISTRATION

Registration (per sweep hand revolution)	Turbine Side		Disc Side
	2", 3", 4"	6", 6" x 8"	2", 3", 4", 6", 6" x 8"
1,000 US Gallons		✓	
1,000 Imperial Gallons		✓	
100 US Gallons	✓		
100 Imperial Gallons	✓		
100 Cubic Feet		✓	
10 US Gallons			✓
10 Imperial Gallons			✓
10 Cubic Feet	✓		
10 Cubic Metres		✓	
1 Cubic Foot			✓
1 Cubic Metre	✓		
0.1 Cubic Metre			✓

Register Capacity (6-wheel odometer)	Turbine Side		Disc Side
	2", 3", 4"	6", 6" x 8"	2", 3", 4", 6", 6" x 8"
1,000,000,000 US Gallons		✓	
1,000,000,000 Imperial Gallons		✓	
100,000,000 US Gallons	✓		
100,000,000 Imperial Gallons	✓		
100,000,000 Cubic Feet		✓	
10,000,000 US Gallons			✓
10,000,000 Imperial Gallons			✓
10,000,000 Cubic Feet	✓		
10,000,000 Cubic Metres		✓	
1,000,000 Cubic Feet			✓
1,000,000 Cubic Metres	✓		
100,000 Cubic Metres			✓

SPECIFICATIONS

- Application: cold water measurement of flow in one direction
- Maximum operating pressure: 150 psi (1034 kPa)
- Maximum operating temperature: 80°F
- Register: direct reading, center sweep, roll-sealed, magnetic drive with low-flow indicator
- Measuring element:
 - AWWA Class II Turbine, hydrodynamically balanced rotor
 - Nutating disc

OPTIONS

- Sizes: 2" HP, 3", 4", 6", and 6" x 8"
- Units of measure: U.S. gallons, imperial gallons, cubic feet, cubic metres
- Register types:
 - Direct reading: bronze box and cover (standard)
 - Remote reading systems*: ProRead, E-Coder)R900i, E-Coder, TRICON/S, TRICON/E3
 - Reclaim
- Companion flanges:
 - 2", 3", 4" bronze or cast iron
 - 6", 6" x 8" cast iron
- Strainer: 2", 3", 4", 6" NSF/ANSI 61 lead free high copper alloy

* Consult factory for meter performance specifications when fitted with ARB.

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HIGH PERFORMANCE TURBINE METER

SIZES: 1-1/2", 2", 3", 4", 6", 8", and 10"



High Performance Turbine water meters offer some of the widest flow ranges of any turbine meters on the market.



HP Turbine water meters offer some of the widest flow ranges of any turbine meters on the market. All HP Turbine water meters meet or exceed the latest performance and accuracy requirements of AWWA C701 and maximum continuous flow rates may be exceeded by as much as 25% for intermittent periods.

CONSTRUCTION

Each HP Turbine consists of a rugged no-lead high copper alloy maincase, an AWWA Class II turbine measuring element, and a roll-sealed register.

The maincase is corrosion resistant, lightweight, and compact. Inlet and outlet connections are flanged. Strainers are available to prevent debris from entering the meter and to reduce the effects of uneven water flow due to upstream piping variations.

The Unitized Measuring Element (UME) allows for quick, easy, in-line interchangeability. Water volume is measured accurately at all flows by a specially designed assembly. The hydrodynamically balanced thrust compensated rotor relieves pressure on the thrust bearings to minimize wear and provide sustained accuracy over an extended operating life. Direct coupling of the rotor to the gear train eliminates revenue loss due to slippage during fast starts and line surges. A calibration vane allows in-field calibration of the UME to lengthen service life and to ensure accurate registration.

The roll-sealed register eliminates leaking and fogging. A magnetic drive couples the register with the measuring element.

APPLICATION

The HP Turbine water meter is designed for applications where flow rates are consistently moderate to high.

SYSTEMS COMPATIBILITY

Adaptability to all present and future systems for flexibility.

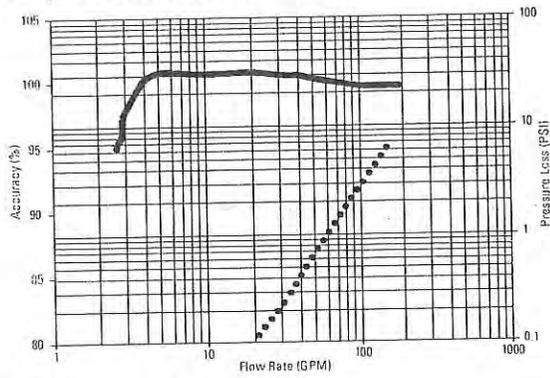
KEY FEATURES

- Roll-Sealed Register
 - Magnetic drive, low torque registration ensures accuracy
 - Impact-resistant register design with flat glass for readability
 - 1:1 ratio, low flow indicator identifies leaks
 - Bayonet mount allows in-line serviceability
 - Tamperproof seal pin deters theft
 - Date of manufacture, size, and model stamped on dial face
- No-Lead Maincase
 - Made from no-lead high copper alloy
 - NSF/ANSI 61, Annex G certified and Annex F compliant
 - Compact design is lightweight and easy to handle
 - Sturdy, durable, corrosion resistant
 - Resists internal pressure stresses and external damage
 - Residual value
- Turbine Measuring Element
 - Excellent low flow sensitivity and wide flow ranges available at 98.5%–101.5% accuracy
 - Direct coupling of rotor to gear train prevents slippage and ensures accurate registration
 - Interchangeable measuring element allows for in-line service
 - Hydrodynamically balanced rotor
 - Reusable O-ring gasket on 3" –10" sizes

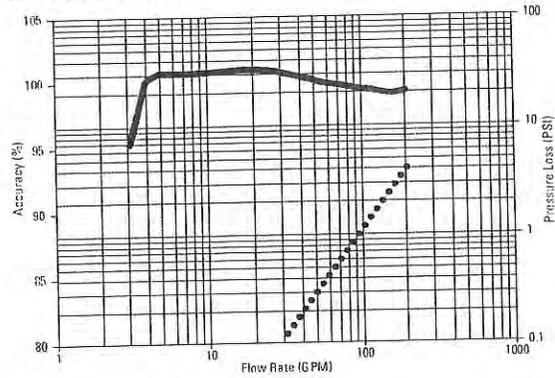
WARRANTY

Neptune provides a limited warranty with respect to its HP Turbine water meters for performance, materials, and workmanship. When desired, owner maintenance is easily accomplished by in-line replacement of major components.

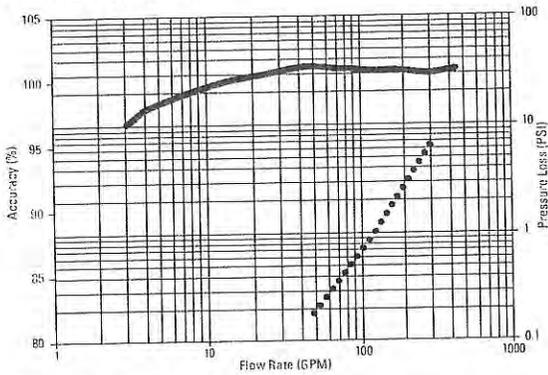
1-1/2" ACCURACY



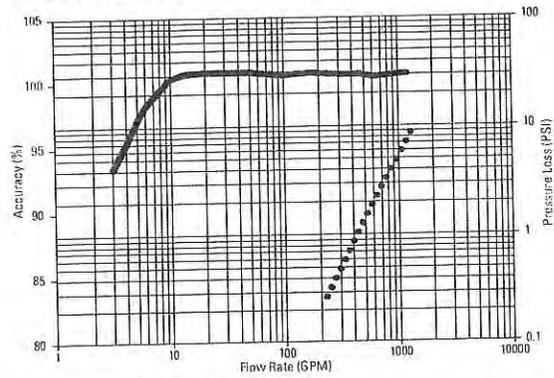
2" ACCURACY



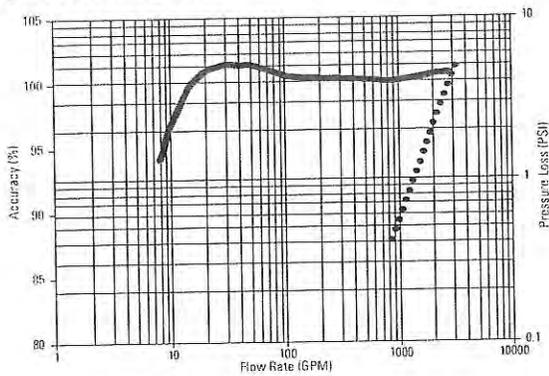
3" ACCURACY



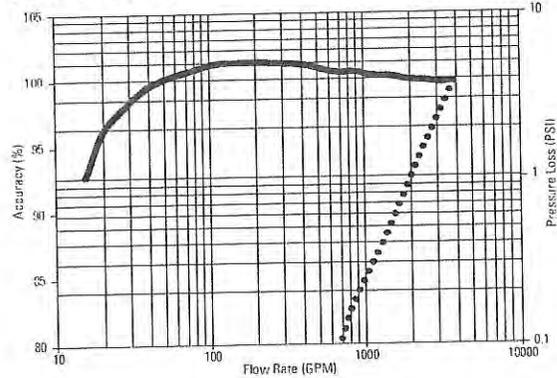
4" ACCURACY



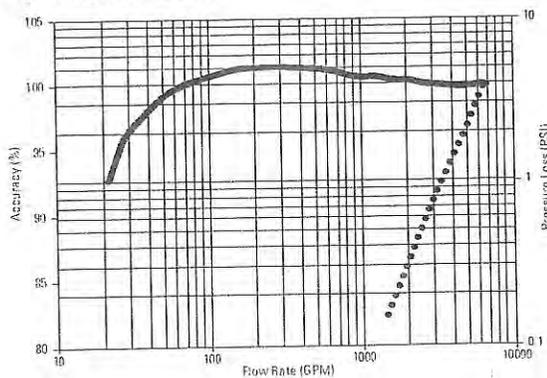
6" ACCURACY



8" ACCURACY



10" ACCURACY



— Accuracy
 Head Loss

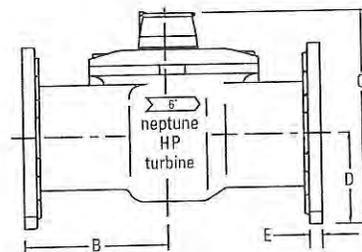
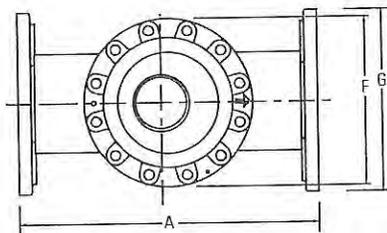
These charts show typical meter performance. Individual results may vary.

OPERATING CHARACTERISTICS

Meter Size	Normal Operating Range @100% Accuracy ($\pm 1.5\%$)	Maximum Intermittent Flow	AWWA Standard
1 1/2"	4 to 160 US gpm 0.91 to 36.3 m ³ /h	200 US gpm 45.4 m ³ /h	N/A
2"	4 to 200 US gpm 0.91 to 45.4 m ³ /h	250 US gpm 56.8 m ³ /h	4 to 160 US gpm 0.91 to 36.3 m ³ /h
3"	5 to 450 US gpm 1.14 to 102.2 m ³ /h	560 US gpm 127.2 m ³ /h	8 to 350 US gpm 1.8 to 79.5 m ³ /h
4"	10 to 1200 US gpm 2.27 to 272.5 m ³ /h	1500 US gpm 340.7 m ³ /h	15 to 630 US gpm 3.4 to 143.0 m ³ /h
6"	20 to 2500 US gpm 4.55 to 567.8 m ³ /h	3100 US gpm 704.1 m ³ /h	30 to 1400 US gpm 6.8 to 317.9 m ³ /h
8"	35 to 4000 US gpm 7.95 to 908.5 m ³ /h	5000 US gpm 1135.6 m ³ /h	50 to 2400 US gpm 11.4 to 545 m ³ /h
10"	50 to 6500 US gpm 11.36 to 1476.3 m ³ /h	8000 US gpm 1817 m ³ /h	75 to 3800 US gpm 17.0 to 863 m ³ /h

DIMENSIONS

Meter Size	A	B	C-STD	C-ProRead™	C-E-Coder/R900i™	D	E	F	G	Weight
	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	lbs (kg)
1 1/2"	10 (254)	6 1/2 (165)	7 1/8 (181)	7 9/16 (192)	10 7/8 (276.2)	1 3/4 (44)	3/4 (19)	4 1/2 (114)	5 3/8 (137)	19 (8.6)
2"	10 (254)	6 1/2 (165)	7 5/8 (194)	8 1/16 (204.8)	11 3/8 (288.9)	2 1/8 (54)	13/16 (21)	4 1/2 (114)	5 3/8 (137)	20 (9.1)
3"	12 (305)	6 (152)	10 (254)	10 7/16 (265.1)	13 3/4 (349.3)	3 3/4 (95)	5/8 (16)	6 1/4 (159)	7 1/2 (191)	40 (18.1)
4"	14 (356)	6 1/2 (165)	10 7/8 (276)	11 5/16 (287.3)	14 5/8 (371.4)	4 1/2 (114)	3/4 (19)	8 1/8 (206)	9 (229)	52 (23.6)
6"	18 (457)	8 5/8 (219)	13 (330)	13 7/16 (341.3)	16 3/4 (425.5)	5 1/2 (140)	1 (25)	10 1/4 (260)	11 (279)	115 (52.2)
8"	20 (508)	9 5/8 (244)	15 1/2 (394)	15 15/16 (404.8)	19 1/4 (489)	6 3/4 (171)	1 1/8 (29)	10 1/4 (260)	13 1/2 (343)	195 (88.4)
10"	26 (660)	12 5/8 (321)	15 1/2 (394)	15 15/16 (404.8)	19 1/4 (489)	8 (203)	1 1/4 (32)	10 1/4 (260)	16 (406)	275 (124.7)



GUARANTEED SYSTEMS COMPATIBILITY

All HP Turbine water meters are guaranteed adaptable to our ARB[®]V, ProRead[™] (ARB VI), E-Coder)R900*i*[™], E-Coder[®], TRICON[®]/S, TRICON/E[®]3, and Neptune meter reading systems without removing the meter from service.

REGISTRATION

Registration (per sweep hand revolution)		
	1 1/2", 2", 3", 4"	6", 8", 10"
1,000 US Gallons		✓
1,000 Imperial Gallons		✓
100 US Gallons	✓	
100 Imperial Gallons	✓	
100 Cubic Feet		✓
10 Cubic Feet	✓	
10 Cubic Metres		✓
1 Cubic Metre	✓	
Register Capacity (6-wheel odometer)		
	1 1/2", 2", 3", 4"	6", 8", 10"
1,000,000,000 US Gallons		✓
1,000,000,000 Imperial Gallons		✓
100,000,000 US Gallons	✓	
100,000,000 Imperial Gallons	✓	
100,000,000 Cubic Feet		✓
10,000,000 Cubic Feet	✓	
10,000,000 Cubic Metres		✓
1,000,000 Cubic Metres	✓	

SPECIFICATIONS

- Application: cold water measurement of flow in one direction
- Maximum operating pressure: 175 psi (1206 kPa)
- Maximum operating temperature: 80°F
- Register: direct reading, center sweep, roll-sealed, magnetic drive with low-flow indicator
- Measuring element: AWWA Class II Turbine, hydrodynamically balanced rotor

OPTIONS

- Sizes: 1 1/2", 2", 3", 4", 6", 8", 10"
- Units of measure: U.S. gallons, imperial gallons, cubic feet, cubic metres
- Register Types:
 - Direct reading: Bronze box and cover (standard)
 - Remote reading systems*: ARBV, ProRead, E-Coder)R900*i*, E-Coder, TRICON/S, TRICON/E3
 - Reclaim
- Companion flanges:
 - 1 1/2" and 2" (oval): bronze or cast iron
 - 3", 4", 6": bronze or cast iron
 - 8" and 10": cast iron
- Strainer:
 - 2"-6" NSF/ANSI 61 no-lead high copper alloy
 - 8"-10" NSF/ANSI 61 no-lead high copper alloy

* Consult factory for meter performance specifications when fitted with ARB.

Neptune engages in ongoing research and development to improve and enhance its products. Therefore, Neptune reserves the right to change product or system specifications without notice.

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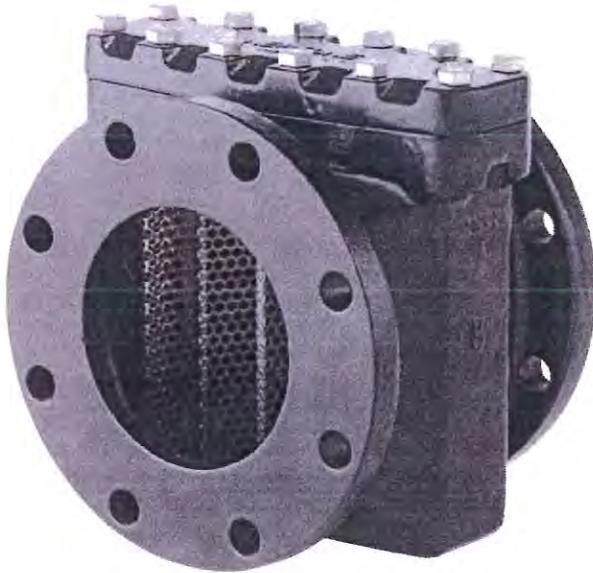
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STRAINERS

SIZES: 1 1/2", 2", 3", 4", 6", 8", 10", 12", 16", and 20"



Neptune strainers are designed and built for long-term, trouble-free performance in water pipeline service. They are specially designed for installation with HP Turbine or TRU/FLO® compound meters and are compatible with all other makes as well.

Neptune recommends that a strainer be installed with each HP Turbine or TRU/FLO Compound meter to prevent meter damage and to ensure accurate registration regardless of the configuration of the meter installation.

PERFORMANCE

When installed at the inlet of a turbine or compound meter, the strainer performs two very important functions:

- It provides protection against damage to the turbine meter measuring element from debris or foreign material in the pipeline.
- The stainless steel, plate-type strainer element is designed to improve the velocity profile of the flow stream entering the meter. This velocity profile improvement optimizes turbine meter performance. Good metering practice normally requires 8 to 10 diameters of straight pipe at the meter inlet to minimize velocity profile distortion caused by upstream valves or other fittings. The Neptune strainer reduces this long straight-run requirement and simplifies meter installation.

CONSTRUCTION

Neptune strainers are built of the highest quality, time-proven materials available for water pipeline service. Strainer bodies and covers in 1 1/2" through 10" sizes are lead free Rilsan® nylon-coated ductile iron; the 12", 16", and 20" are epoxy-coated steel. Strainer elements and cover bolts in all sizes are stainless steel.

Neptune strainers are rated at 150 psi working pressure. Each strainer is hydrostatically tested at 300 psi before shipment to ensure hydraulic integrity.

KEY FEATURES

- Lead free, Rilsan nylon-coated ductile iron* body ensures durability; chemical and corrosion resistant
- NSF/ANSI 61, Annex G certified and Annex F compliant
- Low head loss
- Stainless steel strainer plate and cover bolts
- Height to center line matches Neptune HP Turbines for easy installation
- In-line serviceability

**12", 16", and 20" are epoxy-coated steel.*

WARRANTY

Neptune provides a limited warranty with respect to its strainers for performance, materials, and workmanship. For owner maintenance purposes, Neptune offers a complete inventory of replacement parts. When required, maintenance is easily accomplished without removing the strainer from the service line.

