AGREEMENT

FOR

ENGINEERING SERVICES

THIS AGREEMENT (Agreement) is by and between The City of Grand Island, Nebraska (Owner) and Black & Veatch Corporation (Engineer);

W I T N E S S E T H :

WHEREAS, Owner intends to develop an asset management program for the City's wastewater treatment plant and collection system pump stations (the Project);

WHEREAS, Owner requires certain engineering services in connection with the Project (the Services); and,

WHEREAS, Engineer is prepared to provide the Services.

NOW, THEREFORE, in consideration of the promises contained in this Agreement, Owner and Engineer agree as follows:

ARTICLE 1 - EFFECTIVE DATE

The effective date of this Agreement shall be July 14, 2015.

ARTICLE 2 - GOVERNING LAW

This Agreement shall be governed by and construed in accordance with the laws of the State of Nebraska without giving effect to the principles thereof relating to conflicts of law.

ARTICLE 3 - SERVICES TO BE PERFORMED BY ENGINEER

Engineer shall perform the Services described in Attachment A, Scope of Services. Engineer shall have no liability for defects in the Services attributable to Engineer's reliance upon or use of data, design

criteria, drawings, specifications, or other information furnished by Owner or third parties retained by Owner.

ARTICLE 4 – COMPENSATION

4.1 Payment shall be due and payable upon receipt by Owner to Engineer in accordance with Attachment B, Compensation.

4.2 Method of Payment. Payments due Engineer under this Agreement shall be electronically transferred either by ACH, specifically in CCD+ or CTX format, or wire transfer to the bank account and in accordance with the bank instructions identified in Engineer's most recent invoice in immediately available funds no later than the payment due date. Invoice number and project name shall be referenced in the bank wire reference fields or the ACH addenda information.

4.3 In the event Owner disputes any invoice item, Owner shall give Engineer written notice of such disputed item within ten (10) days after receipt of such invoice and shall pay to Engineer the undisputed portion of the invoice according to the provisions hereof. If Owner fails to pay any invoiced amounts when due, interest will accrue on each unpaid amount at the rate of one and one-half percent (1 ½%) per month, or the maximum amount allowed by law, if less, from the date due until paid according to the provisions of this Agreement. Interest shall not be charged on any disputed invoice item finally resolved in Owner's favor. Payment of interest shall not excuse or cure any default or delay in payment of amounts due.

ARTICLE 5 - OWNER'S RESPONSIBILITIES

Owner shall at such times as may be required by Engineer for the successful and expeditious completion of the Services:

5.1 Obtain all permits and licenses required to be taken out in the name of Owner which are necessary for the performance of the Services;

5.2 Provide Engineer with all specifications necessary for the completion of the Services;

5.3 Advise Engineer of the existence and undertake the abatement and disposal of all hazardous materials, including, but not limited to, asbestos, polychlorinated biphenyls (PCBs) and radioactive material and other toxic substances, encountered by Engineer in the performance of the Services; and

5.4 Appoint an individual who shall be authorized to act on behalf of Owner, with whom Engineer may consult at all reasonable times, and whose instructions, requests, and decisions will be binding upon Owner with concurrence of the City Council as to all matters pertaining to this Agreement and the performance of the parties hereunder.

ARTICLE 6 - STANDARD OF CARE

Engineer shall exercise the same degree of care, skill, and diligence in the performance of the Services as is ordinarily possessed and exercised by a professional engineer under similar circumstances. ***NO OTHER WARRANTY, EXPRESSED OR IMPLIED, IS INCLUDED IN THIS AGREEMENT OR IN ANY DRAWING, SPECIFICATION, REPORT, OR OPINION PRODUCED PURSUANT TO THIS AGREEMENT.***

ARTICLE 7 - LIABILITY AND INDEMNIFICATION

7.1 General. Having considered the potential liabilities that may exist during the performance of the Services, the benefits of the Project, and the Engineer's fee for the Services, and in consideration of the promises contained in this Agreement, Owner and Engineer agree to allocate and limit such liabilities in accordance with this Article. Indemnities against, releases from, and limitations on liability expressed in this Agreement shall apply even in the event of the breach of contract or warranty, tort (including negligence), strict liability or other basis of legal liability of the party indemnified or released, or of the party whose liability is limited. Such indemnities, releases, and limitations shall extend to the partners, licensors, subcontractors, vendors and related entities of such party, and all such parties' directors, officers, shareholders, employees, and agents.

7.2 Indemnification. Engineer agrees to defend, indemnify, and hold harmless the Owner, from and against legal liability for all claims, losses, damages, and expenses resulting from death or bodily injury to any person, damage or destruction to third-party property to the extent such claims, losses, damages,

or expenses are caused by its negligent acts, errors, or omissions. In the event such claims, losses, damages, or expenses are caused by the joint or concurrent negligence of Engineer and Owner, they shall be borne by each party in proportion to its own negligence.

