REQUEST FOR PROPOSALS
For a
SCADA System Master Plan (CIP# ASY1903)

PROPOSAL SUBMITTAL DATE, TIME, & LOCATION:
November 19, 2018 @ 2:00 PM
Mount Pleasant Waterworks Operations Center
1619 Rifle Range Road
Mount Pleasant, SC 29464

EMAIL QUESTIONS TO:
Brian King, Budget & Procurement Supervisor
Financial Services Division
Mount Pleasant Waterworks
bking@mpwonline.com

*MAIL PROPOSALS TO:
Mount Pleasant Waterworks
1619 Rifle Range Road
Mount Pleasant, SC 29464
Attention: Brian King

HAND CARRY PROPOSALS TO:
Mount Pleasant Waterworks
1619 Rifle Range Road
Mount Pleasant, SC 29464

MARK ENVELOPE: “SCADA System Master Plan Proposal”
Attn: Brian King, Budget & Procurement Supervisor

*Respondents mailing proposals should allow a sufficient mail delivery period to ensure timely receipt of their proposals by Mount Pleasant Waterworks.
REQUEST FOR PROPOSALS

SCADA System Master Plan (CIP# ASY1903)

Mount Pleasant Waterworks (MPW) intends to implement a Project entitled SCADA Master Plan. This project will develop a master plan and implementation strategy for MPW’s SCADA system for the next 6 years. MPW invites interested vendors to offer formal, “Sealed Proposals” as described herein.

GENERAL INSTRUCTIONS

1) Vendors must submit two (2) copies of the proposal within the time frame indicated for submission.

2) Vendors shall submit their proposals, identifying the contents clearly marked on the outside of the envelope “SCADA System Master Plan Proposal”, by the submission deadline to: Brian King, Budget & Procurement Supervisor, Mount Pleasant Waterworks, 1619 Rifle Range Rd., Mount Pleasant, S.C. 29464. MPW will accept proposals until 2:00 p.m. Monday November 19, 2018.

3) Submission of a proposal will be considered as conclusive evidence of the proposer’s complete examinations and understanding of the specifications as provided by MPW.

4) Proposals received after the time and date specified will not be considered and will be deemed unresponsive.

5) Prices quoted shall include all discounts to be considered in making the award and shall be net, including delivery to Mount Pleasant Waterworks Operations Center. State and local taxes, as applicable, should be included in the proposal price.
GENERAL TERMS AND CONDITIONS

1) Mount Pleasant Waterworks reserves the right to reject any and all proposals in whole or in part and to waive all technicalities as deemed appropriate.

2) Awards shall be made to the proposer who submits a responsive proposal, which is most advantageous to MPW.

3) Ambiguous proposals, which are uncertain as to terms, delivery, quantity, and/or compliance with specifications, may be rejected or otherwise disregarded.

4) All proposals shall be executed and submitted in a sealed envelope. The face of the envelope shall contain “SCADA System Master Plan Proposal”, date, and time. In addition, the envelope should be marked “Attention: Brian King”.

5) Proposers and/or their representatives shall direct all inquiries and all other communications regarding this proposal to Brian King. All questions shall be in writing or electronic mail in order to forward the answers to all prospective proposers. No oral answers to proposal questions shall be permitted. This shall ensure fairness and give all proposers an equal opportunity to be considered.

6) Any addenda to the proposal documents will be issued in writing. No oral statements, explanations or commitments shall be of any effect unless incorporated in the addenda.

7) MPW reserves the right to contact proposers individually for the purpose of clarifying proposals and/or requesting additional information.

8) MPW is not liable for any cost incurred by the proposers in connection with the development and submittal of their proposals.

9) In estimating the best value, MPW will consider any of the following in addition to proposal price; quality; service capabilities; performance analysis; reference checks of other clients; and size, fiscal stability and longevity of the providing company. This list is not all-inclusive.

10) Discussions or communications (written or oral) concerning the proposal, the proposers, the proposer’s competitors or the award of the proposal with members of the Commission shall be basis for disqualification of the affected party’s proposal.
1.1 General Information and Project Background

MPW operates a water and wastewater system serving approximately 82,000 people in Mount Pleasant, SC, a suburb of Charleston, SC. The system is comprised of 500 miles of wastewater lines with 160 wastewater pump stations, and 553 miles of water lines with 2 water booster stations and 2 meter connections which serves an approximate geographic area of 53 square miles. In addition, MPW owns and operates 2 wastewater treatment plants and 4 reverse osmosis (RO) treatment plants.