OPTIONS

- Rilsan nylon-coated ductile iron
- Lead free, bronze alloy

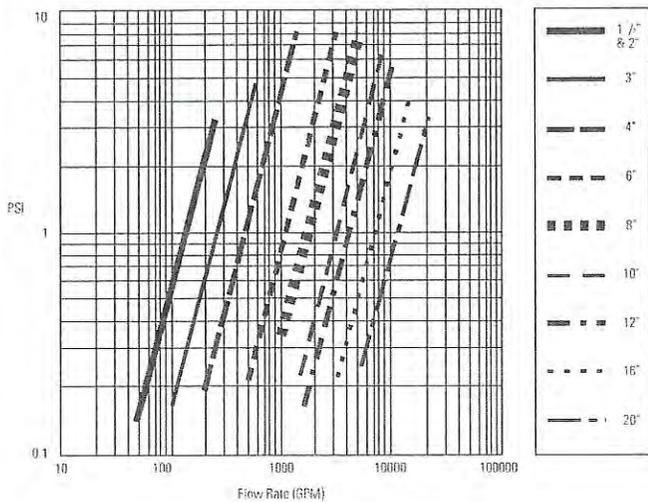
MAXIMUM OPERATING PRESSURE

- 150 psi

DIMENSIONS:

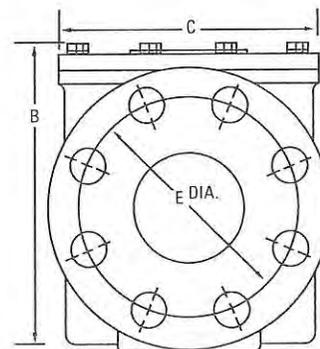
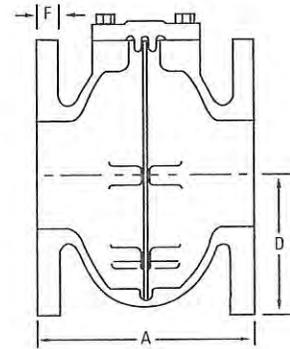
Meter Size	A in/mm	B in/mm	C in/mm	D in/mm	E in/mm	F in/mm	No. of Holes	Hole Dia. in/mm	Weight lbs/kg
1 1/2"	7 178	6 152	5 1/4 133	2 1/8 54	4 1/2 114	3/4 19	2	3/4 19	15 6.8
2"	7 178	6 152	5 1/4 133	2 1/8 54	4 1/2 114	3/4 19	2	3/4 19	15 6.8
3"	6 152	8 1/2 216	8 3/4 222	3 3/4 95	6 152	5/8 16	4	3/4 19	30 13.6
4"	7 1/2 191	9 3/4 248	10 1/2 267	4 1/2 114	7 1/2 191	11/16 17	8	3/4 19	42 19.0
6"	9 229	11 3/4 298	11 1/2 292	5 1/2 140	9 1/2 241	3/8 22	8	7/8 22	70 31.8
8"	10 254	14 356	13 1/2 343	6 3/4 171	11 3/4 298	1 1/8 29	8	7/8 22	120 54.5
10"	15 381	18 1/4 464	18 1/4 464	8 203	14 1/4 362	1 3/16 30	12	1 25	195 88.4
12"	16 7/8 429	18 7/8 479	20 1/2 521	9 1/2 241	17 432	13/16 21	12	1 25	180 81.6
16"	25 1/4 641	28 711	20 3/4 527	11 3/4 299	21 1/4 540	1 25	16	1 1/4 29	240 108.8
20"	18 3/8 473	28 711	26 1/8 664	13 3/4 349	25 635	1 1/8 29	20	1 1/4 29	300 136.0

PRESSURE LOSS



PART NUMBERS

- 1 1/2" 53145-100 Lead free, Rilsan nylon-coated ductile iron
- 2" 53120-600 Lead free, Rilsan nylon-coated ductile iron
- 3" 53107-600 Lead free, Rilsan nylon-coated ductile iron
- 4" 53107-700 Lead free, Rilsan nylon-coated ductile iron
- 6" 52000-601 Lead free, Rilsan nylon-coated ductile iron
- 8" 52000-704 Lead free, Rilsan nylon-coated ductile iron
- 10" 52000-802 Lead free, Rilsan nylon-coated ductile iron
- 12" 9276-000 Steel
- 16" 9276-100 Steel
- 20" 9276-200 Steel



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ARB® UTILITY MANAGEMENT SYSTEMS™



CE5320B HANDHELD DATA COLLECTOR

The CE5320B is powered by Neptune's meter reading software, N_SIGHT™ R900®. Neptune's meter reading software is designed to automate the meter reading process with a comprehensive feature set that allows utilities to reliably manage meter reading schedules regardless of size or industry type.

With Neptune's ARB® Utility Management Systems™, utilities can read their meters using a variety of data collection technologies – walk-by, mobile, and fixed network. The CE5320B is just one component of Neptune's hybrid meter reading approach, allowing the meter reader to collect meter readings manually (keyed entry), probed, or via radio frequency (RF). Regardless of the method, the CE5320B offers the capability to reliably collect and store meter readings throughout the entire work day.

The CE5320B handheld is loaded with meter reading routes through an Ethernet communication/charging cradle using Neptune's meter reading software. Communication/charging cradles are connected directly to a PC, to a server supporting multiple computers, or to the company LAN. To retrieve meter reading data, the CE5320B is again inserted into the cradle at the office. Data is then downloaded to the meter reading software and prepared for transfer to the billing system. The CE5320B remains in the cradle to recharge so it is ready for work the next day.

Utilities also have a choice with respect to RF AMR capabilities. The CE5320B is equipped with an HR2650i integrated receiver. This receiver is designed to automatically read Neptune R900® RF MIUs as well as Itron® R300® and electric ERT® transmitters. With this integrated receiver, meter reading becomes a more user-friendly and ergonomic task, as the handheld is more lightweight and balanced. Additionally, the CE5320B supports various types of meter probes. Walk-by probed meter reading is supported via a wireless RF link between the probe and the handheld computer.



KEY FEATURES

- AMR capable – fully compatible with R900s, R300s, and electric ERTs
- Windows CE.NET operating system
- 54 multi-functional raised tactile keys with backlighting
- Color touch-screen display
- Designed for extreme durability – complies with IP67 & MIL-STD-810F
- Replaceable long-life lithium ion battery – intelligent fast charge system

KEY BENEFITS

- Integrated RF receiver for improved ergonomics
- Offers true multi-tasking capability
- Provides maximum field performance
- Multi-utility meter reading capability
- Flexible, easy-to-use software application functionality
- Migrates from multiple data collection methods – manual keyed entry, probed, and walk-by RF
- Supports rich contrasts that are easy to read both indoors and outdoors
- Courteous, prompt, and conscientious Support Specialists available if needed

SPECIFICATIONS

Operating System	Windows CE_NET 5.0
Software Application	N_SIGHT R900
Processor	Intel 520 MHz Bulverde PXA 270
Memory	128 MB SRAM, 256 MB Flash for WIN CE and file system
Display	3.5" (89mm) QVGA TFT touch screen transfective color LCD with backlighting 320 x 240 pixels with full graphics
Keyboard	Highly ergonomic backlit keyboard, 54 multi-function keys Ergonomic key grouping to facilitate data entry Alphanumeric keys with large, separate numeric keypad Tactile and programmable audible feedback Customized keyboard templates to support N_SIGHT R900 Standard two-zone keyboard backlighting
Power Supply	Rechargeable lithium ion battery pack -2600 mAh capacity Intelligent fast charge system (4 hours) Power management system Integrated charge status and low battery indicator Typical 7-9 hour work day Rechargeable nickel metal hydride backup battery ON/OFF switch, manual and automatic shutoff 5 volt power for external devices
Communication	Ethernet 10 Base T, 10 Mbps Bluetooth 2.0 802.11 b/g 1 RS232 Lemo connector
Audio	Speaker output
AMR RF Receiver	HR2650i (R900, Itron R300, Itron electric ERT)
Dimensions	<u>Without AMR RF Receiver</u> Height: 1.53" min., 2.36" max (39 mm min., 60 mm max.) Width: 3.53" min., 4.08" max (90 mm min., 104 mm max.) Length: 9.74" (248 mm) <u>With AMR RF Receiver</u> Height: 1.53" min., 3.25" max (39 mm min., 83 mm max.) Width: 3.53" min., 4.08" max (90 mm min., 104 mm max.) Length: 10.5" (267 mm)
Weight	<u>Without AMR RF Receiver</u> 1.94 lbs (880g) with battery pack <u>With AMR RF Receiver</u> 2.0 lbs (907g) with battery pack
Temperature Range	Operating: -4°F to +122°F (-20°C to +50°C) Storage: -22°F to +140°F (-30°C to +60°C) Humidity: 95% non-condensing
Environmental	MIL-STD-810F method 512.4 procedure I IP67 (1 meter immersion) MIL-STD-810F method 506.3 procedure I (wind blown rain) <u>Shock Resistance</u> *Exceeds 2 meter drop on concrete *MIL-STD-810F method 516.5 procedure IV <u>Electrostatic Discharge</u> Meets EN61000-42
Approvals	FCC Class B CE Certification ISO9001 ROHS compliant
Accessories	Ethernet communications and charging cradle 110 V AC power supply Ergonomic hand strap adjustable for either left or right handed users Shoulder carrying strap
Warranty	One year comprehensive warranty Hardware and software maintenance contracts available

The CE5320B incorporates an Intel® 520MHz Bulverde processor to maximize field performance. 128Mb of RAM and 256Mb of internal Flash memory provide ample storage for multiple routes of meter reading data. Communication of data from the CE5320B is conducted through an Ethernet cradle at speeds up to 10Mbps – almost 100 times faster than conventional serial communications. The cradle also serves as a charging device designed to intelligently “fast charge” the unit’s rechargeable lithium ion batteries in only four hours. The CE5320B power supply is designed to provide eight (8) hours of continuous use which minimizes downtime and ensures a full, productive work day.

Neptune’s commitment to quality and long-term service is backed by a qualified Customer Support Center. Neptune’s Customer Support team is easily accessible through our toll-free number (800-647-4832). Neptune provides access to qualified professionals who provide prompt and courteous assistance. Comprehensive hardware and software warranties as well as maintenance services are also available to keep all equipment operating at peak performance.



CE5320B with charging cradle

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ARB® UTILITY MANAGEMENT SYSTEMS™



E-CODER®)R900i™
INSIDE AND PIT VERSIONS



The E-Coder®)R900i™ combines the field-proven R900® radio frequency meter interface unit (MIU) with our E-Coder® solid state absolute encoder into one integrated package to offer utilities the advantages associated with ease and speed of installation. The E-Coder®)R900i does not have any external wires to be installed or require any special programming for operation. The E-Coder®)R900i operates within the 902-928 unlicensed RF band.

The E-Coder portion of the integrated unit features a custom integrated circuit design that digitally encodes the rotation of the measuring chamber, providing "absolute" registration with no internal battery requirement. The R900 MIU portion of the integrated unit collects meter-usage data and transmits the data for collection by the meter reader. The R900 MIU is a one-way communication device that transmits data every 14 seconds using frequency-hopping, spread-spectrum technology to ensure data security and improved meter reading accuracy and reliability. Data transmitted by the R900 MIU is received by the Neptune walk-by, mobile, or R900 Gateway fixed network data collection systems and stored for downloading at the utility office.

The E-Coder®)R900i provides high resolution, 8-digit remote meter reading and data logging along with value-added features such as leak, tamper, and reverse flow detection. The data logging functionality provides hourly consumption data. Leak flags help identify when the event actually occurs; the same goes for negative consumption that implies a backflow event.

Ninety-six days of historical data can be retrieved directly from the meter and then downloaded directly into N_SIGHT™ R900® host software. The daily or hourly consumption can then be run as a graph – justifying the amount charged on the bill. Neptune's data logging is designed to minimize download time as well as the number of service technician visits.

The E-Coder®)R900i/PLUS features are also communicated through the E-Coder protocol, allowing host software platforms to interpret the data and pass the information directly to the billing packages, CIS screens, and operations and maintenance reports. The value-added data received through Neptune's E-Coder®)R900i enhances customer service and improves operational efficiencies.

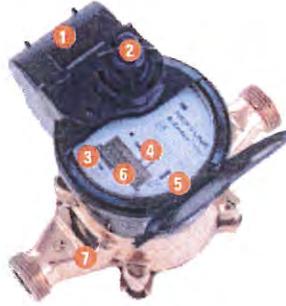
KEY FEATURES

- 8-digit remote meter reading and usage profiling
- Logs 96 days of hourly consumption data
- Leak, tamper, and reverse flow detection
- Ease of installation – no external wiring
- Solid state absolute encoder
- No FCC license required
- No MIU programming required
- Long-life lithium battery with capacitor
- Encoder metrology requires no battery
- Available in both pit and inside versions
- Fully submersible pit version
- LCD leak indicators
- Directional flow indicator
- Rate of flow on LCD display

KEY BENEFITS

- Enhanced "customer care"
 - Leak history/diagnostics
 - Proactive leak notification
 - Provides hourly consumption data
 - Improves meter reading accuracy
 - Eliminates estimated reads
- Enhanced cost savings and ease of installation
 - No external wires
 - Reduces labor cost
 - Reduces potential wire vandalism
- Drought management
 - Reduction of water loss through proactive notification of water leaks
 - Ability to enforce odd/even day water restrictions
- Increased operational efficiencies
 - Reduces costs
 - Minimizes reading time
 - Improves meter reading safety
 - Work order reduction for high water bill inquiries
 - Prioritization of meter maintenance
- Tamper management
 - Identification and prioritization of potential tamper situations

- Replaceable Battery ①
- Antenna ②
- Light Sensor ③
- Flow Indicators ④
- Date of Manufacture ⑤
- LCD Display ⑥
- T-10 Meter ⑦



	<p>LIGHT SENSOR Recessed under the small hole near the center of the faceplate of the E-Coder/R900i, supplies the power for the LCD panel (light activated) as well as the activation of the data logging extraction.</p>
	<p>FLOW INDICATOR Shows the direction of flow through the meter: ON Water in use. OFF Water not in use. Flashing Water is running slowly. (-) Reverse flow. (+) Forward flow.</p>
	<p>LEAK INDICATOR Displays a possible leak: OFF No leak indicated. Flashing Intermittent leak indicates that water has been used for at least 50 of the 96 15-minute intervals during a 24-hour period. On Continuously Indicates water use for all 96 15-minute intervals during a 24-hour period.</p>
RATE	<p>RATE OF FLOW Average flow rate is displayed every six seconds on LCD display.</p>
RF LOG	<p>DATA LOGGING displayed on LCD during extraction of data logging consumption data. **"DL" on dial face denotes data logging</p>
	<p>LCD DISPLAY Nine-digit LCD displays the meter reading in billing units of measure: U.S. gallons, cubic feet, Imperial gallons, or cubic metres.</p> <ul style="list-style-type: none"> ① E-Coder basic reading/customary 6-digit remote reading ② Customary sweep hand digits ③ E-CoderPLUS reading (8-digit remote reading) ④ Testing units used for diagnostics ⑤ Extended reading units ⑥ Customary billing units

TECHNICAL SPECIFICATIONS

- Electrical Specifications:
 - MIU Power: Lithium battery with capacitor
- Transmitter Specifications:
 - Transmit period: Every 14 seconds
 - Transmitter channels: 50
 - Channel frequency: 910 to 920 MHz spread spectrum
 - Output Power: Meets FCC Part 15.247
 - FCC Verification: Part 15.247
- Environmental Conditions: MIU and E-Coder
 - Operating temperature: -22°F to 149°F (-30°C to 65°C)
 - Storage temperature: -40°F to 158°F (-40°C to 70°C)
 - Operating humidity:
 - Inside Set – 0 to 95%, condensing
 - Pit Set – 100% submersible
- Materials
 - Register housing:
 - Inside Set: Plastic Polycarbonate
 - Pit Set: Roll-sealed copper shell
- Lens:
 - Inside Set: Plastic
 - Pit Set: Glass
- Antennas
 - Inside Set: Fixed antenna
 - Pit Set: Standard whip type
Optional through-the-lid
 - 18" Coax
 - 6' Coax
 - 20' Coax

OPTIONS

- Compatibility
 - Available for all sizes and makes of current Neptune meters
 - Handhelds – Walk-by RF
 - MRX920™ – Mobile RF
 - R900® Gateways
- Units of Measure: U.S. Gallons, Cubic Feet, Imperial Gallons, Cubic Metres

WARRANTY

- Register: 20 years (10/10)
- R900 MIU: 20 years (10/10)
- R900 Battery: 20 years (10/10)

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ARB® UTILITY MANAGEMENT SYSTEMS™



R450™ DATA COLLECTOR



R450 Data Collector

Neptune's R450™ System is an advanced, highly robust, two-way fixed network meter reading solution that delivers comprehensive usage information through a secure, long-range wireless network. The R450 System provides the timely, high-resolution meter reading that enables water utilities to eliminate on-site visits and estimated reads, reduce theft and loss, implement time-of-use billing, and profit from all of the financial and operational benefits of fixed network automated reading and billing.

An integral part of the R450 System is the R450™ Data Collector (R450 DC). This collector features two-way communications which allows for over-the-air programming, twenty-four hour usage/consumption profiling, and priority alarms for leak detection, reverse flow, and other value-added features.

As a tower-based system, the cell size is optimized, which allows for a small number of collectors to adequately cover your system. In addition, your investment is protected with a NEMA 4X weatherproof enclosure and back-up of your valuable data.

With backhaul options such as CDMA, GPRS, and Ethernet, the R450 DC provides you with flexible and reliable choices on how you want your data delivered.

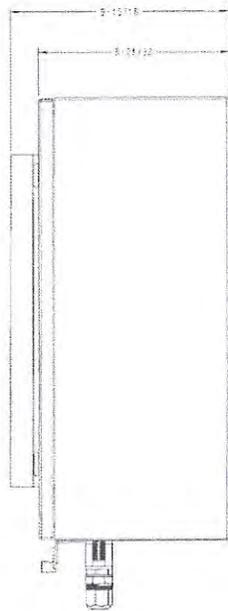
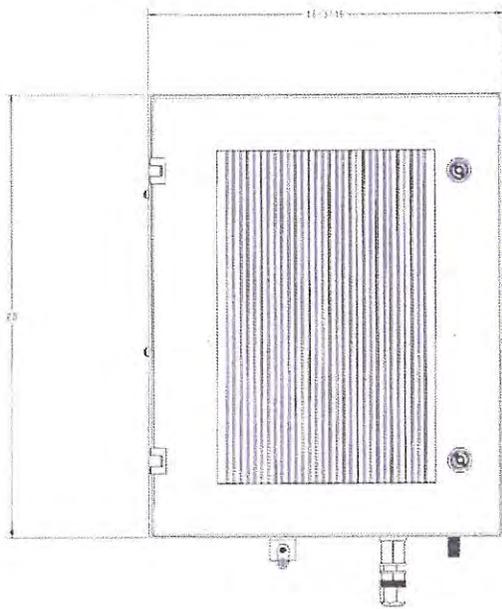
The advanced features of the R450 DC ensure that the R450 System is one of the most technologically advanced in the industry.