7.3 Employee Claims. Engineer shall indemnify Owner against legal liability for damages arising out of claims by Engineer's employees. Owner shall indemnify Engineer against legal liability for damages arising out of claims by Owner's employees.

7.4 Consequential Damages. Notwithstanding any provision in this Agreement to the contrary, and to the fullest extent permitted by law, Engineer (including any of its related or affiliated companies) shall not be liable to Owner and Owner expressly waives all claims for loss of profits, revenue, use, opportunity, and goodwill; cost of substitute facilities, goods, and services; cost of capital; increased operating costs; and for any special, indirect, incidental, consequential, punitive, or exemplary damages resulting in any way from the performance or non-performance of the Services whether arising under breach of contract or warranty, tort (including negligence), indemnity, strict liability or other basis of legal liability.

7.5 Limitations of Liability. To the fullest extent permitted by law, Engineer's (including any of its related or affiliated companies) total liability to Owner for all claims, losses, damages, and expenses, whether arising under breach of contract or warranty, tort (including negligence), indemnity, strict liability or any other basis of legal liability, resulting in any way from the performance or non-performance of the Services shall not exceed the total compensation actually received by Engineer under this agreement.

7.6 Survival. Upon completion of all Services, obligations, and duties provided for in this Agreement, or if this Agreement is terminated for any reason whatsoever, the terms and conditions of this Article shall survive.

ARTICLE 8 – INSURANCE

During the performance of the Services under this Agreement, Engineer shall maintain the following insurance:

(1) General Liability Insurance, with a limit of $1,000,000 for each occurrence and in the aggregate.

(2) Automobile Liability Insurance, with a combined single limit of $1,000,000.

(3) Workers' Compensation Insurance in accordance with statutory requirements and Employers' Liability Insurance, with limits of $500,000 for each occurrence and in the aggregate.

(4) Professional Liability Insurance, with a limit of $1,000,000 per occurrence and in the aggregate.

Engineer shall, upon written request, furnish Owner certificates of insurance which shall include a provision that such insurance shall not be canceled without at least thirty days' written notice to Owner. If Owner purchases, or causes a contractor to purchase, a builders' risk or other property insurance policy for the Project, Owner shall require that Engineer be included as a named insured on such policy without liability for the payment of premiums.

Owner assumes sole responsibility and waives all rights and claims against Engineer for all loss of or damage to property owned by or in the custody of Owner and any items at the job site or in transit thereto (including, but not limited to, construction work in progress), however such loss or damage shall occur, except damage when is the fault or negligence of Engineer. Owner shall require its insurers to waive all rights of subrogation against Engineer for claims covered under any property insurance the Owner may carry.

Owner shall require all Project contractors under contract with Owner to include Owner and Engineer as additional insureds on their general, automobile, excess, and umbrella liability insurance policies. Further, Owner shall obtain and maintain for the benefit of Engineer the same indemnities, waivers of subrogation rights and insurance benefits obtained for the protection of the Owner from any construction contractor and subcontractor working on the Project and shall obtain from that contractor and subcontractor insurance certificates evidencing the required coverages.

ARTICLE 9 - LIMITATIONS OF RESPONSIBILITY

Engineer shall not be responsible for: (1) construction means, methods, techniques, sequences, procedures, or safety precautions and programs in connection with the Project; (2) the failure of any contractor, subcontractor, vendor, or other Project participant, not under contract to Engineer, to fulfill contractual responsibilities to the Owner or to comply with federal, state, or local laws, regulations, and codes; or (3) procuring permits, certificates, and licenses required for any construction unless such responsibilities are specifically assigned to Engineer in Attachment A, Scope of Services.

ARTICLE 10 - OPINIONS OF COST AND SCHEDULE

Since Engineer has no control over the cost of labor, materials, or equipment furnished by others not under contract to Engineer, or over the resources provided by others not under contract to Engineer to meet Project schedules, Engineer's opinion of probable costs and of project schedules for construction shall be made on the basis of experience and qualifications as a professional engineer. Engineer does not guarantee that proposals, bids, or actual Project costs will not vary from Engineer's opinions of probable cost or that actual schedules will not vary from Engineer's projected schedules.

ARTICLE 11 - REUSE OF DOCUMENTS

All documents, including, but not limited to, drawings, specifications, and computer software prepared by Engineer pursuant to this Agreement are instruments of service in respect to the Project. They are not intended or represented to be suitable for reuse by Owner or others on extensions of the Project or on any other project. Any reuse without prior written verification or adaptation by Engineer for the specific purpose intended will be at Owner's sole risk and without liability or legal exposure to Engineer. Owner shall defend, indemnify, and hold harmless Engineer against all claims, losses, damages, injuries, and expenses, including attorneys' fees, arising out of or resulting from such reuse. Any verification or adaptation of documents will entitle Engineer to additional compensation at rates to be agreed upon by Owner and Engineer.

