



City of Denton

City Hall
215 E. McKinney Street
Denton, Texas
www.cityofdenton.com

AGENDA INFORMATION SHEET

DEPARTMENT: Procurement
ACM: Cassey Ogden
DATE: September 11, 2023

SUBJECT

Consider recommending adoption of an ordinance of the City of Denton, a Texas home-rule municipal corporation, authorizing the City Manager to execute a Professional Services Agreement with Signature Automation, LLC, for the selection and design of a standardized Human Machine Interface (HMI) software system for the Water Production and Water Reclamation Departments as set forth in the contract; providing for the expenditure of funds therefor; and providing an effective date (RFQ 7574-022 – Professional Services Agreement for design services awarded to Signature Automation, LLC, in the not-to-exceed amount of \$1,913,152.00).

STRATEGIC ALIGNMENT

This action supports Key Focus Area: Enhance Infrastructure and Mobility.

INFORMATION/BACKGROUND

The Water Production and Water Reclamation Divisions use Human Machine Interface (HMI) software applications to provide real-time monitoring and interactive control of the treatment processes. The HMI system provides remote monitoring and control of processes within treatment plants, and associated remote facilities (elevated storage tanks, booster, and lift stations), and provides a graphical representation to the operations personnel about abnormal conditions so that appropriate actions can be initiated to avoid potential Texas Commission on Environmental Quality (TCEQ) permit violations.

Each division currently has an HMI and Historical application that has been in service since 2002 and is using different vendors for the products that require technical support licenses for each one.

Purpose of the Project

1. Standardize an application that both Water Production and Water Reclamation can utilize.
 - This will provide for one product vendor for both utilities.
 - Creates a situation that allows support staff to assist each other during absences.
 - Provides for a single vendor for application licenses.
 - Aligns with industry best practices.
2. Design the new HMI windows to adhere to current HMI standards and practices (ANSI/ISA 101).
 - The current standards and practices promote “Situational Awareness” as a graphical design.

- Situational Awareness design concepts create a graphical representation of visual alerts utilizing high-contrast, graphical techniques. The advantage of this design method provides for quicker recognition of an abnormal condition or alarm.
3. Tag Name Database Review
 - All the Water Utility plants have been in service since 2002 and each plant has undergone modifications to processes and field instrumentation or actual removal.
 - This project will provide an assessment of the Tag Name database and remove unused tag names. By removing unused tag names, the system will run more efficiently and reduce the HMI / Historian application's cost.
 4. HMI Design / Modification Criteria Manual
 - The project will provide a document to control future modifications and establish nomenclature conventions.
 - This document is intended to protect this project's investment through the incorporation of specific design guides and controls.
 5. Evaluate the replacement of Alarm and Notification applications.
 - The goal is to standardize one Alarm Notification System.

Request for Qualifications for professional engineering services for Water and Wastewater was solicited using the City's formal solicitation process. City Council approved a pre-qualified list of engineering firms on March 23, 2021 (Ordinance 21-546).

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

On March 23, 2021, City Council approved RFQ 7574 for a prequalified list of professional engineering firms for Water and Wastewater (Ordinance 21-546).

RECOMMENDATION

Award a contract with Signature Automation, LLC, for the selection and design of a standardized Human Machine Interface (HMI) software system for the Water Production and Water Reclamation Departments, in a not-to-exceed amount of \$1,913,152.

PRINCIPAL PLACE OF BUSINESS

Signature Automation, LLC
Dallas, TX

ESTIMATED SCHEDULE OF PROJECT

This project will be started upon approval with a completion date by Fall of 2024.

FISCAL INFORMATION

These services will be funded from a combination of the accounts listed below.

Water CIP Account	630528523	\$956,576
Wastewater Utilities CIP	640507545	\$956,576

Requisition # 160875 has been entered into the Purchasing software system in the amount of \$1,913,152. The budgeted amount for this item is \$1,913,152.

EXHIBITS

Exhibit 1: Agenda Information Sheet
Exhibit 2: LLC Member
Exhibit 3: Ordinance and Contract

Respectfully submitted:
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Purchasing Manager

For information concerning this acquisition, contact: Chris Carroll, 940-349-7190.

Legal point of contact: Marcella Lunn at 940-349-8333.