KEY FEATURES

- Two-way communications
- Multiple backhaul options
- Supports priority alarms
- Over-the-air programming
- NEMA 4X enclosure
- Back-up of data
- Optimized cell size

KEY BENEFITS

- Remote system monitoring
- Improved customer service
 - Priority alarms
 - Hourly usage/consumption data
- Reduced number of collectors without sacrificing coverage area
- Best life cycle value



GENERAL SPECIFICATIONS

- Environmental
 - Operating Temperature: -22° F to +140° F (-30° C to +60° C)
 - NEMA 4X enclosure
 - Operating Humidity: 0 to 95% non-condensing
- Frequency
 - Licensed 450 to 470 MHz
- Power
 - 110-220V AC
- Backhaul Options
 - CDMA
 - GPRS
 - Ethernet
- Tower-based installation
- Weight: 72 lbs

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ARB® UTILITY MANAGEMENT SYSTEMS™



MRX920™

MOBILE DATA COLLECTOR



MRX920™ Mobile Data Collector

Neptune's MRX920™ is a rugged, portable, easy-to-use automatic meter reading device. Weighing only five pounds, the MRX920 is small enough to fit in any vehicle and comes with a carrying case or optional mobile office unit to be stowed or fastened in a location of your choice. Within minutes, the MRX920 can be securely placed in any vehicle and powered via the vehicle power source.

Data transmitted by R900® radio frequency (RF) meter interface units (MIUs) is received and stored by the MRX920 mobile data collector. Information can be quickly uploaded to Neptune's host meter reading software at the utility office. The N_SIGHT™ R900® host software transfers the customer information to the customer information system (CIS) to generate customer bills. The MRX920 unit also captures the advanced features of the E-Coder® solid state absolute encoder register connected to an R900 MIU*. These features include leak, tamper, and reverse flow indication.

The MX900 mobile data collection software runs on the user's laptop computer and is designed to support maximum efficiency. This software supports a USB connection or a wireless connection via WiFi to the MRX920 receiver and utilizes menu-driven commands to allow the user to effortlessly control all aspects of the meter reading process. No operator intervention is necessary once data collection has started. At any time, the operator can view either read or unread accounts with the touch of a button.

UTILITY ADVANTAGES

The MRX920 unit provides the meter reading industry with many advantages over other existing AMR systems:

- Industry-leading performance in a compact and affordable package
- Improves meter reading accuracy
- Addresses "hard-to-read" meters
- Increases meter reader safety
- Reduces man-hours needed to collect and process meter reading information
- Supports any size utility
- Portable and easy to set up

KEY FEATURES

- USB or wireless connection to the receiver via WiFi
- RF test application receives meter data information without loading a route
- Digital signal processing for improved meter reading throughput
- Portable for use in any vehicle
- Low power consumption (< 1A) allows for multiple devices to be connected in the same vehicle
- Intuitive graphical user interface
- Supports E-CoderPLUS advanced features**
- Supported by a courteous and knowledgeable Customer Support Center
- GIS meter location mapping***
- GPS vehicle location tracking***
- Wireless loading/unloading of routes

KEY BENEFITS

- Reads up to eight meters simultaneously and can process 70 unique meter readings per second
- Maximizes meter reading success rates and overall field and office efficiency
- Reduces potential liability to utility through improved meter reader safety
- Does not require a special or customized vehicle
- Operates from standard 12V DC vehicle power source (i.e., cigarette lighter)
- Will support leak detection, tamper detection, and reverse flow indication
- Courteous, prompt, and conscientious Support Specialists available if needed

* When connected to second generation R900 or later.

** Indication of E-Coder

***GIS mapping requires optional maps software package. GPS requires GPS capable laptop or USB-connected receiver.

CITY OF LAREDO
PURCHASING DIVISION

Water Meters/AMR/AMI System Pricing

ESTIMATED QUANTITY	METER SIZE	METER TYPE	AMI Complete Meter	AMR Complete Meter	AMI kit (REG /ENDPOINT/ Antenna)	AMR kit (REG /ENDPOINT/ Antenna)	AMR Retrofit (ENDPOINT/ Antenna)	AMI Retrofit (ENDPOINT/ Antenna)	TOTAL \$
8000	5/8" x 3/4"	Pit PD	175.74	150.30					
4000	5/8" x 3/4"	Pit PD			143.37	119.48			
350	3/4"	Pit PD			143.37	119.48			
150	3/4"	Pit PD	201.47	174.74					
150	1"	Pit PD	247.20	219.95	143.37	119.48			
120	1"	Pit PD	247.20	219.95					
100	1 1/2"	Pit PD	422.69	393.46	143.37	119.48	126.51	101.21	
75	1 1/2"	Turbine	568.54	537.64	143.37	119.48			
100	2"	Pit PD			143.37	119.48	126.51	101.21	
100	2"	Turbine			143.37	119.48	126.51	101.21	
80	2"	Compound	1,155.61	1,093.61	286.75	238.95			
25	3"	Turbine			143.37	119.48	126.51	101.21	
25	3"	Compound			286.75	238.95	253.00	202.41	
10	3"	Compound	2,175.26	2,101.67	286.75	238.95			
3	4"	Turbine			143.37	119.48	126.51	101.21	
3	4"	Compound							
10	4"	Compound	2,657.27	2,578.21	286.75	238.95			
3	6"	Turbine			143.37	119.48	126.51	101.21	
3	6"	Compound			286.75	238.95	253.00	202.41	
1	6"	Compound	4,276.36	4,178.89	286.75	238.95			
TOTAL \$									

Installation Services Pricing (Refer to Specification 22.2)

ESTIMATED QUANTITY	METER SIZE	METER TYPE	AMI Complete Meter	AMR Complete Meter	AMI kit (REG /ENDPOINT/ Antenna)	AMR kit (REG /ENDPOINT/ Antenna)	TOTAL \$
8000	5/8" x 3/4"	Pit PD	45.00	45.00			
4000	5/8" x 3/4"	Pit PD			27.00	27.00	
350	3/4"	Pit PD			27.00	27.00	
150	3/4"	Pit PD	45.00	45.00			
150	1"	Pit PD	45.00	45.00	27.00	27.00	
120	1"	Pit PD	45.00	45.00			
TOTAL \$							

AMI/AMR Infrastructure Implementation - Option 1

<u>Reading Equipment</u>	<u>Quantity</u>
R450 Data Collector	9
Server Upgrade	1
Training/Implementation	1
CE5320B Handheld w/HR2650i	12
MRX920 Mobile Data Collector w/ laptop	1
Installation Option 1*	9
Total Implementation Cost for AMI/AMR Infrastructure	\$362,179.00

*Installation Option 1 includes the installation of 9 (nine) R450 data collectors with 8 (eight) of the sites utilizing GPRS for data back-haul and 1 (one) of the sites utilizing a LAN connection for backhaul. The City would be responsible for the purchase of the modems at each location plus the monthly charges incurred through the local phone company providing the SIM cards.

Pricing on material/equipment is good for twelve (12) months; At the conclusion of twelve (12) months, pricing may adjust according to the PPI (Producer Price Index)

Price increases will not increase by more than 3% from the prior year pricing.

It is the responsibility of the City of Laredo to provide electricity (120VAC) at each collector site (water tanks). Based on the discussions at the pre-proposal conference it was stated that 120VAC was available at all of the sites.

AMI/AMR Infrastructure Implementation - Option 2

<u>Reading Equipment</u>	<u>Quantity</u>
R450 Data Collector	9
Server Upgrade	1
Training/Implementation	1
CE5320B Handheld w/HR2650i	12
MRX920 Mobile Data Collector w/ laptop	1
Installation Option 2*	9
Total Implementation Cost for AMI/AMR Infrastructure	\$388,100.00

*Installation Option 2 includes the installation of 9 (nine) R450 data collectors with 8 (eight) of the sites utilizing Point-to-Point (P2P) connections for data back-haul and 1 (one) of the sites utilizing a LAN connection for backhaul. Data will be backhauled to the 2 (two) locations (includes the existing pilot location) served by a LAN connection, the City offices on Daughtery Ave., or a combination thereof. Option 2 has no additional cost for equipment or monthly charges from the City. P2P devices are included with this option.

Pricing on material/equipment is good for twelve (12) months; At the conclusion of twelve (12) months, pricing may adjust according to the PPI (Producer Price Index)

Price increases will not increase by more than 3% from the prior year pricing.

It is the responsibility of the City of Laredo to provide electricity (120VAC) at each collector site (water tanks). Based on the discussions at the pre-proposal conference it was stated that 120VAC was available at all of the sites.

Annual Maintenance Charges from HD Supply/Neptune

<u>Annual Maintenance*</u>	<u>Quantity</u>	<u>Price/ea</u>	<u>Total</u>
ARB N Sight AMR Software	1	\$750.59	\$750.59
CE5320B Handheld w/HR2650i	12	\$994.12	\$11,929.41
MRX920 Mobile Data Collector	1	\$1,000.00	\$1,000.00
ARB N Sight AMI Software	1	\$2,000.00	\$2,000.00
AMI Data Collector	10	\$2,400.00	\$24,000.00
			\$39,680.00

*Maintenance Cost will commence after year 1; Maintenance is included in the price of the material/equipment/software during year one.

Fixed for 5 Years, Renegotiate after that period. Neptune has not increased annual maintenance pricing since 2004.

Annual Maintenance costs are direct with HD Supply/Neptune

Breakout Additional Work Pricing

Meter Size	Additional Scope Item	Unit Price
3/4"	Curb Stop Replacement	\$65.00
3/4"	Meter Box & Lid Replacement	\$20.00
3/4"	Repair Leaking/Defective Piping at Meter Location	\$90.00
3/4"	Concrete/Asphalt Remove & Repour to Access Meter	\$175.00
1"	Curb Stop Replacement	\$80.00
1"	Meter Box & Lid Replacement	\$20.00
1"	Repair Leaking/Defective Piping at Meter Location	\$110.00
1"	Concrete/Asphalt Remove & Repour to Access Meter	\$175.00



City of Laredo Purchasing Division

Clarifications RFP FY13-012

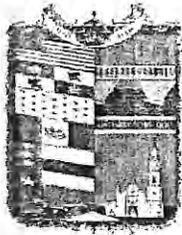
December 14, 2012

Ref: Proposal: **Water Meter/AMR/AMI System – Utilities Department
FY13-012**

To All Interested Vendors:

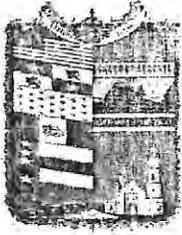
Please note the following **clarifications**:

- A) In section 16.8, the City is requesting that the vendor shall be the sole manufacturer of the different components of the system (endpoints, data collector, host software, and meters), and provide a turnkey system offering to the utility. A prime contractor will not be considered a qualified bidder as this is not what the City is looking for.
- B) On page 13 under Registers-absolute encoders, the no external wires except for a quick disconnect to the external antenna is for the registers that will be provided with the meters for a complete meter exchange noted under the section 21.0, Bid Tabulation Form, under columns AMI/Complete Meter and AMR/Complete Meter and for meter retrofits under the columns AMI Kit(Reg/Endpoint/Antenna) and AMR Kit (Reg/Endpoint/Antenna).
- C) On page 14, still under Registers-absolute encoders, it states that the registers must come with a 20 foot pig tail wire connected to the meter endpoint if ordered by Owner for inventory. This is for meters exchanges that will be done by the Utilities Department. The endpoints mentioned that must have a 6 foot pigtail are for registers that are already set in the field or are in our inventory and are AMR/AMI ready and are noted under section 21.0, Bid Tabulation Form, under columns AMR Retrofit (Endpoint/Antenna) and AMI Retrofit (Endpoint/Antenna).
- D) The stem + water height = overflow height for the tank. Is not the top of the bowl, but the provided information will provide an idea of the height of the tank. Ground Elevation +stem+ water height=overflow elevation for the tank. The Total Static Head (Ft) is the elevation of the overflow of the tank, again, is not the top of the bowl, but the provided information will give an idea of the height of the tank.
- E) Is the City able to provide an estimated cost for the meters, and the installation of the meters combined? 4.5 million per year on a 5 year project timeline.
- F) What is the anticipated start date for the project? February 2012
- G) Is a performance & payment bond required for this project? Yes. See page 36.
- H) Are meters in setters, or are they connected with straight meter couplings? Even if the meters have resetters, they are attached by meter couplings.



City of Laredo Purchasing Division

- I) What percentage, if any, of meters are located in asphalt/concrete? 10-15%
- J) Do all settings have shut off valves before the meter? Yes.
- K) What is the material of the existing service lines (plastic, copper, galvanized)? All
- L) What is the age of the existing service lines? Unknown
- M) Will the Contractor be responsible for obtaining warehousing for the storage of old/new meters? Yes.
See page 25 under Project Management.
- N) Who will take possession of the meters removed from service? The vendor.
- O) What is the primary make-up of the meter box lid (plastic, cast iron or concrete)? The majority (90%) are cast iron.
- P) Are there existing holes in the meter box lids? No
- Q) According to page 35 of 43, "All waste resulting from cleaning the meter pit as well as replacing the meter box and lid must be cleaned up and hauled off by the Contractor." Question: Is the Installation Contractor responsible for providing the meter boxes and lids? No. Is so, who is responsible for providing the meter boxes and lids? City will provide boxes and lids as noted under Section 25.3. Please provide the specifications for the meter boxes needing to be installed? (Drawings, sizes, etc.) Not applicable as the City will be providing the meter boxes and lids needed. How should the Installation Contractor price the replacement of the meter box and lid seeing as there is not a line item on the price sheet? Based on the number of accounts that are listed on the Installation Services Pricing on page 41, the price should include everything to install one meter.
- R) According to pg. 32 of 43, "Installation Contractor shall replace all meter box lids and any other lids needed to obtain the performance requirements specified herein. The City will provide the meter box lids." Question: How should the Installation Contractor price the replacement of the lids seeing as there is not a line item on the price sheet? Based on the number of accounts that are listed on the Installation Services Pricing on page 41, the price should include everything to install one meter.
- S) What is the procedure for inoperable or broken valves? See section 27.14
- T) How is the Contractor to price the installation of the AMI System (Collectors, network control computer, all necessary hardware and software, billing system integration, etc.) and the installation of the AMR System (Mobile Laptop Meter Reading Device, software, work order management system, etc.) seeing as there is not a line item for the above mentioned items? Based on the number of accounts that are listed on the Water meters/AMR/AMI System Pricing on page 41, the price should include everything to have one meter function in the manner specified.



City of Laredo Purchasing Division

- U) How many tanks have Ethernet? Two
- V) Could there be a price increase after the first year maybe based on the PPI? There is a formula that exists for construction contracts. It is something that is negotiable.
- W) Can you provide the two heights missing on the tanks, (Del Mar and Hillside)? The Del Mar tank is 100 feet to the bottom of the bowl and has a total of 129 feet to the top of the tank. The Hillside tank has 87 feet to the bottom of the bowl and has a total of 110 feet to the top of the tank.
- X) Can you clarify in the RFP, the warranty list a warranty of 20 years with 10 fixed and 10 at a prorated rate on page 15 but has 12 years full warranty for the batteries on page 23. Which is correct? Page 23 is a typo. It should read 10 years not twelve.
- Y) Who will pay for the interface to the Billing System? The Vendor. It is part of the whole system cost.
- Z) Will the City consider extending the deadline for the RFP? No.
- AA) On past meter bids, the “domestic only” (made in the United States) was specified. I wanted to clarify that that was in effect for all components on the project. Yes, that is correct and is under Warranty on page 15 in the RFP.
- BB) To make sure I am clear on section 16.8, Neptune does comply with the sole manufacturer requirement for all meters, transmitters, and associated software/reading equipment. As a manufacturer though, we cannot supply the meter installation aspect. Therefore, our wish is to have Pedal Valve (our installation partner) act as the prime on this proposal to provide a turnkey solution. As in the past all warranties and performance guarantees will be the responsibility of Neptune and our distributor, HD Supply. To further clarify the City acknowledges that although it has maintained that the vendor shall be the sole manufacturer certain business practices prevent the manufacturer from being the prime party submitting the proposal. In these cases, the City will accept proposals from other than sole manufacturers with the condition that all specified components (meters, transmitters, and all other associated software/reading equipment used) by the prime proposer be provided by a single manufacturer and therefore all warranties and performance guarantees will be the responsibility of the sole manufacturer and/or their representative.
- CC) The RFP states that the City will not store any project materials at their facilities. Will the City provide land/area where the contactor can bring in storage containers/conexes to warehouse the materials for the project? No, the vendor is responsible for storing all project materials.



City of Laredo Purchasing Division

DD) I see that there are bid forms for the meters and the installation but that there is no bid form for the infrastructure components such as data collectors, software, servers, annual maintenance fees, etc. Are you planning on providing an additional form for the infrastructure or should we add a table to our proposal for these items? Neither. Based on the number of accounts that are listed on the Water meters/AMR/AMI System Pricing on page 41, the price should include everything to have one meter function in the manner specified.

EE) I am requesting consideration for addendum to Water Meter/AMR/AMI System-Utilities Department RFP FY 13-012. The addendum is as follows: Alternative Metering and System Technologies exceeding current specifications provided by City of Laredo in-conjunction this RFP can be proposed in addition general proposal submittals. No, the City will not do an addendum to this RFP.

Sincerely,

A handwritten signature in cursive script that reads "Enrique Aldape III".

Enrique Aldape III
Administrative Assistant II

Acknowledgement of Clarifications #1

A large, stylized handwritten signature in black ink.

(Please sign/ date and include with proposal)

12/19/2012

XC Purchasing File

ProRead™/E-Coder® Encoder Warranty Statement

ARRB®
UTILITY
MANAGEMENT
SYSTEMS™

Products Covered

This warranty shall apply to both the ProRead Absolute Encoder and E-Coder Solid State Absolute Encoder Registers, hereinafter referred to as "Product," sold by Neptune Technology Group Inc. The warranty is extended only to utilities, municipalities, other commercial users, and authorized distributors, hereinafter referred to as "Customer," and does NOT apply to consumers.

Materials and workmanship

Neptune Technology Group Inc. ("Neptune") warrants that the product shall be free from defects in manufacture and design for a period of ten (10) years from the date of shipment (such period being the "Warranty Period") when installed, serviced and operated according to Neptune's instructions. Neptune shall not be responsible for any defects in the product (whether due to design, materials, manufacture, or otherwise) which manifest themselves after the expiration of the Warranty Period. Neptune will repair or replace a non-performing product free of charge for ten (10) years.

Warranties are inapplicable under certain conditions

This warranty does not include field replacement labor or materials costs, which are the responsibility of the Customer. This warranty does not apply if product is placed in non-recommended installations; may have been repaired with parts not recommended by Neptune; is converted, altered or connected by other than Neptune recommended procedures; is used with other than genuine Neptune components or read by equipment not approved or licensed by Neptune; or damaged due to improper care or maintenance, or improper periodic testing (please refer to Encoder quick install guide). This warranty does not apply to any Product that has been damaged by, or subjected to, conditions which, in the opinion of Neptune, have affected the Product's ability of performance, including but not limited to: misuse; improper handling; application or installation; excessive operating conditions; tampering or unauthorized repairs and modifications; accidental or intentional damage; or acts of God. In no event shall Neptune be liable for special, incidental, indirect or consequential damages, including, without limitation, lost revenue.