Any files delivered in electronic media may not work on systems and software different than those with which they were originally produced. Engineer makes no warranty as to the compatibility of these files with any other system or software. Because of the potential degradation of electronic medium over time, in the event of a conflict between the sealed original drawings/hard copies and the electronic files, the sealed drawings/hard copies will govern.

ARTICLE 12 - OWNERSHIP OF DOCUMENTS AND INTELLECTUAL PROPERTY

Project specific engineering documents, drawings, and specifications prepared by Engineer as part of the Services shall become the property of Owner when Engineer has been compensated for all Services rendered, provided, however, that Engineer shall have the unrestricted right to their use. Engineer shall, however, retain its rights in its standard drawing details, specifications, data bases, computer software, and other proprietary property. Rights to intellectual property developed, utilized, or modified in the performance of the Services shall remain the property of Engineer.

ARTICLE 13 - TERMINATION

This Agreement may be terminated by either party upon written notice in the event of substantial failure by the other party to perform in accordance with the terms of this Agreement. The nonperforming party shall have fifteen calendar days from the date of the termination notice to cure or to submit a plan for cure acceptable to the other party.

Owner may terminate or suspend performance of this Agreement for Owner's convenience upon written notice to Engineer. Engineer shall terminate or suspend performance of the Services on a schedule acceptable to Owner. If termination or suspension is for Owner's convenience, Owner shall pay Engineer for all the Services performed and termination or suspension expenses, including, but not limited to, demobilization, remobilization and cancellation charges approved by the Owner. Upon restart, an equitable adjustment shall be made to Engineer's compensation.

ARTICLE 14 - DELAY IN PERFORMANCE

Except for Owner's payment obligation, neither Owner nor Engineer shall be considered in default of this Agreement for delays in performance caused by circumstances beyond the reasonable control of the non-performing party. For purposes of this Agreement, such circumstances include, but are not limited to: unusually severe weather conditions; floods; earthquakes; fire; epidemics; war, riots, and other civil disturbances; strikes, lockouts, work slowdowns, and other labor disturbances; sabotage; judicial restraint; and inability to procure permits, licenses, or authorizations from any local, state, or federal agency for any of the supplies, materials, accesses, or services required to be provided by either Owner or Engineer under this Agreement.

Should such circumstances occur, the non-performing party shall, within a reasonable time of being prevented from performing, give written notice to the other party describing the circumstances preventing continued performance and the efforts being made to resume performance of this Agreement. Engineer shall be entitled to an equitable adjustment in schedule and compensation in the event such circumstances occur.

ARTICLE 15 - PRE-EXISTING CONTAMINATION

Anything herein to the contrary notwithstanding, title to, ownership of, and legal responsibility and liability for any and all pre-existing contamination shall at all times remain with Owner. "Pre-existing contamination" is any hazardous or toxic substance, material, or condition present at the Project site or sites concerned which was not brought onto such site or sites by Engineer for the exclusive benefit of Engineer. Owner shall release, defend, indemnify, and hold Engineer harmless from and against any and all liability which may in any manner arise from or be in any way directly or indirectly caused by such pre-existing contamination except if, and then only to the extent, such liability is caused by Engineer's sole negligence or willful misconduct.

ARTICLE 16 - COMMUNICATIONS

Any communication required by this Agreement shall be made in writing to the address specified below:

Engineer: Mr. Derek Cambridge
Black & Veatch Corporation
8400 Ward Parkway
Kansas City, MO 64114

Owner: Mr. Marvin Strong, P.E.
City of Grand Island
Wastewater Treatment Plant Engineer
100 E. First St.
Grand Island, NE 68802-1968

Nothing contained in this Article shall be construed to restrict the transmission of routine communications between representatives of Engineer and Owner.

ARTICLE 17 - WAIVER

A waiver by either Owner or Engineer of any breach of this Agreement shall be in writing. Such a waiver shall not affect the waiving party's rights with respect to any other or further breach.

ARTICLE 18 - SEVERABILITY

The invalidity, illegality, or unenforceability of any provision of this Agreement or the occurrence of any event rendering any portion or provision of this Agreement void shall in no way affect the validity or enforceability of any other portion or provision of this Agreement. Any void provision shall be deemed severed from this Agreement, and the balance of this Agreement shall be construed and enforced as if this Agreement did not contain the particular portion or provision held to be void. The parties further agree to amend this Agreement to replace any stricken provision with a valid provision that comes as close as possible to the intent of the stricken provision. The provisions of this Article shall not prevent this entire Agreement from being void should a provision which is of the essence of this Agreement be determined void.

ARTICLE 19 - INTEGRATION

This Agreement represents the entire and integrated agreement between Owner and Engineer. It supersedes all prior and contemporaneous communications, representations, and agreements, whether oral or written, relating to the subject matter of this Agreement. This Agreement may only be modified by a written amendment executed by both parties.