The US census has named Mount Pleasant one of the fastest growing cities in the country with a 21% population increase from 2010 and to 2016. MPW ‘s system size has expanded with this growth and is expected to continue to grow over next 20 years. MPW utilizes a SCADA system to manage and operate the large amount of equipment over a large geographical area. Over the course of its development, the SCADA system has become a critical infrastructure and plays large role in MPW’s day to day operations.

The SCADA system, in its current state, is advanced and is in excellent condition. This is largely due to the implementation of strategies developed in a previous master plan that was published in 2008. Given the expected continued growth, the criticality of the SCADA system, and the success of a previous Master Plan, MPW wishes to develop a SCADA system master plan that will provide a road map for the future.

1.2 Objective

Considering the condition of MPW’s current SCADA system, the objective of this Project is to explore advanced SCADA topics, determine which advanced strategies offer worthwhile benefit to MPW, and develop a master plan document that serves as a guide for implementation. In addition to advanced topics, the project will address traditional topics and implement strategies that future proofs the current SCADA system.

1.3 Schedule

- RFP issued October 22, 2018
- RFP submittal period October 22, 2018-November 19, 2018
- RFP Due November 19, 2018, 2:00 PM
- RFP and Firm Evaluation November 19-30, 2018
- Notification of Selection December 3, 2018
- Contract Award December 10, 2018
- SCADA Master Plan – Draft June 1, 2019
- SCADA Master Plan—Final September 1, 2019

Note: MPW reserves the right to change dates as needed
2.1 Evaluation Process

Proposals will be evaluated by the following criteria:

- Firm’s credentials and experience
- Project team organization and credentials
- Project understanding
- Project scope, approach and schedule
- Cost
- Quality of proposal

Selection will be based on the proposal that best meets the criteria above and offers the best service to MPW. This list is not all-inclusive.

2.2 Proposal Requirements

2.3.1 Proposal Format

Proposal font size, font type, use of graphics, and formatting is up to the discretion of the respondent. The proposal shall clearly present the evaluation criteria listed in Section 2.1 in a concise and comprehensive manner. Inclusion of preprinted marketing material shall not be included and will not be reviewed.

Proposals shall include and organized in the following manner:

a) Cover Letter: 1 page Maximum

Addressed to:

Mount Pleasant Waterworks
1619 Rifle Range Road
Mount Pleasant SC 2946
Attn: Brian King

Contain at a minimum the following items:

- An expression of the firm’s interest in being selected for the Project.
- A statement confirming key personnel identified in the Proposal.
- A summary of the firm’s qualifications.
- A signature by a Principal of the firm with the name of firm, office address, telephone number, email address, and the name of the contact person for the Proposal.

b) Project Understanding: 1 Page Maximum

Expresses the Firm’s understanding of the Project and MPW’s goals and needs to be addressed through the project.
c) **Project Scope and Approach: 4 Pages Maximum**

A detailed description of the Firm’s approach to the project and a detailed scope of services and tasks.

d) **Firm’s General Credentials: 6 Pages Maximum**

Documents the Firm’s resources and experience in SCADA master planning by using examples of similar projects. At a minimum, the following information shall be included:

- Year Firm was established and any former name.
- Types of services offered by the firm
- Names of the principals and key personnel with experience of each person and length of time in the organization.
- Number of staff personnel available for assignment.
- Outside consultants and associates usually retained.
- List of completed similar projects including Client’s reference information. Provide at least three references for three Master Plans completed in the last five years.

e) **Project Team Organization and Credentials: 6 Pages Maximum**

Presentation of the project team, team organization, team member experience and bios, and project management approach. Full resumes for team members are encouraged and shall be placed in the Appendix section.

f) **Schedule and Project Cost: 4 Pages Maximum**

Shall include the following information:

- A statement confirming that the project team has the capability to complete the project in accordance with MPW’s proposed schedule.
- Schedule to perform tasks as outlined in the scope of work including, but not limited to:
  - Milestones for each task and each deliverable
  - List of major events
  - Schedule of reviews and meetings with MPW
- Table showing estimate of labor hours per task, per person, and the estimated labor rate ($/hr) for each person.
- A total proposed project cost.

g) **Appendix Section (Not required; Informational purposes only)**

- Team Member resumes
- No promotional materials are to be included
- Any other relevant material
3.1 Minimum Qualifications

The Firm and/or its staff must have the following minimum qualifications:

- 5 years of experience in SCADA Master Planning.
- Experience and working knowledge with VTSCADA HMI platform.
- Experience with cross integrating business and SCADA platforms.
- Experience and working knowledge with MAXIMO CMMS system.
- Experience with cellular based communication systems.
- Experience and working knowledge of DNP3 communication protocol.
- Project Manager must hold a Professional Engineer’s license in the state of South Carolina.
- Firm must hold a South Carolina Certificate of Authorization for engineering work.