THE ABOVE WARRANTY IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY NEPTUNE WITH RESPECT TO THE PRODUCT. ALL OTHER WARRANTIES, CONDITIONS, TERMS, REPRESENTATIONS, OR OTHER LEGALLY OPERATIVE PROVISIONS CONCERNING THE PRODUCT ARE HEREBY EXPRESSLY EXCLUDED, INCLUDING WITHOUT LIMITATION, ANY WARRANTY, CONDITION, TERM, AND REPRESENTATION OR OTHER LEGALLY OPERATIVE PROVISION AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THIS PARAGRAPH IS EXPRESSLY INTENDED TO EXCLUDE FROM THIS CONTRACT ALL STATUTORY AND COMMON LAW WARRANTIES TO THE MAXIMUM EXTENT PERMITTED BY LAW. TO AVOID ANY AMBIGUITY OR MISUNDERSTANDING, ALL PROBLEMS ARISING WITH THE PRODUCT AFTER THIS POINT ARE CUSTOMER'S RESPONSIBILITY. NEPTUNE'S LIABILITY SHALL IN NO EVENT EXCEED THE PURCHASE PRICE. NEPTUNE SHALL NOT BE SUBJECT TO AND DISCLAIMS THE FOLLOWING: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY; (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY NEPTUNE, OR ANY UNDERTAKINGS, ACTS, OR OMISSIONS RELATING THERETO; AND (3) ALL CONSEQUENTIAL, INCIDENTAL, SPECIAL, MULTIPLE, EXEMPLARY, AND PUNITIVE DAMAGES WHATSOEVER.



Encoder Compatibility Guarantee

ARRB[®] UTILITY
MANAGEMENT
SYSTEMS™

Automatic Reading and Billing (ARB[®]) System (ARB V, ProRead™, and E-Coder[®])

With the purchase of the ARB encoder metering system, Neptune will provide the assurance that the ARB System purchased today can be expanded from reading with Neptune handheld devices to reading with Neptune mobile products and fixed network systems.

GUARANTEE OF COMPATIBILITY

The Pocket ProReader RF, Advantage Probe, R900[®], E-Coder/R900[®], DAP handhelds (PC9300, 9800 & CE5320B) and Neptune mobile systems are designed and built by Neptune. This guarantees the utility compatibility between these systems and the ARB encoder registers.

For Probed Reads: When reading ARB encoders with the Pocket ProReader RF, Advantage Probe, or DAP handhelds (PC9300, 9800 and CE5320B), Neptune guarantees that the meter reading obtained will match the mechanical odometer reading, or Neptune will pay the difference at the rate currently in force.

For RF Reads: When reading ARB encoders connected to an R900 where the R900 reads a ProRead or ARB V encoder hourly, or in the case of E-Coder where the R900 reads the E-Coder every 15 minutes, Neptune guarantees the encoder reading and the remote reading will match upon manual activation of the R900 with a magnet to force an immediate read and transmission. In the event of the E-Coder/R900, where the R900 transmission is updated every 15 minutes, Neptune will guarantee the encoder reading and remote reading to match upon this update. If the electronic reading on the handheld device is less than the odometer reading, Neptune will pay the difference at the rate currently in force.

Damage Guarantee

The Pocket ProReader RF, Advantage Probe, R900, E-Coder/R900, DAP handhelds (PC9300 & 9800, CE5320B) and Neptune mobile systems are warranted against causing damage to any ARB encoder register during interrogation. If it is found that the Pocket ProReader RF, Advantage Probe, R900, DAP handhelds (PC9300 & 9800, CE5320B) or Neptune mobile systems caused damage to an ARB encoder register during interrogation, Neptune will either repair or replace the register at no charge to the utility.

If there are any questions concerning this Meter & Reading Information Systems Guarantee, please write to: Manager of Consumer Relations, Neptune Technology Group Inc., 1600 Alabama Hwy, 229 Tallassee, Alabama 36078.

If a Neptune water meter fails an accuracy test during an applicable warranty period, it may be returned to Neptune for repair or replacement at Neptune's option. An accuracy test shall be conducted by the customer according to AMWA standards. If foreign material causes the meter not to perform appropriately, all such materials shall be removed prior to the customer conducting the test. Any meter being returned for repair to Neptune under this performance guarantee must be returned with a copy of the customer's test results. If the meter is returned to Neptune without a copy of the test results or if Neptune's factory test shows the meter to meet current AMWA standards, the customer will be charged a nominal testing fee by Neptune in such cases. Neptune will repair or replace the meter at Neptune's option after the meter has been tested by Neptune. Meters repaired or replaced under the performance guarantee will be guaranteed to perform to AMWA repaired meter accuracy standards. This guarantee is void if components have not been maintained or installed according to Neptune installation and maintenance guidelines, or are otherwise damaged or defective. The accuracy guarantee will not apply where a properly formatted electronic meter reading cannot be obtained on six digit encoders. The last digit will be displayed only as a zero (0) or five (5) when read remotely. As part of the encoder technology, the electronic reading from the R900 is guaranteed to match the reading on the encoder register upon manual activation of the R900 with a magnet to force an immediate read and transmission (one per hour). System damage as a result of vandalism or acts of God are not covered. Additional warranties may also apply to individual system components. Neptune's liability with respect to breaches of the foregoing warranty shall be limited as stated herein. Neptune's liability shall in no event exceed the purchase price. Neptune shall not be subject to and disclaims the following: (1) any other obligations or liabilities arising out of breach of contract or of warranty; (2) any obligations whatsoever arising from tort claims (including negligence and strict liability) or arising under other theories of law with respect to products sold or services rendered by Neptune, or any undertakings, acts, or omissions relating thereto; and (3) all consequential, incidental, special, multiple, exemplary, and punitive damages whatsoever.

THE WARRANTIES SET FORTH HEREIN ARE IN LIEU OF AND EXCLUDE ALL OTHER WARRANTIES, WHETHER EXPRESSED, IMPLIED OR STATUTORY, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

W/ ENCODER 08.09


NEPTUNE
TECHNOLOGY GROUP INC.



R450™ MIU Warranty Statement

I. Warranty Effective Date

This warranty will be effective for any R450 meter interface unit that is manufactured and shipped after the release of the product.

II. R450 Meter Interface Units (MIU)

Neptune Technology Group Inc. warrants that the R450 Meter Interface Units (the "MIUs") shall be free from defects in manufacture and design for a period of twenty (20) years from the date of shipment (such period being the "Warranty Period"). Neptune shall not be responsible for any defects in the MIU (whether due to design, materials, manufacture, or otherwise) which manifest themselves after the expiration of the Warranty Period. Neptune will repair or replace a non-performing R450 MIU free of charge for the first ten (10) years and at a prorated replacement cost of the current list price during the remaining ten (10) years as shown in the chart.

III. Batteries

Neptune warrants that any Neptune-supplied batteries installed in the R450 MIUs (the "Batteries") shall be free from defects in manufacture and design for a period of twenty (20) years from date of shipment (such period being the "Battery Warranty Period"). Neptune shall not be responsible for any defects in, or failure of, batteries (whether due to design, materials, manufacture, or otherwise) which occur after the expiration of the Battery Warranty Period. Neptune will repair or replace a non-performing R450 MIU Battery free of charge for the first ten (10) years and at a prorated replacement cost of the current list price during the remaining ten (10) years as shown in the chart.

Year of Failure	Product Replacement Cost*
1-10	Full Replacement
11	30%
12	35%
13	40%
14	45%
15	50%
16	55%
17	60%
18	65%
19	70%
20	75%

* Replacement cost percentages will be applied toward published list prices in effect for the year product is accepted by Neptune under warranty conditions. Replacement MIUs and Replacement Batteries are warranted for one (1) year after date of shipment or balance of original MIU warranty, whichever is greater.

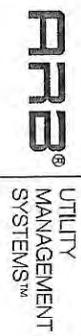
IV. Warranties are inapplicable under certain conditions.

This warranty does not include field replacement labor or materials costs, which are the responsibility of the utility. This warranty does not apply if product is placed in non-recommended installations, may have been repaired with parts not recommended by Neptune, converted, altered or connected by other than Neptune-recommended procedures; is used with other than genuine Neptune meter registers and components or read by equipment not approved or licensed by Neptune; or damaged due to improper care or maintenance, or improper periodic testing (please refer to R450 installation manual and quick install guides). This warranty applies to MIUs configured for one read per day time-stamped at midnight as well as MIUs configured in 24-hour usage/consumption mode. This warranty does not apply to any MIU that has been damaged by, or subjected to, conditions which, in the opinion of Neptune, have affected the R450 MIU's ability of performance, including but not limited to: misuse; improper handling, application or installation; excessive operating conditions; tampering or unauthorized repairs and modifications; accidental or intentional damage; or acts of God. In no event shall Neptune be liable for special, incidental, indirect or consequential damages, including, without limitation, lost revenue.

THE ABOVE WARRANTY FOR THE MIU AND NEPTUNE-SUPPLIED BATTERY IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY NEPTUNE WITH RESPECT TO THE R450 MIU AND NEPTUNE-SUPPLIED BATTERY. ALL OTHER WARRANTIES, CONDITIONS, TERMS, REPRESENTATIONS, OR OTHER LEGALLY OPERATIVE PROVISIONS CONCERNING THE MIUs AND NEPTUNE-SUPPLIED BATTERY ARE HEREBY EXPRESSLY EXCLUDED. THIS INCLUDES, WITHOUT LIMITATION, ANY WARRANTY, CONDITION, TERM, AND REPRESENTATION OR OTHER LEGALLY OPERATIVE PROVISION AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THIS PARAGRAPH IS EXPRESSLY INTENDED TO EXCLUDE FROM THIS CONTRACT ALL STATUTORY AND COMMON LAW WARRANTIES TO THE MAXIMUM EXTENT PERMITTED BY LAW. TO AVOID ANY AMBIGUITY OR MISUNDERSTANDING, ALL PROBLEMS ARISING WITH AN MIU OR NEPTUNE-SUPPLIED BATTERY AFTER THIS POINT ARE BUYER'S RESPONSIBILITY. NEPTUNE'S LIABILITY SHALL IN NO EVENT EXCEED THE PURCHASE PRICE. NEPTUNE SHALL NOT BE SUBJECT TO AND DISCLAIMS THE FOLLOWING: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY, (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY NEPTUNE, OR ANY UNDERTAKINGS, ACTS, OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL, SPECIAL, MULTIPLE, EXEMPLARY, AND PUNITIVE DAMAGES WHATSOEVER.



Neptune T-10, HP Turbine, TRU/FLO® Compound Cold Water Meters Warranty



1. Terms of Limited Warranty.

With respect to its Neptune T-10, HP TURBINE, TRU/FLO® Compound Water Meters (collectively the "Water Meters"), Neptune Technology Group Inc. ("Neptune") warrants the following on meters sold on or after 11/1/92:

The Water Meters will be, at the later of (i) the date of original purchase from Neptune or (ii) the date of original shipment from Neptune-authorized distributor of Water Meters (that later date is referred to as "the Date of Shipment") and will remain for a period of eighteen (18) months from the Date of Shipment, or twelve (12) months from date of installation, whichever comes first, free from manufacturing defects in workmanship and material.

- (a) **Maincase.** The no-lead high copper alloy or Brass maincase of the Water Meters will be at the Date of Shipment free from manufacturing defects in workmanship and material for the life of the Water Meter.
- (b) **Frost Protection.** All Neptune T-10 Cold Water Meters shipped with a synthetic polymer or cast iron bottom cap will, commencing upon the Date of Shipment, be warranted against chamber damage for a period of ten (10) years.
- (c) **Registers.** Standard, roll sealed registers of the Water Meters will be at the Date of Shipment, and shall remain for the following periods, free from manufacturing defects in workmanship and material for a period of ten (10) years. The ARB®, ProRead® (ARB VI), and E-Coder® (ARB VII) system registers are warranted for ten (10) years from Date of Shipment. All ProRead encoder receptacles shipped after January 1, 2001 shall be warranted for five years from the Date of Shipment. All other components and parts are covered under Neptune's standard one-year material and workmanship guarantee.
- (d) **Meter Accuracy for Neptune T-10.** Neptune T-10 Meters and Neptune T-10 nutating disc chambers in TRU/FLO Compound Water Meters are warranted to meet or exceed, as listed herein, accuracy standards of the AWWA Standard C700-95 for a period of: (i) five (5) years from Date of Shipment for 5/8", 3/4" and 1" meters; (ii) for a period of two (2) years from the Date of Shipment for 1 1/2" and 2" meters; or (iii) the applicable registration shown below, whichever occurs first. Neptune further guarantees that the Neptune T-10 and Neptune T-10 nutating disc chambers in TRU/FLO Compound Water Meters will perform to at least Repaired Meter Accuracy Standards, according to AWWA Manual M-6 Chapter 5 (1999) Table 5.3 for an additional ten (10) years or the registration shown below, whichever occurs first.
- (e) **Meter Accuracy for HP Turbine and TRU/FLO.** The HP Turbine and TRU/FLO Compound Cold Water Meters will perform, for a period of one (1) year from the Date of Shipment, to American Water Works Association ("AWWA") accuracy standards for new water meters.

SIZE	EXTENDED LOW FLOW ACCURACY	NEW METER ACCURACY	REPAIRED METER ACCURACY
5/8" & 3/4" x 3/4"	1/4 US gpm @ 95% 5 years or 500,000 gallons	500,000 gallons	1,500,000 gallons
3/4"	1/4 US gpm @ 95% 5 years or 750,000 gallons	750,000 gallons	2,250,000 gallons
1"	3/4 US gpm @ 95% 5 years or 1,000,000 gallons	1,000,000 gallons	3,000,000 gallons
1 1/2"	3/4 US gpm @ 95% 2 years or 1,600,000 gallons	1,600,000 gallons	5,000,000 gallons
2"	1 US gpm @ 95% 2 years or 2,700,000 gallons	2,700,000 gallons	8,000,000 gallons

WM-METER_00.11



2. Warranty Return.

If a Neptune Water Meter fails an accuracy test during an applicable warranty period, it may be returned to Neptune for repair or replacement at Neptune's option. An accuracy test shall be conducted by the customer according to AWWA standards. Any meter being returned for repair to Neptune under this performance guarantee must be returned with a copy of the customer's test results. If the meter is returned to Neptune without a copy of the test results or if Neptune's factory test shows the meter to meet current AWWA standards, the customer will be charged a nominal testing fee by Neptune in such cases. Neptune will repair or replace the meter at Neptune's option after the meter has been tested by Neptune. Meters repaired or replaced under the performance guarantee will be guaranteed to perform to AWWA repaired meter accuracy standards.

3. Warranties are exclusive.

The warranties set forth in this certificate of warranty are in lieu of any other warranty, guarantee, or representation, whether expressed or implied, including without limitation, the warranty of merchantability and the warranty of fitness for a particular purpose.

4. Damages limited to costs of replacement and repair.

If the Water Meter fails to meet the warranties set forth in Paragraph 1 of this Certificate of Warranty, Neptune, at its option shall, without charge of labor or materials, repair or replace the Water Meter or part thereof, provided that (a) the Water Meter is delivered to a Neptune representative, (b) the Water Meter is accompanied by a Return Material Authorization (RMA), and (c) all costs of delivery to Neptune are assumed by the purchaser of the Water Meter. Neptune's liability is limited to its costs of replacement and repair of the defective water meter. Damages resulting from miscalculation of water usage or lost revenue or profit are not recoverable from Neptune. It is the responsibility of the customer to periodically verify the operation and accuracy of its meters.

5. Warranties are inapplicable under certain conditions.

The warranties set forth in this Certificate of Warranty do not apply to any Water Meter that has been damaged by, or subjected to, conditions which, in the opinion of Neptune, have affected the Water Meter's ability of performance, including but not limited to: misuse, improper handling, application or installation, excessive operating conditions, foreign materials in the water, aggressive water conditions, tampering or unauthorized repairs or modifications, accidental or intentional damage, acts of God. This Certificate of Warranty shall not apply if product is placed in non-recommended installation, is connected or altered by other than Neptune recommended procedures, is used with other than genuine Neptune meter registers and components, or read by equipment not approved or licensed by Neptune. Neptune makes no claims concerning operability and/or compatibility or third party reading systems. In addition, this Certificate of Warranty shall not apply if third party reading equipment is believed to have caused damage to the meter or register. In order to determine its liability, if any, under this Certificate of Warranty, Neptune shall have the right to inspect any Water Meter or part thereof that is claimed to be defective at Neptune or other location designated by Neptune.

NEPTUNE'S LIABILITY WITH RESPECT TO BREACHES OF THE FOREGOING LIMITED WARRANTY SHALL IN NO EVENT EXCEED THE PURCHASE PRICE. NEPTUNE SHALL NOT BE SUBJECT TO AND DISCLAIMS THE FOLLOWING: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY NEPTUNE, OR ANY UNDERTAKINGS, ACT OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL, SPECIAL, MULTIPLE, EXEMPLARY, AND PUNITIVE DAMAGES WHATSOEVER.

ARRB[®] N_SIGHT™ Software Statement

The warranty on ARB N_SIGHT Software extends 12 months from shipment date. Warranty services provided during the warranty period are:

- Free replacement software for software with defects in the media on which the software is delivered
- Replacement software shipped within 48 hours of customer notifying System Support of problem
- Free software upgrades, patches and corrections within the warranty period
- Toll-free assistance at Customer Support 1-800-647-4832
- These services are purchaser's exclusive remedy for warranty issues

NEPTUNE DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Software Maintenance

Extended software maintenance contracts are available from your Authorized Neptune Sales Representative.