ARTICLE 20 - SUCCESSORS AND ASSIGNS

Owner and Engineer each binds itself and its directors, officers, partners, successors, executors, administrators, assigns, and legal representatives to the other party to this Agreement and to the directors, officers, partners, successors, executors, administrators, assigns, and legal representatives of such other party in respect to all provisions of this Agreement.

ARTICLE 21 - ASSIGNMENT

Neither Owner nor Engineer shall assign any rights or duties under this Agreement without the prior written consent of the other party, except that Engineer may do so to any of its related, affiliated, or successor entities upon written notice to Owner of same. Unless otherwise stated in the written consent to an assignment, no assignment will release or discharge the assignor from any obligation under this Agreement. Nothing contained in this Article shall prevent Engineer from employing independent consultants, associates, and subcontractors to assist in the performance of the Services.

ARTICLE 22 - THIRD PARTY RIGHTS

Nothing in this Agreement shall be construed to give any rights or benefits to anyone other than Owner and Engineer.

ARTICLE 23 – GRATUITIES AND KICKBACKS

City Code states that it is unethical for any person to offer, give or agree to give any city employee or former city employee, or for any city employee or former city employee to solicit, demand, accept, or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, or preparation of any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy, or other particular matter, pertaining to any program requirement or a contract or subcontract, or to any solicitation or proposal therefore. It shall be unethical for any payment, gratuity, or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor or any person associated therewith, as an inducement for the award of a subcontract or order.

ARTICLE 24 – EXHIBITS INCORPORATED

All Attachments listed below and discussed in this AGREEMENT are hereby incorporated into the AGREEMENT by this reference.

- Attachment A; Scope of Services
- Attachment B; Compensation
- Attachment C; Schedule of Hourly Billing Rates and Charges

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement as of the day and year first above written.

OWNER:

CITY OF GRAND ISLAND,
NEBRASKA

By: _____

Title: Jeremy Jensen, Mayor

Date: 7/14/2015

Attest: _____

RaNae Edwards, City Clerk

ENGINEER:

BLACK & VEATCH CORPORATION

By: _____

Derek L. Cambridge
Title: Associate Vice President

Date: 7/8/15

Date: 7/14/2015

The Amendment is in due form according to law and is hereby approved.

_____

Stacy R. Nonhof, Assistant City Attorney

Date: 7/14/15

Scope of Services – Asset Management Implementation Assistance for Wastewater Treatment Plant

General

This scope of work describes the services to be rendered by Black & Veatch (the "ENGINEER") to the CITY of Grand Island (the "CITY") for asset management implementation assistance for the Grand Island Wastewater Treatment Plant (WWTP). The project will develop an asset register for the WWTP utilizing both the CITY Geographic Information System (GIS) and asset management system (Cartegraph), inventory the major assets at the WWTP, and then configure the asset management system for the maintenance activities associated with those assets.

Project Information

Project Title: Asset Management Implementation Assistance for the Wastewater Treatment Plant

Objective: The CITY requires the development of the necessary supporting data and configuration of its previously selected Enterprise Asset and Maintenance Management System (EAMS), Cartegraph, in support of its asset management program for wastewater treatment operations. The ENGINEER will develop a conceptual data model identifying the necessary asset types and associated attribute information, the appropriate linkages to the CITY's Geographic Information System (GIS), inventory the associated asset types at the wastewater treatment plant and collect the necessary attribute information, load the inventoried asset data into the EAMS, and finally configure the EAMS with the appropriate maintenance activities for the loaded assets.

The ENGINEER shall complete the services described herein within two hundred seventy (270) days, based on notice to proceed by August 1, 2015. This schedule assumes that documents will be provided to the CITY five (5) working days before scheduled milestone reviews and/or workshops and that all CITY review comments will be received within ten (10) working days after the transmittal or review workshops.

The CITY goals of supporting the development and implementation of a comprehensive EAMS solution for wastewater treatment will be achieved by ENGINEER in the completion of, but are not limited to, the following efforts:

- Development of a conceptual data model design for wastewater treatment plant assets.
- Integration, at a practical level, of wastewater treatment plant assets with the CITY GIS.
- Development of an associated physical geodatabase design (for assets integrated with GIS) for wastewater treatment plant assets.

- Inventory of wastewater treatment plant assets and associated attribute information.
- Configuration of appropriate wastewater treatment asset types within Cartegraph EAMS solution.
- Loading of inventory data results into GIS and EAMS solutions as appropriate.
- Configuration of Cartegraph EAMS solution with appropriate work order types, tasks, preventive maintenance schedules and inspections to support wastewater treatment plant maintenance procedures.
- Training of CITY personnel on use and administration of newly configured EAMS components.

Project Administration and Controls: The ENGINEER will provide ongoing direction and management of the PROJECT. Review staffing, budget, progress, and quality of work throughout the course of the PROJECT for ENGINEER and subcontractors. Provide PROJECT status reports to the CITY with each invoice and at the completion of each major phase of the project.

