City of Denton

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

AGENDA INFORMATION SHEET

DEPARTMENT: Procurement

DCM: David Gaines

DATE: August 8, 2022

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 Burns & McDonnell Engineering Company, Inc., to manage and control the geometric network to a utility network in the capacity of Owner's Engineer to DME Systems Operation Department; providing for the expenditure of funds therefor; and providing an effective date (RFQ 7804-004 – Professional Services Agreement for professional services awarded to Burns & McDonnell Engineering Company, Inc., in the not-to-exceed amount of $387,500.00).

INFORMATION/BACKGROUND

The City of Denton utilizes and maintains a master repository of records and maps for the installed electric system equipment. A geographic information/facilities management system (referred to as "GIS") was the method chosen by the City of Denton (COD) twenty-three years ago. ESRI's ArcGIS, which comprises ArcMap, ArcGlobe, ArcScene, and ArcCatalog, is the full enterprise software suite. The ArcMap application allows the creation and modification of maps and analysis of 2D spatial data. ArcScene is ArcMap with 3D capabilities (like terrain mapping), ArcGlobe is like Google Earth, ArcScene combined, and ArcCatalog is our data manager. Schneider Electric's (SE) ArcFM, a powerful extension of Esri's ArcGIS platform, provides a graphical, data-rich environment and supports map-centric, intuitive modeling, design, maintenance, and management of facility and land base information for the electric utility. This allows DME to run database queries on the transmission and distribution electric systems infrastructure and fiber communications infrastructure, create engineering and operations maps and provide electronic maps for field use. The electric GIS is the core technology product of DME and is DME specific. It has provided GIS data that assists with financial fixed asset accounting (per FERC guidelines), budget preparations, and presentations requiring governing board approvals, distribution engineering analysis, outage management, outage tracking, and outage reporting. In addition, the ArcGIS/ArcFm solution integrates with many other software applications such as customer information system (CIS), asset management, outage management (Responder OMS), engineering analytics, etc.

DME's GIS currently uses a geometric network (GN) for data modeling in a geodatabase. In 2020 Esri announced the end of support for GN based software platform. It recommended that utility customers upgrade to Utility Network (UN) based platform by January 2024. Since SE's ArcFm Enterprise Solution is an extension of Esri, it also announced the end of support for GN-based software to stay compatible with Esri's UN-based software. Schnieder Electric asked utility customers to upgrade to the UN-compatible ArcFM platform by January 2024. DME has chosen to upgrade from GN to UN on Esri and ArcFm platforms. This is the most cost-effective way to move forward for the electric department. This also allows

DME to implement new applications such as Advanced Distribution Management Systems and workflow management software that increase efficiencies and electric system reliability.

The UN allows DME to model the entire network from generation to transmission to distribution to the customer meter. This level of connectivity is needed for DME to implement an Advanced Distribution Management System, use life cycle management on the transmission and substation level, and perform advanced analytics for system planning and operation.
The support for the core products of DME is at the end of the lifecycle, forcing DME to re-evaluate the way DME uses the GIS data. Therefore, with the collaboration from the City of Denton Technology Services (TS), DME has developed an attentive plan to prepare the electric utility for a technologically advanced future outlined in the following sequence:

1) Upgrade the Supervisory Control and Data Acquisition System (SCADA) application and infrastructure in 2022.
2) Renew SE's Maintenace and Support (M&S) contract in 2022
3) Re-assess the existing Outage Management System(OMS) in 2022
4) Migrate from the Geometric network to Utility Network (distribution system) and model substation and transmission systems in UN-based GIS in 2023
5) Upgrade to UN-based ArcFM enterprise solution 2023
6) Deploy ArcFM Designer XI (DXI) in 2023
7) Start the RFP process to procure ADMS in 2023
8) Implement new OMS in 2023
9) Deploy Maximo Workflow Application Suite and integrate with (DXI) in 2023
10) Implement Advanced Distribution Management System (2024)
11) Implement and test current systems-associated integrations (2024-2025)

DME has selected B&M under the Pre-Qualified Engineering Firms RFQ 7804 to work as the Owners Engineer OE. B&M comprises a team of engineers and scientists with different systems engineering specialties and support staff. The OE will not be involved in the direct design and deployment of the project but instead act diligently as an advocate for DME while managing all participating vendors in the design and implementation of this project. In addition, the OE will represent DME through procurement, design, development, execution, integrations, and functional testing of the systems to confirm that the work is done according to specifications and within legal standards.

B&M has gathered requirements from DME stakeholders and understands the organization's vision, including ongoing or planned initiatives. As a result, B&M can provide the expertise and resources needed to keep the project on schedule and aligned with DME's future business objectives.

Request for Qualifications for professional engineering services for Denton Municipal Electric was solicited using the City’s formal solicitation process. City Council approved a pre-qualified list of engineering firms on December 14, 2021.

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

On December 14, 2021, Council approved RFQ 7804 for a prequalified list of professional engineering services for Denton Municipal Electric (Ordinance 21-2687).

RECOMMENDATION

Award a contract to Burns & McDonnell Engineering Company, Inc., to manage and control the geometric network to a utility network in the capacity of Owner's Engineer to DME Systems Operation Department, in a not-to-exceed amount of $387,500.

PRINCIPAL PLACE OF BUSINESS

Burns & McDonnell Engineering Company, Inc.
Fort Worth, TX

ESTIMATED SCHEDULE OF PROJECT

This project will be started upon approval with a completion date of December of 2023.

FISCAL INFORMATION

These services will be funded from DME's pre-qualified engineering services account 605171500.1360.3980. Requisition #156193 has been entered into the Purchasing software system in the amount of $387,500. The budgeted amount for this item is $387,500.

EXHIBITS

Exhibit 1: Agenda Information Sheet
Exhibit 2: Ordinance and Contract

Respectfully submitted:
Lori Hewell, 940-349-7100
Purchasing Manager

For information concerning this acquisition, contact: Jerry Looper, 940-349-7676.

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