Maintenance contract services provided during extended period include:

- Replacement software media shipped within 48 hours of customer notifying system support of problem
- Free software updates, upgrades, patches and corrections within the life of the maintenance contract.
- Toll-free assistance 1-800-647-4832

TERMS AND CONDITIONS OF SALE ("Terms")

1. All references in this document to "Seller" shall include HD Supply, Inc. and / or any parent, subsidiary or affiliate of HD Supply, Inc. (including any division of the foregoing) whether or not performing any or all of the scope hereunder or specifically identified herein. All references to "Buyer" shall include all parent(s), subsidiaries and affiliates of the entity placing the order. Buyer and Seller may be referred to individually as a "Party" and collectively as "Parties".
2. All sales to Buyer are subject to these Terms, which shall prevail over any inconsistent terms of Buyer's purchase order or other documents. Additional or different terms and conditions in any way altering or modifying these Terms are expressly objected to and shall not be binding upon Seller unless specifically accepted in writing by Seller's authorized representative. These Terms shall supersede and take precedence over any contradictory or different terms contained in any future agreements (other than a new signed credit application) that may be executed between the Parties hereto. No modification or alteration of these Terms shall result by Seller's shipment of goods following receipt of Buyer's purchase order, or other documents containing additional, conflicting or inconsistent terms. There are no terms, conditions, understandings, or agreements other than those stated herein, and all prior proposals and negotiations are merged herein. These Terms are binding on the Parties, their successors, and permitted assigns.
3. Prices on Seller website, catalogs or in Seller quotes are subject to change without notice, and all such prices expire and become invalid if not accepted within 10 calendar days from the date of issue, unless otherwise noted by Seller in writing. Price extensions if made are for Buyer's convenience only, and they, as well as any mathematical, stenographic or clerical errors, are not binding on Seller. Prices shown do not include any sales, excise, or other governmental tax or charge payable by Seller to any federal, state or local authority. Any taxes now or hereafter imposed upon sales or shipments will be added to the purchase price, and Buyer shall reimburse Seller for any such tax or provide Seller with an acceptable tax exemption certificate. All prices and other terms provided to Buyer shall be kept confidential except to the extent a Party is required by law to disclose the same.
4. Seller shall not be liable for delay or default in delivery resulting from any cause beyond Seller's reasonable control, including, but not limited to, governmental action, strikes or other labor troubles, fire, damage or destruction of goods, wars (declared or undeclared), acts of terrorism, manufacturers' shortages, availability or timeliness of transportation, materials, fuels, or supplies, and acts of God (each a "Force Majeure Event"). Upon the occurrence of a Force Majeure Event: (a) the time for Seller's performance shall be extended reasonably and the Parties shall adjust all affected dates accordingly; (b) the purchase price shall be adjusted for any increased costs to Seller resulting from such Force Majeure Event; and (c) Buyer shall not be entitled to any other remedy.
5. Seller is a reseller of goods only, and as such does not provide any warranty for the goods it supplies hereunder. Notwithstanding this As-Is limitation, Seller shall pass through to Buyer any transferable manufacturer's standard warranties with respect to goods purchased hereunder. BUYER AND PERSONS CLAIMING THROUGH BUYER SHALL SEEK RECOURSE EXCLUSIVELY FROM MANUFACTURERS IN CONNECTION WITH ANY DEFECTS IN OR FAILURES OF GOODS, AND THIS SHALL BE THE EXCLUSIVE RECOURSE OF BUYER AND PERSONS CLAIMING THROUGH BUYER FOR DEFECTIVE GOODS, WHETHER THE CLAIM OF BUYER OR THE PERSON CLAIMING THROUGH BUYER SHALL SOUND IN CONTRACT, TORT, STRICT LIABILITY, PURSUANT TO STATUTE, OR FOR NEGLIGENCE. BUYER SHALL PASS THESE TERMS TO SUBSEQUENT BUYERS AND USERS OF GOODS. SELLER EXCLUDES AND DISCLAIMS ALL OTHER EXPRESS AND IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SELLER ASSUMES NO RESPONSIBILITY WHATSOEVER FOR SELLER'S INTERPRETATION OF PLANS OR SPECIFICATIONS PROVIDED BY BUYER, AND BUYER'S ACCEPTANCE AND USE OF GOODS SUPPLIED HEREUNDER SHALL BE PREMISED ON FINAL APPROVAL BY BUYER OR BY BUYER'S RELIANCE ON ARCHITECTS, ENGINEERS, OR OTHER THIRD PARTIES RATHER THAN ON SELLER'S INTERPRETATION. TO THE EXTENT NOT PROHIBITED BY APPLICABLE LAW, IN NO EVENT, WHETHER IN CONTRACT, WARRANTY, INDEMNITY, TORT (INCLUDING, BUT NOT LIMITED TO, NEGLIGENCE), STRICT LIABILITY OR OTHERWISE, ARISING DIRECTLY OR INDIRECTLY OUT OF THE PERFORMANCE OR BREACH OF THESE TERMS, SHALL SELLER BE LIABLE FOR (a) ANY INCIDENTAL, INDIRECT, PUNITIVE, SPECIAL, CONSEQUENTIAL OR SIMILAR DAMAGES SUCH AS LOSS OF USE, LOST PROFITS, ATTORNEYS' FEES OR DELAY DAMAGES, EVEN IF SUCH DAMAGES WERE FORESEEABLE OR CAUSED BY SELLER'S BREACH OF THIS AGREEMENT; (b) ANY CLAIM THAT PROPERLY IS A CLAIM AGAINST THE MANUFACTURER; OR (c) ANY AMOUNT EXCEEDING THE AMOUNT PAID TO SELLER FOR GOODS FURNISHED TO BUYER WHICH ARE THE SUBJECT OF SUCH CLAIM(S). ALL CLAIMS MUST BE BROUGHT WITHIN ONE YEAR OF ACCRUAL OF A CAUSE OF ACTION.
6. Buyer shall indemnify, defend, and hold Seller its officers, directors, employees and agents harmless from any and all costs (including attorneys' and accountants' fees and expenses), liabilities and damages resulting from or related to any third party (including Buyer's employees) claim, complaint and/or judgment arising from Buyer's use of any goods furnished hereunder, as well as any negligent, intentional, or tortious act or omission of Buyer or any material breach by Buyer of these Terms.
7. When goods are delivered to Buyer in Seller's own vehicles, the F.O.B. point shall be Buyer's designated delivery site. In all other cases the F.O.B. point shall be Seller's store or warehouse and all responsibility and costs of shipping and delivery beyond the applicable F.O.B. point shall be borne by Buyer. Title and risk of loss shall pass to Buyer at the applicable F.O.B. point, which for goods not delivered in Seller's own vehicles shall be when Seller delivers the goods to the common carrier. All claims for shortage of goods or for loss or damage to goods as to which Seller has the risk of loss shall be waived unless Buyer, within 10 calendar days after receipt of the short or damaged shipment, gives Seller written notice fully describing the alleged shortage or damage. Partial shipments are permitted at Seller's discretion.
8. Any change in product specifications, quantities, destinations, shipping schedules, or any other aspect of the scope of goods must be agreed to in writing by Seller, and may result in a price and delivery adjustment by Seller. No credit for goods returned by Buyer shall be given without Seller's written authorization. All returns are subject to a restocking charge.
9. Unless otherwise agreed in writing, payment terms are net 30 days from delivery, payable in United States of America ("U.S.") dollars. Notwithstanding the foregoing, all orders are subject to Seller's continuing approval of Buyer's credit. If Buyer's credit is not approved or becomes unsatisfactory to Seller then Seller, in its sole discretion, may suspend or cancel performance, or require different payment terms, including but not limited to cash on delivery or in advance of shipment. In addition, Seller may in its discretion require an advance deposit of up to 100% of Seller's selling price for any specially manufactured goods ordered by Buyer hereunder. Payments due hereunder shall be made in the form of cash, check, or money order, or other tender approved in writing by Seller. Seller may, in its sole discretion, apply Buyer's payment against any open charges. Past due accounts bear interest at the lesser of 1.5% per month or the maximum rate permitted by applicable law, continuing after Seller obtains judgment against Buyer. Seller may exercise setoff or recoupment to apply to or satisfy Buyer's outstanding debt. Buyer shall have no right of setoff hereunder, the same being expressly waived hereby. Seller expressly reserves its right to file liens if payment is not received for its materials and expressly disclaims any waiver of lien rights language which may be contained in any future agreements between the Parties hereto. Seller reserves all rights to invoice and be paid for materials provided to Buyer and any terms contained in any of Buyer's purchase orders or other documents that purport to limit in any way the time or manner within which Seller may invoice are hereby waived by Buyer.
10. Buyer shall not export or re-export, directly or indirectly, all or any part of the goods or related technology obtained from Seller under these Terms except in accordance with applicable export laws and regulations of the U.S. Further, a Buyer that is a non-U.S. company or citizen shall similarly limit any export or re-export activity to that which would be deemed compliant with U.S. export laws and regulations if performed by a U.S. company or citizen.
11. Buyer shall pay Seller all costs and expenses of collection, suit, or other legal action brought as a result of the commercial relationship between them, including, but not limited to, all actual attorneys' and paralegals' fees, and collection costs, incurred pre-suit, through trial, on appeal, and in any administrative or bankruptcy proceedings. Any cause of action that Seller has against Buyer may be assigned without Buyer's consent to HD Supply, Inc. or to any affiliate, parent or subsidiary of HD Supply, Inc.
12. This Agreement, Buyer's account, and the business relationship between Buyer and Seller shall be governed by and construed in accordance with the laws of Georgia without regard to conflicts of laws rules, and specifically excluding the UN Convention on Contracts for the International Sale of Goods. The Parties agree that any legal action arising under or related to this Agreement shall be brought in Cobb County, Georgia, and any right to object to such venue or to assert the inconvenience of such forum is hereby waived.
13. If Buyer fails to comply with these Terms, Seller may terminate or restrict any order immediately upon notice to Buyer. Buyer certifies that it is solvent and that it will advise Seller immediately if it becomes insolvent. Buyer agrees to send Seller written notice of any changes in the form of ownership of Buyer's business within 5 days of such changes. Buyer and Seller are the only intended beneficiaries of this document, and there are no third party beneficiaries.
14. The invalidity or unenforceability of all or part of these Terms will not affect the validity or enforceability of the other terms. The parties agree to replace any void or unenforceable term with a new term that achieves substantially the same practical and economic effect and is valid and enforceable.
15. The following provisions shall survive termination, cancellation and completed performance of this Agreement as long as necessary to allow the aggrieved party to fully enforce such clauses: 5, 6, 9, 10, 11 and 12

HD Supply Terms and Conditions of Sale - Rev A0807 Customer Initials _____ Date _____

CITY OF LAREDO
PURCHASING DIVISION

Vendor Information:

Please complete all information requested below and submit with your bid package

"The undersigned affirms that they are duly authorized to execute this contract, that this company, corporation, firm, partnership or individual has not prepared this proposal in collusion with any other vendor, and that the contents of this proposal as to prices, terms or conditions of said proposal have not been communicated by the undersigned nor by any employee or agent to any other person engaged in this type of business prior to the official opening of this request. By submitting this proposal the vendor agrees to the City of Laredo specifications and all terms and conditions stipulated in the proposed document".

Firm Name: Pedal Valves, Inc

Signature [Signature] Date 12/19/2012
of person authorized to sign proposal

Print Name Jason Wilkie
of person authorized to sign proposal

Title: Vice President of Operations

Business Address: 13625 River Rd.

City, State, Zip Code: Luling, LA 70070

Telephone Number: 985-785-9997 Fax Number: 985-785-0082

Contact Person Email Address: jasonw@pedalvalve.com

Federal Tax ID Number: 721249237

Vendors Principal/Corporate Place of Business Address: Same

Indicated Status of Business:

Corporation Partnership Sole Proprietorship Other:

If other state business status: Louisiana

State how long under its present business name: 19 years

State if company is a certified minority business enterprise:

Historically Underutilized Business (HUB): Yes No Disadvantaged Business Enterprise (DBE): Yes No
Small Disadvantaged Business Enterprise (SDBC) Yes No Other: Please specify WBE certified with ORCA see attached

This company is not a certified minority business:

The above minority information is requested for statistical and tracking purposes only and will not influence the amount of expenditure the City will make with any given company

CITY OF LAREDO
PURCHASING DIVISION

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor or other person doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 1491, 80th Leg., Regular Session.

OFFICE USE ONLY

Date Received

This questionnaire is being filed in accordance with Chapter 176, Local Government Code by a person who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the person meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Local Government Code.

A person commits an offense if the person knowingly violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.

1 Name of person who has a business relationship with local governmental entity.

NONE

2 Check this box if you are filing an update to a previously filed questionnaire.

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date the originally filed questionnaire becomes incomplete or inaccurate.)

3 Name of local government officer with whom filer has employment or business relationship.

NONE

Name of Officer

This section (item 3 including subparts A, B, C & D) must be completed for each officer with whom the filer has an employment or other business relationship as defined by Section 176.001(1-a), Local Government pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, income, other than investment income, from the filer of the questionnaire? Yes No

B. Is the filer of the questionnaire receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity? Yes No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves an officer or director, or holds an ownership of 10 percent or more? Yes No

4 D. Describe each employment or business relationship with the local government officer named in this section.

Signature of person doing business with the governmental entity

Date



Certification for: PEDAL VALVES, INC.
DUNS: 825062565
Certification Validity:
From: 02/13/2012 03:23:45 PM (EST)
To: 02/13/2013 03:23:45 PM (EST)

By submitting this certification, I, **Stella Gilbert**, am attesting to the accuracy of the representations and certifications contained herein. I understand that I may be subject to penalties if I misrepresent **PEDAL VALVES, INC.** in any of the above representations or certifications to the Government.

READ ONLY

- Vendor will provide information with specific offers to the Government.
- I certify that I have read and understand the provision.

52.203-11 Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions (Sept 2007)

- (a) *Definitions.* As used in this provision—"Lobbying contact" has the meaning provided at 2 U.S.C. 1602(8). The terms "agency," "influencing or attempting to influence," "officer or employee of an agency," "person," "reasonable compensation," and "regularly employed" are defined in the FAR clause of this solicitation entitled "Limitation on Payments to Influence Certain Federal Transactions"(52.203-12).
- (b) *Prohibition.* The prohibition and exceptions contained in the FAR clause of this solicitation entitled "Limitation on Payments to Influence Certain Federal Transactions" (52.203-12) are hereby incorporated by reference in this provision.
- (c) *Certification.* The offeror, by signing its offer, hereby certifies to the best of its knowledge and belief that no Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on its behalf in connection with the awarding of this contract.
- (d) *Disclosure.* If any registrants under the Lobbying Disclosure Act of 1995 have made a lobbying contact on behalf of the offeror with respect to this contract, the offeror shall complete and submit, with its offer, OMB Standard Form LLL, Disclosure of Lobbying Activities, to provide the name of the registrants. The offeror need not report regularly employed officers or employees of the offeror to whom payments of reasonable compensation were made.
- (e) *Penalty.* Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by 31 U.S.C. 1352. Any person who makes an expenditure prohibited under this provision or who fails to file or amend the disclosure required to be filed or amended by this provision, shall be subject to a civil penalty of not less than \$10,000, and not more than \$100,000, for each such failure.

(End of Provision)

READ ONLY

- Vendor will provide information with specific offers to the Government.
- I certify that I have read and understand the provision.

52.209-2 Prohibition on Contracting with Inverted Domestic Corporations—Representation (May 2011)

- (a) *Definitions.* Inverted domestic corporation and subsidiary have the meaning given in the clause of this contract entitled Prohibition on Contracting with Inverted Domestic Corporations (52.209-10).
- (b) *Relation to Internal Revenue Code.* An inverted domestic corporation as herein defined does not meet the definition of an inverted domestic corporation as defined by the Internal Revenue Code at 26 U.S.C. 7874.
- (c) *Representation.* By submission of its offer, the offeror represents that—

- (1) It is not an inverted domestic corporation; and
- (2) It is not a subsidiary of an inverted domestic corporation.

(End of Provision)

READ ONLY

- Vendor will provide information with specific offers to the Government.
- I certify that I have read and understand the provision.

52.222-38 Compliance with Veterans' Employment Reporting Requirements (Sep 2010)

By submission of its offer, the offeror represents that, if it is subject to the reporting requirements of 38 U.S.C. 4212(d) (i.e., if it has any contract containing Federal Acquisition Regulation clause 52.222-37, Employment Reports on Veterans), it has submitted the most recent VETS-100A Report required by that clause.

(End of Provision)

READ ONLY

- Vendor will provide information with specific offers to the Government.
- I certify that I have read and understand the provision.

52.223-1 Biobased Product Certification (Dec 2007)

- (a) As required by the Farm Security and Rural Investment Act of 2002 and the Energy Policy Act of 2005 (7 U.S.C. 8102(c)(3)), the offeror certifies, by signing this offer, that biobased products (within categories of products listed by the United States Department of Agriculture in 7 CFR part 2902, subpart B) to be used or delivered in the performance of the contract, other than biobased products that are not purchased by the offeror as a direct result of this contract, will comply with the applicable specifications or other contractual requirements.

(End of Provision)

READ ONLY

- Vendor will provide information with specific offers to the Government.
- I certify that I have read and understand the provision.

52.225-20 Prohibition on Conducting Restricted Business Operations in Sudan—Certification (Aug 2009)

- (a) *Definitions.* As used in this provision—

"Business operations" means engaging in commerce in any form, including by acquiring, developing, maintaining, owning, selling, possessing, leasing, or operating equipment, facilities, personnel, products, services, personal property, real property, or any other apparatus of business or commerce.

"Marginalized populations of Sudan" means—

- (1) Adversely affected groups in regions authorized to receive assistance under section 8(c) of the Darfur Peace and Accountability Act (Pub. L. 109-344) (50 U.S.C. 1701 note); and
- (2) Marginalized areas in Northern Sudan described in section 4(9) of such Act.

"Restricted business operations" means business operations in Sudan that include power production activities, mineral extraction activities, oil-related activities, or the production of military equipment, as those terms are defined in the Sudan Accountability and Divestment Act of 2007 (Pub. L. 110-174). Restricted business operations do not include business operations that the person (as that term is defined in Section 2 of the Sudan Accountability and Divestment Act of 2007) conducting the business can demonstrate—

- (1) Are conducted under contract directly and exclusively with the regional government of southern Sudan;
- (2) Are conducted pursuant to specific authorization from the Office of Foreign Assets Control in the Department of the Treasury, or are expressly exempted under Federal law from the requirement to be conducted under such authorization;
- (3) Consist of providing goods or services to marginalized populations of Sudan;

- (4) Consist of providing goods or services to an internationally recognized peacekeeping force or humanitarian organization;
 - (5) Consist of providing goods or services that are used only to promote health or education; or
 - (6) Have been voluntarily suspended
- (b) *Certification*. By submission of its offer, the offeror certifies that the offeror does not conduct any restricted business operations in Sudan.

(End of Provision)

READ ONLY

Vendor will provide information with specific offers to the Government.

I certify that I have read and understand the provision.

52.225-25 Prohibition on Contracting with Entities Engaging in Sanctioned Activities Relating to Iran — Representation and Certification. (Nov 2011)

(a) *Definition*.

"Person"—

(1) Means—

- (i) A natural person;
- (ii) A corporation, business association, partnership, society, trust, financial institution, insurer, underwriter, guarantor, and any other business organization, any other nongovernmental entity, organization, or group, and any governmental entity operating as a business enterprise; and
- (iii) Any successor to any entity described in paragraph (1)(ii) of this definition; and

(2) Does not include a government or governmental entity that is not operating as a business enterprise.

"Sensitive technology"—

(1) Means hardware, software, telecommunications equipment, or any other technology that is to be used specifically—

- (i) To restrict the free flow of unbiased information in Iran; or
- (i) To disrupt, monitor, or otherwise restrict speech of the people of Iran; and

(2) Does not include information or informational materials the export of which the President does not have the authority to regulate or prohibit pursuant to section 203(b)(3) of the International Emergency Economic Powers Act (50 U.S.C. 1702(b)(3)).

(b) The offeror shall e-mail questions concerning sensitive technology to the Department of State at CISADA106@state.gov.

(c) Except as provided in paragraph (d) of this provision or if a waiver has been granted in accordance with 25.703-4, by submission of its offer, the offeror—

(1) Represents, to the best of its knowledge and belief, that the offeror does not export any sensitive technology to the government of Iran or any entities or individuals owned or controlled by, or acting on behalf or at the direction of, the government of Iran; and

(2) Certifies that the offeror, or any person owned or controlled by the offeror, does not engage in any activities for which sanctions may be imposed under section 5 of the Iran Sanctions Act. These sanctioned activities are in the areas of development of the petroleum resources of Iran, production of refined petroleum products in Iran, sale and provision of refined petroleum products to Iran, and contributing to Iran's ability to acquire or develop certain weapons or technologies.

(d) Exception for trade agreements. The representation requirement of paragraph (c)(1) and the certification requirement of paragraph (c)(2) of this provision do not apply if—

(1) This solicitation includes a trade agreements notice or certification (e.g., 52.225-4, 52.225-6, 52.225-12, 52.225-24, or comparable agency provision); and

(2) The offeror has certified that all the offered products to be supplied are designated country end products or designated country construction material.

(End of Provision)

READ ONLY

Vendor will provide information with specific offers to the Government.

I certify that I have read and understand the provision.

52.227-6 Royalty Information (Apr 1984)

- (a) Cost or charges for royalties. When the response to this solicitation contains costs or charges for royalties totaling more than \$250, the following information shall be included in the response relating to each separate item of royalty or license fee:
- (1) Name and address of licensor.
 - (2) Date of license agreement.
 - (3) Patent numbers, patent application serial numbers, or other basis on which the royalty is payable.
 - (4) Brief description, including any part or model numbers of each contract item or component on which the royalty is payable.
 - (5) Percentage or dollar rate of royalty per unit.
 - (6) Unit price of contract item.
 - (7) Number of units.
 - (8) Total dollar amount of royalties.
- (b) Copies of current licenses. In addition, if specifically requested by the Contracting Officer before execution of the contract, the offeror shall furnish a copy of the current license agreement and an identification of applicable claims of specific patents.