1. Progress Reporting: The progress report accompanying each invoice shall include an updated schedule, summary of work completed, outstanding project issues, potential scope adjustments and a comparison of work completed compared against the invoiced amount.

2. Trend Management: In the event there is a consideration to change the scope of the PROJECT, the ENGINEER shall develop and present a Potential Scope Adjustment (PSA) document which itemizes the potential change(s) in scope, details the anticipated cost impact on both the ENGINEER's work as well as for the PROJECT's completion, and indicates any anticipated changes in the initial PROJECT's schedule. The CITY will provide direction to ENGINEER on the implementation of any PSA's and both parties will endeavor to negotiate an amendment to the task. The approval of all PSA's, schedule, and compensation shall be authorized in resolution form by the Mayor and Council of the City of Grand Island prior to notice to proceed.

Project Location: The PROJECT site is the Grand Island WWTP in Grand Island, Nebraska.

Task Authorizations: The scope of services identifies several project checkpoints in order to determine CITY acceptance prior to commencing subsequent efforts. In addition, CITY will authorize commencement of work for each major task identified within this scope of services. ENGINEER will begin no work on a task without prior written authorization.

Work Tasks

ENGINEER will perform the following specific tasks as part of this Scope of Services:

Task 1 – Analyze & Define WWTP Assets & Prepare Conceptual Design Report

Objective: Develop a conceptual design identifying the various types of assets for the wastewater treatment plant, their relation to GIS features, the associated geodatabase design for GIS related features, and appropriate attribute information for each asset type.

Subtasks

1. Kick-off meeting: Determine needs and goals of the CITY staff. Attend one (1) meeting in Grand Island to discuss the PROJECT goals with the CITY staff. Discuss breakdown of work tasks and associated ENGINEER and CITY roles and responsibilities.

2. Data review: Review existing GIS (Geographic Information System), CADD (Computer Aided Drafting and Design) drawings, and the existing Antero maintenance management system data to develop understanding of current standards in place with regards to GIS as well as current level of detail and quality of information within Antero EAMS solution related to asset information.

3. Asset information workshops: Prepare for and conduct up to two (2) days of information gathering workshops to review each potential asset type, identify CITY requirements as related to attribute information, and assess potential sources for attribute information that may not be available via field inventory efforts. An additional 3 days will be spent on-site following the workshops to work with CITY personnel on an as-needed basis to further refine and clarify the information to be stored for each asset type.

4. Conceptual design report: Prepare a WWTP Assets Conceptual Design Report. Report will include a listing of each asset type, its associated attributes with field types and possible valid lists of values, whether the asset type will be an integrated GIS feature class and the information that might be housed and integrated between GIS and EAMS.

5. Conceptual design report review and finalization:

    a. Following delivery of the draft Conceptual Design Report, conduct a half (1/2) day workshop with CITY staff to review conceptual design and recommendations.

    b. Revise report based on CITY feedback and workshop discussions and prepare final Conceptual Design Report.

    c. *Task Checkpoint* - CITY will review design and provide authorization prior to commencement of efforts to begin development of the physical data model.

6. Physical asset data model design: Following review and acceptance of conceptual design report, ENGINEER will prepare a physical asset data model design as follows:

    a. For asset types to be integrated with GIS, ENGINEER will prepare physical geodatabase design within ArcGIS 10.2.2 geodatabase in XML geodatabase workspace document format.

    b. For all asset types, regardless of GIS integration, configuration of WWTP Cartegraph Library, associated Recordsets, and Relationships within Cartegraph OMS version Spring 2015 per specifications in conceptual design report. ENGINEER will configure asset

types in CITY's production Cartegraph environment provided by CITY's current licensing agreement.

c. Revise physical geodatabase design and Cartegraph WWTP library based on CITY review and comment.

d. *Task Checkpoint* - CITY will review physical data model and provide authorization prior to commencement of efforts to begin Task 2.

Task 2 – Collect WWTP Assets & Attributes & Populate Asset Database(s)

Objective: Populate the asset register, comprised of the geodatabase design in GIS and WWTP library in Cartegraph, with WWTP asset data. Conduct a field inventory of WWTP assets to collect and verify asset information and then load the information into the combined asset management databases accordingly.

Subtasks

1. Below Grade Utility Piping Development: For yard piping and appurtenances assets, ENGINEER will create an AutoCAD drawing of all known below grade utilities at the WWTP. The AutoCAD drawing will be based on the CITY's chosen GIS coordinate system so that the drawing can be converted to a GIS file that is compatible with the CITY's system. Initial creation in AutoCAD will result in a file that can be disseminated to other engineering design consulting firms for future reference.

    a. The current AutoCAD file for the Headworks Improvement project will be combined with other AutoCAD drawings the City has from previous projects.

    b. The existing plans the CITY has from previous projects will be reviewed and any missing utilities noted on those plans will be added to the CADD drawing. In addition to the line locations the following items will be noted on the CADD drawing (if available):

        i. Pipe diameter

        ii. Pipe material type

        iii. Pipe elevations

        iv. Installation date

        v. Valve, curb stop, hydrant (fire & yard hydrants)locations

            1. Valve & hydrant information will also be added

    c. Additional field survey work will be completed to pick up any available utility locations as well as to shoot the existing plant coordinate points in order to convert the plant site to the CITY's coordinate system.

d. The updated AutoCAD drawing will be reviewed with the CITY (assuming 2 review meetings) and comments from the CITY will be incorporated into the drawing.