4.1 Scope

4.1.1. Tasks

At minimum, the following tasks must be included in the project scope:

Task 1 Establish a Core Team: Consult with MPW’s management to select a group of 3-5 employees who have detailed knowledge of MPW’s SCADA system, represent MPW’s interests in SCADA improvements, and have the availability and time to participate in Master Planning activities.

Task 2 Submit Monthly Progress reports: Progress reports will be sent to MPW’s project manager monthly; providing a summary of tasks completed during the previous month and tasks to be completed during the next month. The report will include a task by task budget expenditure and budget summary.

Task 3 Establish understanding of SCADA System: Develop a full understanding of MPW’s SCADA system. This can be accomplished through document reviews, site visits, and other methodologies. Critical sites to MPW’s SCADA system are:

- Reverse Osmosis Plant #1
- Reverse Osmosis Plant #2
- Reverse Osmosis Plant #3
- Reverse Osmosis Plant #4
- Wand Park Booster Station
- HWY 41 Booster Station
- Rifle Range Rd Wastewater Treatment and Administration building
- Center St. Wastewater Treatment Plant
- 1 Duplex Collections Pump station
- 1 Regional collections Pump station

A Current State Technical Memorandum shall be developed, issued to MPW for their review, and included in the Master Plan.
**Task 4 Cybersecurity analysis:** The SCADA system shall be analyzed for any potential cybersecurity threats, loopholes and risks. A documented assessment shall be included as a separate section in the Current State Technical Memorandum described in **Task 3.**

**Task 5 Define SCADA System Requirements:** Stated requirements must be defined within the framework of MPW’s entire organization and an overall vision for the SCADA system must be established. Input and direction is required from SCADA stakeholders, MPW management, staff members with unique knowledge of the SCADA system, and the Core Team. At a minimum, the following requirements shall be considered and established if necessary:

- Cybersecurity
- Hardware/Software deficiencies
- Disaster Recovery analysis and planning
- Communication methods and protocols
- SCADA document management
- HMI functionality
- Alarm-Event Management
- Data Management
- Instrumentation
- SCADA Standards
- Organization and Procedures
- Optimization

Potential advanced requirements are but not limited to:

- IIOT and cloud-based technologies
- Cross Platform integration
- Advance Process Control techniques
- Data utilization and analytics
- Machine Learning

**Task 6 Develop SCADA System Requirements Technical Memorandum:** A written document that has gone through a draft review process with the Core Team and clearly defines the SCADA requirements determined in the **Task 5.**

**Task 7 Gap Analysis, Project Development and Project Scheduling:** Compare MPW’s current SCADA system to the requirements defined in **Task 5** and develop a list of projects that addresses requirement gaps. Project scope, budget estimates, and business cases must be developed for each project. The listed projects shall go through a review process that prioritizes projects to MPW’s needs and establishes an implementation and phasing plan. The finalized version of listed projects with scopes, budgets, business cases, and schedule shall be included in the master plan.
Task 8 Develop and Publish SCADA Master Plan: The master plan shall go through a draft review process with the Core Team and responsible parties from MPW. The master plan shall include the following sections:

- Executive Overview
- Overview of Current State
- Summary of Functional Requirements
- Description of Short-term Projects
- Description of Long-term Projects
- Appendices
  - Budgetary Cost Estimates
  - Overall Project Schedule
  - Cash Flow Estimates
  - Business Case for each project
  - Current State Technical Memorandum
  - SCADA System Requirements Technical Memorandum
  - Disaster Recovery Plan

Task 9 Master Plan Presentation: Present the final master plan to the Core Team, SCADA stakeholders, and MPW’s management.
PROPOSAL CONSTITUTES OFFER

By submitting a proposal, the respondent agrees to be bound by all the requirements, terms and conditions set forth in this proposal document. A proposal containing variations from the requirements, terms and conditions set forth herein may, at the sole discretion of the Commission, may be declared non-responsive. The requirements, terms and conditions set forth in this document will become part of the successful vendor’s contractual obligations upon award of the contract.

The proposer understands that quoted prices are inclusive of all costs and that no additional costs, incidental or otherwise shall apply.

________________________
VENDORS FED. ID NUMBER

________________________
OFFEROR/VENDOR

________________________(SEAL)
AUTHORIZED SIGNATURE

________________________
PRINTED SIGNATURE

________________________
BUSINESS ADDRESS

________________________
CITY, STATE AND ZIP CODE

________________________
TELEPHONE NUMBER

________________________
FAX NUMBER

________________________
E-MAIL ADDRESS