(End of provision)

Alternate I (Apr 1984)

Substitute the following for the introductory portion of paragraph (a) of the basic clause: When the response to this solicitation covers charges for special construction or special assembly that contain costs or charges for royalties totaling more than \$250, the following information shall be included in the response relating to each separate item of royalty or license fee:

52.203-2 Certificate of Independent Price Determination (Apr 1985)

- (a) The offeror certifies that-
- (1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to-
 - (i) Those Prices
 - (ii) The intention to submit an offer; or
 - (iii) The methods or factors used to calculate the prices offered.
 - (2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and
 - (3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.
- (b) Each signature on the offer is considered to be a certification by the signatory that the signatory-
- (1) Is the person in the offeror's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to paragraphs (a)(1) through (a)(3) of this provision; or
 - (2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to paragraphs (a)(1) through (a)(3) of this provision **Jason Wilkie, VP Operations**
 - (ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) of this provision have not participated, and will not participate, in any action contrary to paragraphs (a)(1) through (a)(3) of this provision; and
 - (iii) As an agent, has not personally participated, and will not participate, in any action contrary to paragraphs (a)(1) through (a)(3) of this provision.
- (c) If the offeror deletes or modifies paragraph (a)(2) of this provision, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

(End of Provision)

52.204-3 Taxpayer Identification (Oct 1998)

(a) Definitions

"Common parent," as used in this provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

"Taxpayer Identification Number (TIN)," as used in this provision, means the number required by the Internal Revenue Service (IRS) to be used by the offeror in reporting income tax and other returns. The TIN may be either a Social Security Number or an Employer Identification Number.

(b) All offerors must submit the information required in paragraphs (d) through (f) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the IRS. If the resulting contract is subject to the payment reporting requirements described in Federal Acquisition Regulation (FAR) 4.904, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments otherwise due under the contract.

(c) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(d) Taxpayer Identification Number (TIN).

- TIN on file with CCR.
- TIN has been applied for.
- TIN is not required because:
 - Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States; ,
 - Offeror is an agency or instrumentality of a foreign government; ,
 - Offeror is an agency or instrumentality of the Federal Government.

(e) Type of organization.

- sole proprietorship;
- Partnership;
- Corporate entity (not tax-exempt);
- Corporate entity (tax-exempt);
- Government entity (Federal, State, or local);
- Foreign government;
- International organization per 26 CFR 1.6049-4;
- **2X-A2-B1-MF-VW-XS**

(f) Common parent.

- Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this provision.
- Name: N/A
TIN: **TIN not on File with ORCA**

(End of Provision)

52.204-5 Women-Owned Business (Other Than Small Business) (May 1999)

(a) Definition. "Women-owned business concern," as used in this provision, means a concern that is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of its stock is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

(b) Representation. [Complete only if the offeror is a women-owned business concern and has not represented itself as a small business concern in paragraph (b)(1) of FAR 52.219-1, Small Business Program Representations, of this solicitation.] The offeror represents that it is a women-owned business concern.

(End of Provision)

52.209-5 Certification Regarding Responsibility Matters (Apr 2010)

(a) (1) The Offeror certifies, to the best of its knowledge and belief, that-

(i) The Offeror and/or any of its Principals-

- (A) Are Are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;
- (B) Have Have not , within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) contract or subcontract; violation of Federal or State antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating Federal criminal tax laws, or receiving stolen property (if offeror checks "have", the offeror shall also see 52.209-7, if included in this solicitation);
- (C) Are Are not presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in paragraph (a)(1)(i)(B) of this provision.
- (D) Have , Have not , within a three-year period preceding this offer, been notified of any delinquent Federal Taxes in an amount that exceeds \$3,000 for which the liability remains unsatisfied.

(1) Federal taxes are considered delinquent if both of the following criteria apply:

- (i) The tax liability is finally determined. The liability is finally determined if it has been assessed. A liability is not finally determined if there is a pending administrative or judicial challenge. In the case of a judicial challenge to the liability, the liability is not finally determined until all judicial appeal rights have been exhausted.
- (ii) The taxpayer is delinquent in making payment. A taxpayer is delinquent if the taxpayer has failed to pay the tax liability when full payment was due and required. A taxpayer is not delinquent in cases where enforced collection action is precluded.

(2) Examples:

- (i) The taxpayer has received a statutory notice of deficiency, under I.R.C. § 6212, which entitles the taxpayer to seek Tax Court review of a proposed tax deficiency. This is not a delinquent tax because it is not a final tax liability. Should the taxpayer seek Tax Court review, this will not be a final tax liability until the taxpayer has exercised all judicial appeal rights.
- (ii) The IRS has filed a notice of Federal tax lien with respect to an assessed tax liability, and the taxpayer has been issued a notice under I.R.C. § 6320 entitling the taxpayer to request a hearing with the IRS Office of Appeals contesting the lien filing, and to further appeal to the Tax Court if the IRS determines to sustain the lien filing. In the course of the hearing, the taxpayer is entitled to contest the underlying tax liability because the taxpayer has had no prior opportunity to contest the liability. This is not a delinquent tax because it is not a final tax liability because the taxpayer has had no prior opportunity to contest the underlying tax liability because the taxpayer has had no prior opportunity to contest the liability. This is not a delinquent tax because it is not a final tax liability. Should the taxpayer seek tax court review, this will not be a final tax liability until the taxpayer has exercised all judicial appeal rights.
- (iii) The taxpayer has entered into an installment agreement pursuant to I.R.C. § 6159. The taxpayer is making timely payments and is in full compliance with the agreement terms. The taxpayer is not delinquent because the taxpayer is not currently required to make full payment.
- (iv) The taxpayer has filed for bankruptcy protection. The taxpayer is not delinquent because enforced collection action is stayed under 11 U.S.C 362 (the Bankruptcy Code).

(ii) The Offeror has has not , within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) "Principals," for the purposes of this certification, means an officer, director, owner, partner, or a person having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a division or business segment; and similar positions).

This Certification Concerns a Matter Within the Jurisdiction of an Agency of the United States and the Making of a False, Fictitious, or Fraudulent Certification May Render the Maker Subject to Prosecution Under Section 1001, Title 18, United States Code.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by

reason of changed circumstances.

- (c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.
- (d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- (e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

(End of Provision)

52.212-3 Offeror Representations and Certifications –Commercial Items (Alternate 1 & 2) (Nov 2011)

An offeror shall complete only paragraph (b) of this provision if the offeror has completed the annual representations and certifications electronically at <http://orca.bpn.gov>. If an offeror has not completed the annual representations and certifications electronically at the ORCA website, the offeror shall complete only paragraphs (c) through (o) of this provision.

(a) Definitions. As used in this provision:

"Economically disadvantaged women-owned small business (EDWOSB) concern" means a small business concern that is at least 51 percent directly and unconditionally owned by, and the management and daily business operations of which are controlled by, one or more women who are citizens of the United States and who are economically disadvantaged in accordance with 13 CFR part 127. It automatically qualifies as a women-owned small business eligible for the WOSB Program.

"Forced or indentured child labor" means all work or service-

- (1) Exacted from any person under the age of 18 under the menace of any penalty for its nonperformance and for which the worker does not offer himself voluntarily; or
- (2) Performed by any person under the age of 18 pursuant to a contract the enforcement of which can be accomplished by process or penalties.

"Inverted domestic corporation", as used in this section, means a foreign incorporated entity which is treated as an inverted domestic corporation under 6 U.S.C. 395(b), i.e., a corporation that used to be incorporated in the United States, or used to be a partnership in the United States, but now is incorporated in a foreign country, or is a subsidiary whose parent corporation is incorporated in a foreign country, that meets the criteria specified in 6 U.S.C. 395(b), applied in accordance with the rules and definitions of 6 U.S.C. 395(c). An inverted domestic corporation as herein defined does not meet the definition of an inverted domestic corporation as defined by the Internal Revenue Code at 26 U.S.C. 7874.

"Manufactured end product" means any end product in Federal Supply Classes (FSC) 1000-9999, except—

- (1) FSC 5510, Lumber and Related Basic Wood Materials;
- (2) Federal Supply Group (FSG) 87, Agricultural Supplies;
- (3) FSG 88, Live Animals;
- (4) FSG 89, Food and Related Consumables;
- (5) FSC 9410, Crude Grades of Plant Materials;
- (6) FSC 9430, Miscellaneous Crude Animal Products, Inedible;
- (7) FSC 9440, Miscellaneous Crude Agricultural and Forestry Products;
- (8) FSC 9610, Ores;
- (9) FSC 9620, Minerals, Natural and Synthetic; and
- (10) FSC 9630, Additive Metal Materials.

"Place of manufacture" means the place where an end product is assembled out of components, or otherwise made or processed from raw materials into the finished product that is to be provided to the Government. If a product is disassembled and reassembled, the place of reassembly is not the place of manufacture.

"Restricted business operations" means business operations in Sudan that include power production activities, mineral extraction activities, oil-related activities, or the production of military equipment, as those terms are defined in the Sudan Accountability and Divestment Act of 2007 (Pub. L. 110-174). Restricted business operations do not include business operations that the person (as that term is defined in

Section 2 of the Sudan Accountability and Divestment Act of 2007) conducting the business can demonstrate—

- (1) Are conducted under contract directly and exclusively with the regional government of southern Sudan;
- (2) Are conducted pursuant to specific authorization from the Office of Foreign Assets Control in the Department of the Treasury, or are expressly exempted under Federal law from the requirement to be conducted under such authorization;
- (3) Consist of providing goods or services to marginalized populations of Sudan;
- (4) Consist of providing goods or services to an internationally recognized peacekeeping force or humanitarian organization;
- (5) Consist of providing goods or services that are used only to promote health or education; or
- (6) Have been voluntarily suspended.

"Sensitive technology"—

- (1) Means hardware, software, telecommunications equipment, or any other technology that is to be used specifically—
 - (i) To restrict the free flow of unbiased information in Iran; or
 - (ii) To disrupt, monitor, or otherwise restrict speech of the people of Iran; and
- (2) Does not include information or informational materials the export of which the President does not have the authority to regulate or prohibit pursuant to section 203(b)(3) of the International Emergency Economic Powers Act (50 U.S.C. 1702(b)(3)).

"Service - disabled veteran - owned small business concern"—

- (1) Means a small business concern—
 - (i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and
 - (ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a service-disabled veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.
- (2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

"Small business concern" means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR part 121 and size standards in this solicitation.

"Subsidiary" means an entity in which more than 50 percent of the entity is owned—

- (1) Directly by a parent corporation; or
- (2) Through another subsidiary of a parent corporation.

"Veteran owned small business concern" means a small business concern—

- (1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and
- (2) The management and daily business operations of which are controlled by one or more veterans.

"Women-owned business concern" means a concern which is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of its stock is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

"Women-owned small business concern" means a small business concern—

- (1) That is at least 51 percent owned by one or more women; or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and
- (2) Whose management and daily business operations are controlled by one or more women.

"Women-owned small business (WOSB) concern eligible under the WOSB Program" (in accordance with 13 CFR part 127), means a small business concern that is at least 51 percent directly and unconditionally owned by, and the management and daily business operations of which are controlled by, one or more women who are citizens of the United States.

(b)

- (1) *Annual Representations and Certifications.* Any changes provided by the offeror in paragraph (b)(2) of this provision do not automatically change the representations and certifications posted on the Online Representations and Certifications Application (ORCA) website.
- (2) The offeror has completed the annual representations and certifications electronically via the ORCA website at <http://orca.bpn.gov>. After reviewing the ORCA database information, the offeror verifies by submission of this offer that the representations and certifications currently posted electronically at FAR 52.212-3, Offeror Representations and Certifications—Commercial Items, have been entered or updated in the last 12 months, are current, accurate, complete, and applicable to this solicitation

(including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR 4.1201), except for paragraphs _____.

[Offeror to identify the applicable paragraphs at (c) through (o) of this provision that the offeror has completed for the purposes of this solicitation only, if any.

These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.

Any changes provided by the offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications posted on ORCA.]

(c) Offerors must complete the following representations when the resulting contract is to be performed inside the United States or its outlying areas. Check all that apply.

(1)* Small business concern. The offeror represents as part of its offer that it is, is not a small business concern. (See below)

NAICS:	Description:	Small Business Concern (Yes/No):
237110	WATER AND SEWER LINE AND RELATED STRUCTURES CONSTRUCTION	Yes
332919	OTHER METAL VALVE AND PIPE FITTING MANUFACTURING	Yes

(2)* Veteran-owned small business concern. The offeror represents as part of its offer that it is, is not a veteran-owned small business concern. (See Below)

NAICS:	Description:	Veteran-Owned Small Business Concern (Yes/No):
237110	WATER AND SEWER LINE AND RELATED STRUCTURES CONSTRUCTION	No
332919	OTHER METAL VALVE AND PIPE FITTING MANUFACTURING	No

(3)* Service-disabled veteran-owned small business concern. The offeror represents as part of its offer that it is, is not a service-disabled veteran-owned small business concern. (See Below)

NAICS:	Description:	Service-Disabled Veteran-Owned Small Business Concern (Yes/No):
237110	WATER AND SEWER LINE AND RELATED STRUCTURES CONSTRUCTION	No
332919	OTHER METAL VALVE AND PIPE FITTING MANUFACTURING	No

(4) Small disadvantaged business concern. The offeror represents, for general statistical purposes, that it is, is not a small disadvantaged business concern as defined in 13 CFR 124.1002.

(5)* Women-owned small business concern. The offeror represents that it is, is not a women-owned small business concern. (See Below)

NAICS:	Description:	Women-Owned Small Business Concern (Yes/No):
237110	WATER AND SEWER LINE AND RELATED STRUCTURES CONSTRUCTION	Yes
332919	OTHER METAL VALVE AND PIPE FITTING MANUFACTURING	Yes

**Small business concern, Veteran-owned small business concern, Service-disabled veteran-owned small business concern, and Women-owned small business concern status was calculated based on*

the NAICS codes, Number of Employees, and Average Annual Gross Revenues listed in the CCR Registration for "Company Name" along with the Small Business Administration size standard for each NAICS code.

- (6) ****** Women-owned small business (WOSB) concern eligible under the WOSB Program. [Complete only if the offeror represented itself as a women-owned small business concern in paragraph (c)(5) of this provision.] The offeror represents that:
- (i) It is, is not a WOSB concern eligible under the WOSB Program, has provided all the required documents to the WOSB Repository, and no change in circumstances or adverse decisions have been issued that affects its eligibility; and
 - (ii) It is, is not a joint venture that complies with the requirements of 13 CFR part 127, and the representation in paragraph (c)(6)(i) of this provision is accurate in reference to the WOSB concern or concerns that are participating in the joint venture. [The offeror shall enter the name or names of the WOSB concern or concerns that are participating in the joint venture: .] Each WOSB concern participating in the joint venture shall submit a separate signed copy of the WOSB representation.
- (7) ****** Economically disadvantaged women-owned small business (EDWOSB) concern . [Complete only if the offeror represented itself as a WOSB concern eligible under the WOSB Program in (c)(6) of this provision.] The offeror represents that:
- (i) It is, is not an EDWOSB concern eligible under the WOSB Program, has provided all the required documents to the WOSB Repository, and no change in circumstances or adverse decisions have been issued that affects its eligibility; and
 - (ii) It is, is not a joint venture that complies with the requirements of 13 CFR part 127, and the representation in paragraph (c)(7) (i) of this provision is accurate in reference to the EDWOSB concern or concerns that are participating in the joint venture. [The offeror shall enter the name or names of the EDWOSB concern or concerns that are participating in the joint venture: .] Each EDWOSB concern participating in the joint venture shall submit a separate signed copy of the EDWOSB representation.

Note: Complete paragraphs (c)(8) and (c)(9) only if this solicitation is expected to exceed the simplified acquisition threshold.

- (8) Women-owned business concern (other than small business concern). [Complete only if the offeror is a women-owned business concern and did not represent itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents that it is a women-owned business concern.
- (9) Tie bid priority for labor surplus area concerns. If this is an invitation for bid, small business offerors may identify the labor surplus areas in which costs to be incurred on account of manufacturing or production (by offeror or first-tier subcontractors) amount to more than 50 percent of the contract price:

State	Eligible Labor Surplus:	Civil Jurisdictions Included:
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- (10) (i) General. The offeror represents that either-
- (A) is, is not certified by the Small Business Administration as a small disadvantaged business concern and identified, on the date of this representation, as a certified small disadvantaged business concern in the CCR Dynamic Small Business Search database maintained by the Small Business Administration, and that no material change in disadvantaged ownership and control has occurred since its certification, and, where the concern is owned by one or more individuals claiming disadvantaged status, the net worth of each individual upon whom the certification is based does not exceed \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); or sss
 - (B) It has, has not submitted a completed application to the Small Business Administration or a Private Certifier to be certified as a small disadvantaged business concern in accordance with 13 CFR 124, Subpart B, and a decision on that application is pending, and that no material change in disadvantaged ownership and control has occurred since its application was submitted.
- (ii) Joint Ventures under the Price Evaluation Adjustment for Small Disadvantaged Business Concerns. The offeror represents, as part of its offer, that it is a joint venture that complies with the requirements in 13 CFR 124.1002(f) and that the representation in paragraph (c) (10)(i) of this provision is accurate for the small disadvantaged business concern that is participating in the joint venture [The offeror shall enter the name of the small disadvantaged business concern that is participating in the joint venture:].
- (11) HUBZone small business concern. The offeror represents, as part of its offer, that-
- (i) It is, is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal office, or HUBZone

employee percentage has occurred since it was certified in accordance with 13 CFR part 126; and

- (ii) It is It is not a HUBZone joint venture that complies with the requirements of 13 CFR part 126, and the representation in paragraph (c)(11)(i) of this provision is accurate for each HUBZone small business concern participating in the HUBZone joint venture. [The offeror shall enter the names of each of the HUBZone small business concerns participating in the HUBZone joint venture: .] Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(d) Representations required to implement provisions of Executive Order 11246-

(1) Previous contracts and compliance. The offeror represents that-

- (i) It has It has not participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation; and
- (ii) It has It has not filed all required compliance reports.

(2) Affirmative Action Compliance. The offeror represents that-

- (i) It has developed and has on file, It has not developed and does not have on file, at each establishment, affirmative action programs required by rules and regulations of the Secretary of Labor (41 cfr parts 60-1 and 60-2), or
- (ii) It has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

(e) Certification Regarding Payments to Influence Federal Transactions (31 U.S.C. 1352). (Applies only if the contract is expected to exceed \$150,000.) By submission of its offer, the offeror certifies to the best of its knowledge and belief that no Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress or an employee of a Member of Congress on his or her behalf in connection with the award of any resultant contract. If any registrants under the Lobbying Disclosure Act of 1995 have made a lobbying contact on behalf of the offeror with respect to this contract, the offeror shall complete and submit, with its offer, OMB Standard Form LLL, Disclosure of Lobbying Activities, to provide the name of the registrants. The offeror need not report regularly employed officers or employees of the offeror to whom payments of reasonable compensation were made.

(f) Buy American Act Certificate. (Applies only if the clause at Federal Acquisition Regulation (FAR) 52.225-1, Buy American Act-Supplies, is included in this solicitation.)