2. Inventory application preparation: Prior to initiation of field inventory activities, ENGINEER will prepare equipment and application to support inventory of WWTP assets.

   a. ENGINEER will make use of tablet computers with cellular data connections and a custom configured doForms application to prepare a mobile form application to collect information.

   b. Facilities to be inventoried will include CITY WWTP (with the exception of Building 1) and fourteen (14) lift stations. However, additional buildings on the WWTP and/or lift stations may be identified as unnecessary to inventory by the CITY by time of commencement of inventory activities based on other CITY projects.

   c. Existing asset attribute information, where available in Antero application, will be pre-loaded into mobile application for more efficient inventory activities along with fields to indicate verification of any pre-loaded information by field personnel.

   d. For asset information that will knowingly not be available during field inventory, existing data sources identified in Task 1 will be utilized to populate associated attribute information where available. This information will be pre-loaded into the application but made read-only in order to assist with field inventory efforts.

   e. Existing tag numbers will be used as the primary identifier for all assets.

   f. ENGINEER will train field inventory staff on the PROJECT specific use of the application prior to initiating field activities.

   g. *Task Checkpoint* - CITY will review project efforts to date and provide authorization prior to commencement of efforts to begin field inventory.

3. Conduct WWTP asset inventory:

   a. ENGINEER will conduct on-site coordination with CITY to coordinate schedules and access to necessary plant areas for field inventory activities.

   b. A building/mechanical specialist, civil/mechanical specialist, site/civil/piping specialist, electrical specialist, instrumentation and control (SCADA) specialist, and structural specialist will each spend five (5) days on-site conducting field inventory activities for up to one thousand five hundred (1,500) WWTP and lift station assets. Information to be captured in the field will be based on the asset data model design completed in Task 1. Each discipline will focus their inspections on their corresponding area of expertise.

      i. The building/mechanical will focus on mechanical equipment and HVAC.

ii. The site/civil/piping specialist will focus yard piping, appurtenances, and associated interior and exterior process piping systems.

iii. Electrical specialist will focus on power distribution equipment, electrical systems, and motor control centers.

iv. Instrumentation and control will focus on SCADA.

v. Structural will focus on buildings and facilities.

c. CITY will provide staff from operations and/or maintenance in order to assist field inventory staff with access to necessary equipment.

d. Any assets with missing or unreadable tag numbers will be noted and brought to attention of CITY staff for temporary/permanent re-tagging.

e. Inventoried assets to be integrated with GIS will also include capturing of location information. Although to be determined in Task 1 during the creation of the conceptual and physical data models, it is anticipated that all assets exterior to buildings and major process equipment will be inventoried with a location (spatial) component.

i. For applicable equipment assets, location will be based on best level of spatial accuracy available from tablet computer (depending on signal availability, +/- 10 feet).

ii. For large structural assets, footprints will be digitized into the GIS using the latest available orthorectified photography. Should structures not be visible on latest photography, ENGINEER will work with CITY to identify best possible source to generate feature from such as, but not limited to, rectified site plans, drone captured aerial photography, or mapping grade GPS survey.

f. All inventoried assets will also include a digital photo of the asset utilizing camera available from tablet computer.

g. Plant assets to be inventoried will be pre-determined based on the Task 1 asset data model development. Only those asset types identified during the data model development will be inventoried.

4. QA/QC of field inventory data: In parallel with field inventory activities, ENGINEER will conduct ongoing quality assurance/quality control of asset data including analysis for required data, validation against pre-defined lookup lists, and missing, new and/or incomplete assets associated information.

5. CITY review of inventory information: ENGINEER will provide inventory data to CITY personnel in for review and comment. For assets to be integrated with GIS, ENGINEER will provide

associated GIS data in XML workspace export format. For remaining Cartegraph asset information, ENGINEER will provide asset data within the Cartegraph OMS development/test environment. In addition, ENGINEER will provide asset data (not including spatial location and photographs) in Microsoft Excel format for CITY review. CITY will review and provide consolidated comments/questions back to ENGINEER for correction or clarification.

6. Final field inventory data correction: Following review/comment by CITY, ENGINEER will re-inventory any assets found to be in error. It is anticipated that no more than five (5) person-days of additional inventory efforts will be required to address questions or clarifications.

7. Population of asset register(s): Upon completion of final field inventory, all asset data will be loaded into the respective production systems (GIS and Cartegraph).

    a. *Task Checkpoint* - CITY will review asset data and provide authorization prior to commencement of efforts to begin Task 3.

Task 3 – Configure WWTP Assets & Maintenance Activities in Cartegraph OMS

Objective: Configuration of the Cartegraph OMS application to support the corrective and preventive maintenance activities for the previously loaded assets at the WWTP in accordance with CITY WWTP operations and maintenance practices.

Subtasks

1. Review of current maintenance practices: ENGINEER will conduct workshops with WWTP maintenance personnel to identify necessary work order types, activities, associated data, and general maintenance practices for the WWTP. Workshops will occur over three (3) day period with specific focuses on mechanical equipment maintenance, electrical equipment maintenance, and interaction with/involvement of operations personnel maintenance processes.

2. Preventive maintenance (PM) schedule development: ENGINEER will work with WWTP maintenance personnel to identify equipment associated with preventive maintenance programs and develop associated PM schedules within Cartegraph OMS. ENGINEER will provide data population templates (with previously collected assets already populated) and guidance for completion of schedule components. CITY will assist in identifying schedule type (meter or calendar), last completed date or interval for PM on each asset, and next date or interval for PM.

3. Cartegraph OMS base configuration: ENGINEER will configure EAMS solution based on iterative approach soliciting feedback from appropriate CITY personnel. For all data originating from external information systems, CITY personnel will provide data in pre-defined format for loading into Cartegraph OMS. For example, specific employee data from CITY human resources system such as employee ID, title, burdened labor rates, etc. will be requested for loading into Cartegraph and, based on coordination with CITY staff, provided in comma separated value

(CSV) or other appropriate format from originating system. As full functional requirements of the system have not been fully defined by the CITY at this time, configuration efforts are assumed to require up to five (5) weeks of effort. Base system configuration will include:

- Identification of user roles/responsibilities and associated access/security rights.
- Asset performance and deterioration curves (where data is available)
- Employees
- Requests
- Work order types
- Work order custom fields
- Work order tasks
- Materials
- Vendors
- Fleet
- Equipment
- Preventive maintenance schedules
- Inspections

a. *Task Checkpoint* - CITY will review base configuration prior to commencement of mobile configuration and testing efforts.

4. Cartegraph mobile configuration and testing: ENGINEER will test and adjust configuration to support deployment of Cartegraph mobile solution for iPad for CITY WWTP maintenance personnel. CITY is responsible for procurement of mobile devices and associated cellular data provider agreements.

5. Custom report development: During review of current maintenance practices workshops, ENGINEER and CITY will identify any requirements for custom report development to support operations and maintenance practices. ENGINEER will develop, test, and deploy custom reports accordingly utilizing CITY preferred (and Cartegraph supported) report development tool. As number and complexity of custom reports is not known at this time, custom report development is assumed to be a one (1) week effort and will be conducted in parallel (where possible) with configuration activities.

   a. *Task Checkpoint* - CITY will review and approve all prior Task 3 efforts prior to the commencement of end user training and go-live efforts.

6. End user training: ENGINEER will prepare for and conduct end user training for CITY WWTP personnel on use and maintenance of configured Cartegraph OMS solution. Training will be conducted onsite at CITY provided facilities utilizing CITY provided equipment. ENGINEER will

provide customized training manuals and instructor to conduct training. Training will be role based and specific job roles and functions (e.g. operations, mechanical maintenance, electrical maintenance, management, system administrator, etc.). As specific roles and current number of users within each role are not known at this time, training is assumed to be a one (1) week effort.

7. Go-live support: ENGINEER will provide one (1) week of on-site go-live support and system configuration adjustments during initial cutover to production system.

Supplemental Services

Any work requested by CITY that is not included in one of the items listed above will be classified as supplemental services. Such services are as follows:

1. Additional meetings with local, State, or Federal agencies to discuss the PROJECT.
2. Additional appearances at public hearings or before special boards.
3. Supplemental Engineering Work required to meet the requirements of regulatory funding agencies that become effective subsequent to the date of this agreement.
4. Special consultants or independent professional associated requested or authorized by CITY.
5. Changes in the general scope, extent, or character of the project, including, but not limited to:
    a. Custom software or tool development.
    b. Development of custom software integrations with other CITY systems.
    c. Customizations (other than base product configuration tasks) of Cartegraph OMS solution.
    d. Asset condition and reliability assessment.
    e. Predictive Maintenance (PdM) or Reliability Centered Maintenance (RCM) program and practice development.
    f. Potholing or use of other techniques (e.g. ground penetrating radar) for locating of yard piping, appurtenances, or other below ground assets.

ATTACHMENT B – TO AGREEMENT FOR ENGINEERING SERVICES
City of Grand Island – Asset Management Implementation Assistance for Wastewater Treatment Plant

Compensation – Wastewater Treatment Plant and Collection System Improvements

For the services covered by this Agreement, the CITY agrees to pay the ENGINEER as follows:

1. For services described in Attachment A, Scope of Services, an amount equal to the ENGINEER's salary billings plus reimbursable expenses and subcontract billings. The maximum billed for these services shall not exceed Three Hundred and Sixty Seven Thousand Dollars, Seven Hundred and no cents ($367,700.00) without further authorization.