- (1) The offeror certifies that each end product, except those listed in paragraph (f)(2) of this provision, is a domestic end product and that for other than COTS items, the offeror has considered components of unknown origin to have been mined, produced, or manufactured outside the United States. The offeror shall list as foreign end products those end products manufactured in the United States that do not qualify as domestic end products, i.e., an end product that is not a COTS item and does not meet the component test in paragraph (2) of the definition of "domestic end product." The terms "commercially available off-the-shelf (COTS) item" "component," "domestic end product," "end product," "foreign end product," and "United States" are defined in the clause of this solicitation entitled "Buy American Act-Supplies."

(2) Foreign End Products:

Description:

Country of Origin:

- (3) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25.

(g) (1) Buy American Act-Free Trade Agreements-Israeli Trade Act Certificate. (Applies only if the clause at FAR 52.225-3, Buy American Act- Free Trade Agreements-Israeli Trade Act, is included in this solicitation.)

- (i) The offeror certifies that each end product, except those listed in paragraph (g)(1)(ii) or (g)(1)(iii) of this provision, is a domestic end product and that for other than COTS items, the offeror has considered components of unknown origin to have been mined, produced, or manufactured outside the United States. The terms "Bahrainian, Moroccan, Omani, or Peruvian end product," "commercially available off-the-shelf (COTS) item," "component," "domestic end product," "end product," "foreign end product," "Free Trade Agreement country," "Free Trade Agreement country end product," "Israeli end product," and "United States" are defined in the clause of this solicitation entitled "Buy American Act-Free Trade Agreements-Israeli Trade Act."

- (ii) The offeror certifies that the following supplies are Free Trade Agreement country end products (other than Bahrainian, Moroccan, Omani, or Peruvian end products) or Israeli end products as defined in the clause of this solicitation entitled "Buy American Act- Free Trade Agreements- Israeli Trade Act": Free Trade Agreement Country End Products (Other than Bahrainian, Moroccan, Omani, or Peruvian End Products) or Israeli End Products:

Description:

Country of Origin:

- (iii) The offeror shall list those supplies that are foreign end products (other than those listed in paragraph (g)(1)(ii) of this provision) as defined in the clause of this solicitation entitled "Buy

American Act—Free Trade Agreements—Israeli Trade Act." The offeror shall list as other foreign end products those end products manufactured in the United States that do not qualify as domestic end products, i.e., an end product that is not a COTS item and does not meet the component test in paragraph (2) of the definition of "domestic end product."

Other Foreign End Products:

Description:	Country of Origin:
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(iv) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25.

- (2) Buy American Act-Free Trade Agreements-Israeli Trade Act Certificate, Alternate I. If Alternate I to the clause at FAR 52.225-3 is included in this solicitation, substitute the following paragraph (g)(1)(ii) for paragraph (g)(1)(ii) of the basic provision:

(g)(1)(ii) The offeror certifies that the following supplies are Canadian end products as defined in the clause of this solicitation entitled "Buy American Act- Free Trade Agreements-Israeli Trade Act":

Canadian End Products:

Description:	Country of Origin:
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- (3) Buy American Act-Free Trade Agreements-Israeli Trade Act Certificate, Alternate II. If Alternate II to the clause at FAR 52.225-3 is included in this solicitation, substitute the following paragraph (g)(1)(ii) for paragraph (g)(1)(ii) of the basic provision:

(g)(1)(ii) The offeror certifies that the following supplies are Canadian end products or Israeli end products as defined in the clause of this solicitation entitled "Buy American Act-Free Trade Agreements-Israeli Trade Act": Canadian or Israeli End Products:

Description:	Country of Origin:
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- (4) Trade Agreements Certificate. (Applies only if the clause at FAR 52.225-5, Trade Agreements, is included in this solicitation.)

(i) The offeror certifies that each end product, except those listed in paragraph (g)(4)(ii) of this provision, is a U.S.-made, or designated country, end product, as defined in the clause of this solicitation entitled "Trade Agreements."

(ii) The offeror shall list as other end products those end products that are not U.S.-made, or designated country, end products.

Other End Products:

Description:	Country of Origin:
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(iii) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25. For line items covered by the WTO GPA, the Government will evaluate offers of U.S.-made, or designated country, end products without regard to the restrictions of the Buy American Act. The Government will consider for award only offers of U.S.-made, or designated country, end products unless the Contracting Officer determines that there are no offers for such products or that the offers for such products are insufficient to fulfill the requirements of the solicitation.

- (h) Certification Regarding Responsibility Matters (Executive Order 12689).(Applies only if the contract value is expected to exceed the simplified acquisition threshold.) The offeror certifies, to the best of its knowledge and belief, that the offeror and/or any of its principals-

(1) Are, Are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency; and

(2) Have, Have not, within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a Federal, state or local government contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating Federal criminal tax laws, or receiving stolen property; and

(3) Are, Are not presently indicted for, or otherwise criminally or civilly charged by a Government entity with, commission of any of these offenses (h)(2) of this clause.

(4) Have, Have not within a three-year period preceding this offer, been notified of any delinquent Federal taxes in an amount that exceeds \$3,000 for which the liability remains unsatisfied.

(i) Taxes are considered delinquent if both of the following criteria apply:

(A) The tax liability is finally determined. The liability is finally determined if it has been assessed. A liability is not finally determined if there is a pending administrative or judicial challenge. In the case of a judicial challenge to the liability, the liability is not finally determined until all judicial appeal rights have been exhausted.

(B) The taxpayer is delinquent in making payment. A taxpayer is delinquent if the taxpayer has

failed to pay the tax liability when full payment was due and required. A taxpayer is not delinquent in cases where enforced collection action is precluded.

(ii) Examples:

- (A) The taxpayer has received a statutory notice of deficiency, under I.R.C. § 6212, which entitles the taxpayer to seek Tax Court review of a proposed tax deficiency. This is not a delinquent tax because it is not a final tax liability. Should the taxpayer seek Tax Court Review, this will not be a final tax liability under the taxpayer has exercised all judicial appeal rights.
- (B) The IRS has filed a notice of Federal tax lien with respect to an assessed tax liability, and the taxpayer has been issued a notice under I.R.C. § 6320 entitling the taxpayer to request a hearing with the IRS Office of Appeals contesting the lien filing, and to further appeal to the Tax Court if the IRS determines to sustain the lien filing. In the course of the hearing, the taxpayer is entitled to contest the underlying tax liability because the taxpayer has had no prior opportunity to contest the liability. This is not a delinquent tax because it is not a final tax liability. Should the taxpayer seek tax court review, this will not be a final tax liability until the tax payer has exercised all judicial appeal rights.
- (C) The taxpayer has entered into an installment agreement pursuant to I.R.C. § 6159. The taxpayer is making timely payments and is in full compliance with the agreement terms. The taxpayer is not delinquent because the taxpayer is not currently required to make full payment.
- (D) The taxpayer has filed for bankruptcy protection. The taxpayer is not delinquent because enforced collection action is stayed under II U. S. C 362 (the Bankruptcy Code).

(i) Certification Regarding Knowledge of Child Labor for Listed End Products (Executive Order 13126). [The Contracting Officer must list in paragraph (i)(1) any end products being acquired under this solicitation that are included in the List of Products Requiring Contractor Certification as to Forced or Indentured Child Labor, unless excluded at 22.1503(b).]

(1) Listed end products.

Listed End Products	Listed Country of Origin
Bamboo	Burma
Beans (green, soy, yellow)	Burma
Brazil Nuts/Chestnuts	Bolivia
Bricks	Burma, China, India, Nepal, Pakistan
Carpets	Nepal, Pakistan
Charcoal	Brazil
Coal	Pakistan
Coca (stimulant plant)	Colombia
Cocoa	Cote d'Ivoire, Nigeria
Coffee	Cote d'Ivoire
Cotton	Benin, Burkina Faso, China, Tajikistan, Uzbekistan
Cottonseed (hybrid)	India
Diamonds	Sierra Leone
Electronics	China
Embroidered Textiles (zari)	India, Nepal
Garments	Argentina, India, Thailand
Gold	Burkina Faso
Granite	Nigeria
Gravel (crushed stones)	Nigeria
Pornography	Russia
Rice	Burma, India, Mali

Rubber	Burma
Shrimp	Thailand
Stones	India, Nepal
Sugarcane	Bolivia, Burma
Teak	Burma
Tilapia (fish)	Ghana
Tobacco	Malawi
Toys	China

(2) Certification. [If the Contracting Officer has identified end products and countries of origin in paragraph (i)(1) of this provision, then the offeror must certify to either (i)(2)(i) or (i)(2)(ii) by checking the appropriate block.]

(i) The offeror will not supply any end product listed in paragraph (i)(1) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product.

(ii) The offeror may supply an end product listed in paragraph (i)(1) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product. The offeror certifies that it has made a good faith effort to determine whether forced or indentured child labor was used to mine, produce, or manufacture any such end product furnished under this contract. On the basis of those efforts, the offeror certifies that it is not aware of any such use of child labor.

(j) *Place of Manufacture* (Does not apply unless the solicitation is predominantly for the acquisition of manufactured end products.) For statistical purposes only, the offeror shall indicate whether the place of manufacture of the end products it expects to provide in response to this solicitation is predominantly—

(1) In the United States (Check this box if the total anticipated price of offered end products manufactured in the United States exceeds the total anticipated price of offered end products manufactured outside the United States); or

(2) Outside the United States.

FSC Code:

Place of Manufacture:

(k) *Certificates regarding exemptions from the application of the Service Contract Act.* (Certification by the offeror as to its compliance with respect to the contract also constitutes its certification as to compliance by its subcontractor if it subcontracts out the exempt services.) [The contracting officer is to check a box to indicate if paragraph (k)(1) or (k)(2) applies.]

(1) Maintenance, calibration, or repair of certain equipment as described in FAR 22.1003-4(c)(1). The offeror does, does not certify that ___

(i) The items of equipment to be serviced under this contract are used regularly for other than Governmental purposes and are sold or traded by the offeror (or subcontractor in the case of an exempt subcontract) in substantial quantities to the general public in the course of normal business operations;

(ii) The services will be furnished at prices which are, or are based on, established catalog or market prices (see FAR 22.1003-4(c)(2)(ii)) for the maintenance, calibration, or repair of such equipment; and

(iii) The compensation (wage and fringe benefits) plan for all service employees performing work under the contract will be the same as that used for these employees and equivalent employees servicing the same equipment of commercial customers.

(2) PEDAL VALVES, INC. has elected not to complete (k)(2) provision. Information pertaining to this provision, must be submitted to the Government with individual offers/proposals.

(3) If paragraph (k)(1) or (k)(2) of this clause applies ___

(i) If the offeror does not certify to the conditions in paragraph (k)(1) or (k)(2) and the Contracting Officer did not attach a Service Contract Act wage determination to the solicitation, the offeror shall notify the Contracting Officer as soon as possible; and

(ii) The Contracting Officer may not make an award to the offeror if the offeror fails to execute the certification in paragraph (k)(1) or (k)(2) of this clause or to contact the Contracting Officer as required in paragraph (k)(3)(i) of this clause.

(l) *Taxpayer Identification Number (TIN)* (26 U.S.C. 6109, 31 U.S.C. 7701). (Not applicable if the offeror is

required to provide this information to a central contractor registration database to be eligible for award.)

- (1) All offerors must submit the information required in paragraphs (l)(3) through (l)(5) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the Internal Revenue Service (IRS).
- (2) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(3) *Taxpayer Identification Number (TIN).*

- TIN on file with CCR.
- TIN has been applied for.
- TIN is not required because:
 - Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States; ,
 - Offeror is an agency or instrumentality of a foreign government; ,
 - Offeror is an agency or instrumentality of the Federal Government.

(4) *Type of organization.*

- sole proprietorship;
- Partnership;
- Corporate entity (not tax-exempt);
- Corporate entity (tax-exempt);
- Government entity (Federal, State, or local);
- Foreign government;
- International organization per 26 CFR 1.6049-4;
- **2X-A2-B1-MF-VW-XS**

(5) *Common parent.*

- Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this provision.
- Name: N/A
TIN: **TIN not on File with ORCA**

(m) *Restricted business operations in Sudan.* By submission of its offer, the offeror certifies that the offeror does not conduct any restricted business operations in Sudan.

(n) *Prohibition on Contracting with Inverted Domestic Corporations.*

(1) *Relation to Internal Revenue Code.* An inverted domestic corporation as herein defined does not meet the definition of an inverted domestic corporation as defined by the Internal Revenue Code 25 U.S.C. 7874.

(2) *Representation.* By submission of its offer, the offeror represents that—

- (i) It is not an inverted domestic corporation; and
- (ii) It is not a subsidiary of an inverted domestic corporation.

(o) *Sanctioned activities relating to Iran.*

(1) The offeror shall e-mail questions concerning sensitive technology to the Department of State at CISADA106@state.gov.

(2) *Representation and Certification.* Unless a waiver is granted or an exception applies as provided in paragraph (o)(3) of this provision, by submission of its offer, the offeror—

- (i) Represents, to the best of its knowledge and belief, that the offeror does not export any sensitive technology to the government of Iran or any entities or individuals owned or controlled by, or acting on behalf or at the direction of, the government of Iran; and
- (ii) Certifies that the offeror, or any person owned or controlled by the offeror, does not engage in any activities for which sanctions may be imposed under section 5 of the Iran Sanctions Act.

(3) The representation and certification requirements of paragraph (o)(2) of this provision do not apply if—

- (i) This solicitation includes a trade agreements certification (e.g., 52.212-3(g) or a comparable agency provision); and
- (ii) The offeror has certified that all the offered products to be supplied are designated country end

products.

(End of provision)

Alternate I (Apr 2011)

As prescribed in 12.301(b)(2), add the following paragraph (c) (12) to the basic provision:

(12) (Complete if the offeror has represented itself as disadvantaged in paragraph (c)(4) or (c) (10) of this provision.)

[The offeror shall check the category in which its ownership falls]:

Black American.

Hispanic American.

Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians).

Asian-Pacific American (persons with origins from Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Japan, China, Taiwan, Laos, Cambodia (Kampuchea), Vietnam, Korea, The Philippines, U.S. Trust Territory of the Pacific Islands (Republic of Palau), Republic of the Marshall Islands, Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, Guam, Samoa, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or Nauru).

Subcontinent Asian (Asian-Indian) American (persons with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives Islands, or Nepal).

Individual/concern, other than one of the preceding.

Alternate II (Jan 2012)

As prescribed in 12.301(b)(2), add the following paragraph (c) (10)(iii) to the basic provision:

(iii) Address. The offeror represents that its address is, is not in a region for which a small disadvantaged business procurement mechanism is authorized and its address has not changed since its certification as a small disadvantaged business concern or submission of its application for certification. The list of authorized small disadvantaged business procurement mechanisms and regions is posted at <http://www.acquisition.gov/References/sdbadjustments.htm>. The offeror shall use the list in effect on the date of this solicitation. "Address," as used in this provision, means the address of the offeror as listed on the Small Business Administration's register of small disadvantaged business concerns or the address on the completed application that the concern has submitted to the Small Business Administration or a Private Certifier in accordance with 13 CFR part 124, subpart B. For joint ventures, "address" refers to the address of the small disadvantaged business concern that is participating in the joint venture.

52.214-14 Place of Performance-Sealed Bidding (Apr 1985)

(a) The bidder, in the performance of any contract resulting from this solicitation, intends, does not intend [check applicable box] to use one or more plants or facilities located at a different address from the address of the bidder as indicated in this bid.

(b) If the bidder checks "intends" in paragraph (a) of this provision, it shall insert in the spaces provided below the required information:

Name and Address of Owner and Operator of the Plant or Facility if Other than Bidder

Address of Place of Performance (Street, Address, City, County, State, Zip Code):	Owner/Operator:	Owner Address (Street, Address, City, County, State, Zip Code):
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(End of Provision)

52.215-6 Place of Performance (Oct 1997)

(a) The offeror or respondent, in the performance of any contract resulting from this solicitation, intends

does not intend [check applicable block] to use one or more plants or facilities located at a different address from the address of the offeror or respondent as indicated in this proposal or response to request for information.

(b) If the offeror or respondent checks "intends" in paragraph (a) of this provision, it shall insert in the following spaces the required information:

Name and Address of Owner and Operator of the Plant or Facility if Other than Bidder

Address of Place of Performance (Street, Address, City, County, State, Zip Code):	Owner/Operator:	Owner Address (Street, Address, City, County, State, Zip Code):
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(End of Provision)

52.219-1 Small Business Program Representations (Apr 2011)

- (a) (1) The North American Industry Classification System (NAICS) code for this acquisition is See Note.*
- (2) The small business size standard is See Note.
- (3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b) Representations.

(1) The offeror represents as part of its offer that it is, is not a small business concern (see below).

**

NAICS:	Description:	Small Business Concern (Yes/No):
237110	WATER AND SEWER LINE AND RELATED STRUCTURES CONSTRUCTION	Yes
332919	OTHER METAL VALVE AND PIPE FITTING MANUFACTURING	Yes

(2) [Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.] The offeror represents, for general statistical purposes, that it is, is not, a small disadvantaged business concern as defined in 13 CFR 124.1002.

(3) [Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.] The offeror represents as part of its offer that it is, is not a women-owned small business concern.

**

(See Below)

NAICS:	Description:	Women-Owned Small Business Concern (Yes/No):
237110	WATER AND SEWER LINE AND RELATED STRUCTURES CONSTRUCTION	Yes
332919	OTHER METAL VALVE AND PIPE FITTING MANUFACTURING	Yes

(4) Women-owned small business (WOSB) concern eligible under the WOSB Program. [Complete only if the offeror represented itself as a women-owned small business concern in paragraph (b)(3) of this provision] The offeror represents as part of its offer that:

**

(i) It is, is not a WOSB concern eligible under the WOSB Program, has provided all the required documents to the WOSB Repository, and no change in circumstances or adverse decisions have been issued that affects its eligibility; and

(ii) It is, is not a joint venture that complies with the requirements of 13 CFR part 127, and the representation in paragraph (b)(4)(i) of this provision is accurate in reference to the WOSB concern or concerns that are participating in the joint venture. [The offeror shall enter the name or names of the WOSB concern or concerns that are participating in the joint venture: .] Each WOSB concern participating in the joint venture shall submit a separate signed copy of the WOSB representation.

(5) Economically disadvantaged women-owned small business (EDWOSB) concern. [Complete only if the offeror represented itself as a women-owned small business concern eligible for the WOSB Program in (b)(4) of this provision] The offeror represents as part of its offer that:

**

- (i) It is, is not an EDWOSB concern eligible under the WOSB Program, has provided all the required documents to the WOSB Repository, and no change in circumstances or adverse decisions have been issued that affects its eligibility; and
- (ii) It is, is not a joint venture that complies with the requirements of 13 CFR part 127, and the representation in paragraph (b)(5)(i) of this provision is accurate in reference to the EDWOSB concern or concerns that are participating in the joint venture. [The offeror shall enter the name or names of the EDWOSB concern or concerns that are participating in the joint venture: .] Each EDWOSB concern participating in the joint venture shall submit a separate signed copy of the EDWOSB representation.

(6) ****** [Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.] The offeror represents as part of its offer that it is, is not a veteran-owned small business concern.

NAICS:	Description:	Veteran-Owned Small Business Concern (Yes/No):
237110	WATER AND SEWER LINE AND RELATED STRUCTURES CONSTRUCTION	No
332919	OTHER METAL VALVE AND PIPE FITTING MANUFACTURING	No

(7) ****** [Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (b)(6) of this provision.] The offeror represents as part of its offer that it is, is not a service-disabled veteran-owned small business concern.

(See Below)

NAICS:	Description:	Service-Disabled Veteran-Owned Small Business Concern (Yes/No):
237110	WATER AND SEWER LINE AND RELATED STRUCTURES CONSTRUCTION	No
332919	OTHER METAL VALVE AND PIPE FITTING MANUFACTURING	No

**If you are responding to a Government solicitation for supplies or services under a NAICS code not listed in paragraph (b) of this certification, you must provide this certification directly to the Contracting Officer.*

***Small business concern, Veteran-owned small business concern, Service-disabled veteran-owned small business concern, and Women-owned small business concern status was calculated based on the NAICS codes, Number of Employees, and Average Annual Gross Revenues listed in the CCR Registration for "Company Name " along with the Small Business Administration size standard for each NAICS code.*

(8) [Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.] The offeror represents, as part of its offer, that-

- (i) It is, is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal office, or HUBZone employee percentage has occurred since it was certified in accordance with 13 CFR part 126; and
- (ii) It is, is not a HUBZone joint venture that complies with the requirements of 13 CFR part 126, and the representation in paragraph (b)(8)(i) of this provision is accurate for each HUBZone small business concern participating in the HUBZone joint venture. [The offeror shall enter the names of each of the HUBZone small business concerns participating in the HUBZone joint venture: .] Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(c) Definitions. As used in this provision-

"Economically disadvantaged women-owned small business (EDWOSB) concern" means a small business concern that is at least 51 percent directly and unconditionally owned by, and the management and daily business operations of which are controlled by, one or more women who are citizens of the United States and who are economically disadvantaged in accordance with 13 CFR part 127. It automatically qualifies as a women-owned small business concern eligible for the WOSB Program.

"Service-disabled veteran-owned small business concern"-

- (1) Means a small business concern-
- (i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and
 - (ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.
- (2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

"Small business concern" means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR part 121 and the size standard in paragraph (a) of this provision.

"Veteran-owned small business concern" means a small business concern-

- (1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and
- (2) The management and daily business operations of which are controlled by one or more veterans.

"Women-owned small business concern" means a small business concern-

- (1) That is at least 51 percent owned by one or more women; or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and
- (2) Whose management and daily business operations are controlled by one or more women.

"Women-owned small business (WOSB) concern eligible under the WOSB Program" (in accordance with 13 CFR part 127), means a small business concern that is at least 51 percent directly and unconditionally owned by, and the management and daily business operations of which are controlled by, one or more women who are citizens of the United States.

(d) Notice.

- (1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.
- (2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a business concern that is small, HUBZone small, small disadvantaged, service-disabled veteran-owned small, economically disadvantaged woman-owned small, or women-owned small eligible under the WOSB Program in order to obtain a contract to be awarded under the preference programs established pursuant to section 8, 9, or 15, 31, and 36 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall—
 - (i) Be punished by imposition of fine, imprisonment, or both;
 - (ii) Be subject to administrative remedies, including suspension and debarment; and
 - (iii) Be ineligible for participation in programs conducted under the authority of the Act.

(End of provision)

Alternate I (Apr 2011)

As prescribed in 19.309(a)(2), add the following paragraph (b)(9) to the basic provision:

(9) [Complete if offeror represented itself as disadvantaged in paragraph (b)(2) of this provision.] The offeror shall check the category in which its ownership falls:

Black American.

Hispanic American.

Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians).

Asian-Pacific American (persons with origins from Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Japan, China, Taiwan, Laos, Cambodia (Kampuchea), Vietnam, Korea, The Philippines, U.S. Trust Territory of the Pacific Islands (Republic of Palau), Republic of the Marshall Islands, Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, Guam, Samoa, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or Nauru).

Subcontinent Asian (Asian-Indian) American (persons with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives Islands, or Nepal).

Individual/concern, other than one of the preceding.

52.219-2 Equal Low Bids (Oct 1995)

- (a) This provision applies to small business concerns only
- (b) The bidder's status as a labor surplus area (LSA) concern may affect entitlement to award in case of tie bids. If the bidder wishes to be considered for this priority, the bidder must identify, in the following space, the LSA in which the costs to be incurred on account of manufacturing or production (by the bidder or the first-tier subcontractors) amount to more than 50 percent of the contract price.

State	Eligible Labor Surplus:	Civil Jurisdictions Included:
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- (c) Failure to identify the labor surplus areas as specified in paragraph (b) of this provision will preclude the bidder from receiving priority consideration. If the bidder is awarded a contract as a result of receiving priority consideration under this provision and would not have otherwise received award, the bidder shall perform the contract or cause the contract to be performed in accordance with the obligations of an LSA concern.

(End of Provision)

52.219-22 Small Disadvantaged Business Status (Oct 1999)

- (a) General. This provision is used to assess an offeror's small disadvantaged business status for the purpose of obtaining a benefit on this solicitation. Status as a small business and status as a small disadvantaged business for general statistical purposes is covered by the provision at FAR 52.219-1, Small Business Program Representation.
- (b) Representations.
- (1) General. The offeror represents, as part of its offer, that it is a small business under the size standard applicable to this acquisition; and either-
- (i) It has received certification by the Small Business Administration as a small disadvantaged business concern consistent with 13 CFR 124, Subpart B; and
 - (A) No material change in disadvantaged ownership and control has occurred since its certification;
 - (B) Where the concern is owned by one or more disadvantaged individuals, the net worth of each individual upon whom the certification is based does not exceed \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); and
 - (C) It is identified, on the date of its representation, as a certified small disadvantaged business concern in the database maintained by the Small Business Administration (PRO-Net); or
 - (ii) It has submitted a completed application to the Small Business Administration or a Private Certifier to be certified as a small disadvantaged business concern in accordance with 13 CFR 124, Subpart B, and a decision on that application is pending, and that no material change in disadvantaged ownership and control has occurred since its application was submitted.
- (2) For Joint Ventures. The offeror represents, as part of its offer, that it is a joint venture that complies with the requirements at 13 CFR 124.1002(f) and that the representation in paragraph (b)(1) of this provision is accurate for the small disadvantaged business concern that is participating in the joint venture. [The offeror shall enter the name of the small disadvantaged business concern that is participating in the joint venture: .]
- (c) Penalties and Remedies. Anyone who misrepresents any aspects of the disadvantaged status of a concern for the purposes of securing a contract or subcontract shall-
- (1) Be punished by imposition of a fine, imprisonment, or both;
 - (2) Be subject to administrative remedies, including suspension and debarment; and
 - (3) Be ineligible for participation in programs conducted under the authority of the Small Business Act.

(End of provision)

Alternate I (Jan 2012)

As prescribed in 19.309(b), add the following paragraph (b)(3) to the basic provision:

- (3) Address. The offeror represents that its address is is not in a region for which a small disadvantaged

business procurement mechanism is authorized and its address has not changed since its certification as a small disadvantaged business concern or submission of its application for certification. The list of authorized small disadvantaged business procurement mechanisms and regions is posted at <http://www.acquisition.gov/References/sdbadjustments.htm>. The offeror shall use the list in effect on the date of this solicitation. "Address," as used in this provision, means the address of the offeror as listed on the Small Business Administration's register of small disadvantaged business concerns or the address on the completed application that the concern has submitted to the Small Business Administration or a Private Certifier in accordance with 13 CFR part 124, subpart B. For joint ventures, "address" refers to the address of the small disadvantaged business concern that is participating in the joint venture.

52.222-18 Certification Regarding Knowledge of Child Labor for Listed End Products (Feb 2001)

(a) Definition:

"Forced or indentured child labor" means all work or service-

- (1) Exacted from any person under the age of 18 under the menace of any penalty for its nonperformance and for which the worker does not offer himself voluntarily; or
- (2) Performed by any person under the age of 18 pursuant to a contract the enforcement of which can be accomplished by process or penalties.

(b) Listed end products. The following end product(s) being acquired under this solicitation is (are) included in the List of Products Requiring Contractor Certification as to Forced or Indentured Child Labor, identified by their country of origin. There is a reasonable basis to believe that listed end products from the listed countries of origin may have been mined, produced, or manufactured by forced or indentured child labor.

Listed End Products	Listed Country of Origin
Bamboo	Burma
Beans (green, soy, yellow)	Burma
Brazil Nuts/Chestnuts	Bolivia
Bricks	Burma, China, India, Nepal, Pakistan
Carpets	Nepal, Pakistan
Charcoal	Brazil
Coal	Pakistan
Coca (stimulant plant)	Colombia
Cocoa	Cote d'Ivoire, Nigeria
Coffee	Cote d'Ivoire
Cotton	Benin, Burkina Faso, China, Tajikistan, Uzbekistan
Cottonseed (hybrid)	India
Diamonds	Sierra Leone
Electronics	China
Embroidered Textiles (zari)	India, Nepal
Garments	Argentina, India, Thailand
Gold	Burkina Faso
Granite	Nigeria
Gravel (crushed stones)	Nigeria
Pornography	Russia
Rice	Burma, India, Mali
Rubber	Burma

Shrimp	Thailand
Stones	India, Nepal
Sugarcane	Bolivia, Burma
Teak	Burma
Tilapia (fish)	Ghana
Tobacco	Malawi
Toys	China

- (c) Certification. The Government will not make award to an offeror unless the offeror, by checking the appropriate block, certifies to either paragraph (c)(1) or paragraph (c)(2) of this provision
- (1) The offeror will not supply any end product listed in paragraph (b) of this provision that was mined, produced, or manufactured in a corresponding country as listed for that end product.
 - (2) The offeror may supply an end product listed in paragraph (b) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product. The offeror certifies that it has made a good faith effort to determine whether forced or indentured child labor was used to mine, produce, or manufacture such end product. On the basis of those efforts, the offeror certifies that it is not aware of any such use of child labor.

(End of Provision)

52.222-22 Previous Contracts and Compliance Reports (Feb 1999)

The offeror represents that-

- (a) It has It has not participated in a previous contract or subcontract subject the Equal Opportunity clause of this solicitation;
- (b) It has It has not filed all required compliance reports; and
- (c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

(End of Provision)

52.222-25 Affirmative Action Compliance (Apr 1984)

The offeror represents that-

- (a) It has developed and has on file, has not developed and does not have on file, at each establishment, affirmative action programs required by the rules and regulations of the Secretary of Labor (41 CFR 60-1 and 60-2); or
- (b) It has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

(End of Provision)

52.222-48 Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment Certification (Feb 2009)

- (a) The offeror shall check the following certification:

Certification

The offeror does does not certify that -

- (1) The items of equipment to be serviced under this contract are used regularly for other than Government purposes, and are sold or traded by the offeror (or subcontractor in the case of an exempt subcontractor) in substantial quantities to the general public in the course of normal business operations;
- (2) The services will be furnished at prices which are, or are based on, established catalog or market prices for the maintenance, calibration, or repair of equipment.
 - (i) An "established catalog price" is a price included in a catalog, price list, schedule, or other form that is regularly maintained by the manufacturer or the offeror, is either published or otherwise available

for inspection by customers, and states prices at which sales currently, or were last, made to a significant number of buyers constituting the general public.

- (ii) An "established market price" is a current price, established in the usual course of trade between buyers and sellers free to bargain, which can be substantiated from sources independent of the manufacturer or offeror; and
- (3) The compensation (wage and fringe benefits) plan for all service employees performing work under the contract are the same as that used for these employees and equivalent employees servicing the same equipment of commercial customers.
- (b) Certification by the offeror as to its compliance with respect to the contract also constitutes its certification as to compliance by its subcontractor if it subcontracts out the exempt services. If the offeror certifies to the conditions in paragraph (a) of this provision, and the Contracting Officer determines in accordance with FAR 22.1003-4(c)(3) that the Service Contract Act—
 - (1) Will not apply to this offeror, then the Service Contract Act of 1965 clause in this solicitation will not be included in any resultant contract to this offeror; or
 - (2) Will apply to this offeror, then the clause at 52.222-51, Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment-Requirements, in this solicitation will not be included in any resultant contract awarded to this offeror, and the offeror may be provided an opportunity to submit a new offer on that basis.
- (c) If the offeror does not certify to the conditions in paragraph (a) of this provision—
 - (1) The clause in this solicitation at 52.222-51, Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment— Requirements, will not be included in any resultant contract awarded to this offeror; and
 - (2) The offeror shall notify the Contracting Officer as soon as possible, if the Contracting Officer did not attach a Service Contract Act wage determination to the solicitation.
- (d) The Contracting Officer may not make an award to the offeror, if the offeror fails to execute the certification in paragraph (a) of this provision or to contact the Contracting Officer as required in paragraph (c) of this provision.

(End of Provision)

52.222-52 Exemption from Application of the Service Contract Act to Contracts for Certain Services— Certification. (Nov 2007)

PEDAL VALVES, INC. has elected not to complete this provision. Information pertaining to this provision, must be submitted to the Government with individual offers/proposals.

(End of Provision)

52.223-4 Recovered Material Certification (May 2008)

PEDAL VALVES, INC. has elected not to complete this provision. Information pertaining to this provision, must be submitted to the Government with individual offers/proposals.

(End of Provision)

52.223-9 Estimate of Percentage of Recovered Material Content for EPA-Designated Items

Alternate I (May 2008)

PEDAL VALVES, INC. has elected not to complete this provision. Information pertaining to this provision, must be submitted to the Government with individual offers/proposals.

(End of Provision)

52.225-2 Buy American Act Certificate (Feb 2009)

- (a) The offeror certifies that each end product, except those listed in paragraph (b) of this provision, is a domestic end product and that for other than COTS items, the offeror has considered components of unknown origin to have been mined, produced, or manufactured outside the United States. The offeror shall list as foreign end products those end products manufactured in the United States that do not qualify as domestic end products, i.e., an end product that is not a COTS item and does not meet the component test

in paragraph (2) of the definition of "domestic end product." The terms "commercially available off-the-shelf (COTS) item," "component," "domestic end product," "end product," "foreign end product," and "United States" are defined in the clause of this solicitation entitled "Buy American Act-Supplies."

(b) Foreign End Products:

Description:	Country of Origin:
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(c) The Government will evaluate offers in accordance with the policies and procedures of Part 25 of the Federal Acquisition Regulation.

(End of Provision)

52.225-4 Buy American Act-Free Trade Agreements-Israeli Trade Act Certificate (Jun 2009)

(a) The offeror certifies that each end product, except those listed in paragraph (b) or (c) of this provision, is a domestic end product and that for other than COTS items, the offeror has considered components of unknown origin to have been mined, produced, or manufactured outside the United States. The terms "Bahrainian, Moroccan, Omani, or Peruvian end product," "commercially available off-the-shelf (COTS) item," "component," "domestic end product," "end product," "foreign end product," "Free Trade Agreement country," "Free Trade Agreement country end product," "Israeli end product," and "United States" are defined in the clause of this solicitation entitled "Buy American Act-Free Trade Agreements-Israeli Trade Act."

(b) The offeror certifies that the following supplies are Free Trade Agreement country end products (other than Bahrainian, Moroccan, Omani, or Peruvian end products) or Israeli end products as defined in the clause of this solicitation entitled "Buy American Act-Free Trade Agreements-Israeli Trade Act": Free Trade Agreement Country End Products (Other than Bahrainian, Moroccan, Omani, or Peruvian End Products) or Israeli End Products:

Description:	Country of Origin:
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(c) The offeror shall list those supplies that are foreign end products (other than those listed in paragraph (b) of this provision) as defined in the clause of this solicitation entitled "Buy American Act-Free Trade Agreements-Israeli Trade Act." The offeror shall list as other foreign end products those end products manufactured in the United States that do not qualify as domestic end products, i.e., an end product that is not a COTS item and does not meet the component test in paragraph (2) of the definition of "domestic end product."
Other Foreign End Products:

Description:	Country of Origin:
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(d) The Government will evaluate offers in accordance with the policies and procedures of Part 25 of the Federal Acquisition Regulation.

(End of provision)

Alternate I (Jan 2004)

As prescribed in 25.1101 (b)(2)(ii), substitute the following paragraph (b) for paragraph (b) of the basic provision:

(b) The offeror certifies that the following supplies are Canadian end products as defined in the clause of this solicitation entitled "Buy American Act-Free Trade Agreements-Israeli Trade Act": Canadian End Products:

Description:	Country of Origin:
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Alternate II (Jan 2004)

As prescribed in 25.1101(b)(2)(iii), substitute the following paragraph (b) for paragraph (b) of the basic provision:

(b) The offeror certifies that the following supplies are Canadian end products or Israeli end products as defined in the clause of this solicitation entitled "Buy American Act-Free Trade Agreements-Israeli Trade Act": Canadian or Israeli End Products:

Description:	Country of Origin:
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52.225-6 Trade Agreements Certificate (Jan 2005)

(a) The offeror certifies that each end product, except those listed in paragraph (b) of this provision, is a U.S.-made, or designated country, end product, as defined in the clause of this solicitation entitled "Trade Agreements."

- (b) The offeror shall list as other end products those supplies that are not U.S.-made, or designated country, end products. Other End Products:

Description:	Country of Origin:
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- (c) The Government will evaluate offers in accordance with the policies and procedures of Part 25 of the Federal Acquisition Regulation. For line items covered by the WTO GPA, the Government will evaluate offers of U.S.-made, or designated country, end products without regard to the restrictions of the Buy American Act. The Government will consider for award only offers of U.S.-made, or designated country, end products unless the Contracting Officer determines that there are no offers for those products or that the offers for those products are insufficient to fulfill the requirements of this solicitation.

(End of Provision)

52.226-2 Historically Black College or University and Minority Institution Representation (Oct 2008)

- (a) Definitions. As used in this provision-

"Historically black college or university" means an institution determined by the Secretary of Education to meet the requirements of 34 CFR 608.2. For the Department of Defense, the National Aeronautics and Space Administration, and the Coast Guard, the term also includes any nonprofit research institution that was an integral part of such a college or university before November 14, 1986.

"Minority institution" means an institution of higher education meeting the requirements of Section 365(3) of the Higher Education Act of 1965 (20 U.S.C. 1067k), including a Hispanic-serving institution of higher education, as defined in Section 502(a) of the Act (20 U.S.C. 1101a).

- (b) Representation. The offeror represents that it-

- is is not a historically black college or university;
 is is not a minority institution.

(End of Provision)

52.227-15 Representation of Limited Rights Data and Restricted Computer Software (Dec 2007)

- (a) This solicitation sets forth the Government's known delivery requirements for data (as defined in the clause at 52.227-14, Rights in Data—General). Any resulting contract may also provide the Government the option to order additional data under the Additional Data Requirements clause at 52.227-16, if included in the contract. Any data delivered under the resulting contract will be subject to the Rights in Data—General clause at 52.227-14 included in this contract. Under the latter clause, a Contractor may withhold from delivery data that qualify as limited rights data or restricted computer software, and deliver form, fit, and function data instead. The latter clause also may be used with its Alternates II and or III to obtain delivery of limited rights data or restricted computer software, marked with limited rights or restricted rights notices, as appropriate. In addition, use of Alternate V with this latter clause provides the Government the right to inspect such data at the Contractor's facility.
- (b) By completing the remainder of this paragraph, the offeror represents that it has reviewed the requirements for the delivery of technical data or computer software and states [offeror check appropriate block]—
- (1) None of the data proposed for fulfilling such requirements qualifies as limited rights data or restricted computer software; or
 - (2) Data proposed for fulfilling such requirements qualify as limited rights data or restricted computer software and are identified as follows:
- (c) Any identification of limited rights data or restricted computer software in the offeror's response is not determinative of the status of the data should a contract be awarded to the offeror.

(End of Provision)

END