2. The schedule of hourly billing rates and charges by job classification is shown in Attachment C.

3. For supplemental services, an amount equal to the ENGINEER's salary billings plus reimbursable expenses and subcontract billings. Each item of supplemental services shall be specifically authorized by the CITY, and a maximum billing limit shall be established before the work is started. The amount billed for each item of supplemental services shall not exceed the amount established for it without further authorization. Additional amounts for supplemental services may be authorized, if necessary, as the work progresses. The schedule of hourly billing rates and charges by job classification is shown in Attachment C.

4. The ENGINEER agrees to use its best efforts to perform the services within the billing limit stated above and in accordance with the agreed upon performance schedules. If, at any time, the ENGINEER has reason to believe that the cost of the services will be greater than the billing limit, the ENGINEER shall promptly notify the CITY to that effect, giving a revised billing limit for performance of the services.

5. Monthly payments shall be made to the ENGINEER by the CITY based on the ENGINEER's statement. The statement shall indicate the name of the individuals working on the project and the hours associated with each of their efforts.

   Each invoice shall be accompanied by a progress report prepared by ENGINEER's Project Manager. The report shall describe, in narrative form, the work accomplished during the period covered by the invoice and present a summary of the status of the project to-date. The summary shall address the project schedule, budget, and any significant changes in the scope of the work.

   In the event CITY disputes any invoice item, CITY shall give ENGINEER written notice of such disputed item within ten (10) days after receipt of such invoice and shall pay to ENGINEER the undisputed portion of the invoice according to the provisions hereof.

6. It is understood and agreed that the maximum billings is based on the start of the services being authorized not later than September 1, 2015. If start of services is not authorized by the date given, it is understood and agreed that the maximum billing limit will be adjusted accordingly by a supplement to this Agreement.

7. It is understood and agreed:

That the ENGINEER shall start the performance of services listed in Attachment A within ten days of receipt of notice to proceed.

That the ENGINEER shall keep records on the basis of generally accepted accounting practice of costs and expenses and which records shall be available to inspection at reasonable times.

ATTACHMENT C – TO AGREEMENT FOR ENGINEERING SERVICES
City of Grand Island – Asset Management Implementation Assistance for Wastewater Treatment Plant

Schedule of Hourly Billing Rates and Charges – Wastewater Treatment Plant and Collection System Improvements

1. Compensation for personnel used in the performance of engineering services shall be in accordance with the following hourly billing rates.

Black & Veatch Classification	2011 Hourly Billing Rates
Project Director/Manager	$225
Project Administration and Clerical	$80
Project Accountant	$80
Sr. GIS Consultant/Manager	$202
GIS Consultant	$145
GIS Specialist	$125
GIS Technician	$110
Facility/Process Inventory Lead	$185
Sr. Systems/Business Analyst	$200
CMMS Implementation Specialist	$150
Engineering Manager	$175
Design Engineer	$100
Assistant Engineer	$85
Surveyor	$80
CAD Coordinator	$164
CAD Technician	$90
Architect	$156
Architect Tech	$108
Senior Structural Engineer	$185
Structural Engineer	$120
Senior Structural Technician	$130
Structural Technician	$88
Senior Process Mechanical Engineer	$183
Process Mechanical Engineer	$143
Senior Process Mechanical Technician	$120
Building Mechanical QC/Admin	$189
Building Mechanical Engineer	$143
Senior Building Mechanical Tech	$128
Building Mechanical CAD	$102
Project Facilitator Controls	$185
Operations Specialist	$170
Sr. Electrical Engineer	$185
Electrical Engineer	$144
Sr. Instrumentation & Controls Engineer	$185
Instrumentation & Controls Engineer	$143
Cartegraph CMMS Business Analyst	$200
Cartegraph CMMS Implementation Specialist	$175

2. Compensation for reimbursable expense items and other charges incurred in connection with the performance of the work shall be in accordance with the following schedule:

Expense Item	Unit Cost
Travel, Subsistence, and Incidental Expenses	Net Cost
Automobile/Motor Vehicles – Local Mileage	$0.57/mile
Automobile/Motor Vehicles – Rental	Net Cost
Telephone and Telegraph Costs	*
Reproduction of Reports, Drawings & Specifications	Net Cost
Postage & Shipping Charges of Job-Related Materials	*
Computer Services	*
Photograph and Video Reproductions	Net Cost
Sub-Consultant Fees	Net Charge x 1.03

* Included in hourly miscellaneous expense charge of $8.75 per hour.

3. The Schedule of Hourly Billing Rates and Charges indicated herein is effective for service in 2015. The Schedule of Hourly Billing Rates and Charges will be revised and re-issued in March of subsequent years.