



City Council Staff Report

Date:

Aug 21, 2024

Applicant:

Mapleton City Public Works

Location:

NA

Prepared By:

Rob Hunter, City Engineer/
Public Works Director

Public Hearing:

No

Attachments:

Proposed scope and fee from
Total Power & Controls

REQUEST

Approve the proposed scope and fee for Total Power & Controls to upgrade the electrical and SCADA controls at the 1600 North sewer lift station.

BACKGROUND & DESCRIPTION

SCADA (Supervisory Control and Data Acquisition) systems send vital information from Public Works facilities (such as lift station, wells, and tanks) to the Public Works Building. This makes it so Public Works staff can monitor these key facilities from the Public Works building, instead of only when they are at the facility for regular inspection. SCADA systems also send advisories/alerts when the facilities are not functioning properly.

The Public Works Department has experienced recent malfunctions in some of the older facilities due to outdated electrical systems, which has resulted in costly repairs to the equally outdated SCADA systems they power. Therefore, the Public Works Department has budgeted money starting this year to replace outdated electrical and SCADA controls systems at its older facilities. The 1600 North Lift Station, which was built with the original Mapleton sewer system in the 1990s, is the first facility to have this electrical/SCADA system upgrade.

EVALUATION

Total Power & Control is the contractor we have trusted on several electrical and SCADA repairs/installations on Mapleton Public Works facilities. They frequently work with SKM, who is our SCADA contractor. SKM's equipment and programming is included in the proposed scope and fee.

RECOMMENDATION

Approve the proposed scope and fee of \$48,621.72 for Total Power & Controls to upgrade the electrical and SCADA controls at the 1600 North sewer lift station.

RESOLUTION NO. 2024-

A RESOLUTION OF THE CITY OF MAPLETON, UTAH TO APPROVE THE PROPOSED COST OF \$48,621.72 FOR TOTAL POWER & CONTROLS TO REPLACE THE OUTDATED ELECTRICAL AND CONTROLS SYSTEM AT THE 1600 NORTH SEWER LIFT STATION

WHEREAS, regular maintenance and replacement is required to keep city facilities reliable and efficient; and

WHEREAS, Public Works has budgeted funds to upgrade older electrical and control systems for SCADA controls at older facilities; and

WHEREAS, the 1600 North sewer lift station is an older facility, and needs upgrades and replacement for its electrical and SCADA controls;

NOW THEREFORE, BE IT RESOLVED by the City Council of Mapleton, Utah, that: the City approves Total Power & Controls to upgrade the electrical and SCADA controls at the 1600 North lift station for the proposed cost of \$48,621.72.

This resolution adopted this 21st day of August, 2024, by the City Council of Mapleton City, Utah.

Dallas Hakes
Mayor

ATTEST:

Camille Brown
City Recorder



*Mapleton City
Public Works*

July 18, 2024

1600 N. Lift Station Electrical and Controls Upgrade Proposal

1. Scope Summary

This Scope of Work has been developed based on information provided by Mapleton City. Our understanding is that the 1600 N. Lift Station requires an electrical and controls system upgrade. This Lift Station is currently in operation with an existing pump control/plc panel and power distribution equipment. Total Power & Control (TPC) has been tasked to provide the electrical and control design and installation needed to update the equipment at this site. TPC will supply labor, materials, and items described under the scope of services below. TPC is qualified to do the work and has installed many similar systems.

1.1. Exclusions and Exceptions

- The site will be provided with electrical service equipment, fiber communication service, a location to install the new duplex pump/plc control panel, and a location to install the new transfer switch.
- Cost for excavation is not included in this proposal.

2. Scope of Services

The Scope of Services has been divided into the following tasks (each task is further described below):

1. Task 1 – Labor
2. Task 2 – Equipment

2.1. Task 1 – Labor

The following labor will be provided as part of the project: (TOTAL POWER & CONTROLS - \$8000.00)

1. Design and construct a new duplex pump/plc control panel.
2. Conduit and cabling installation
3. Panel rack modification and installation

4. Provide and install new duplex pump/plc control panel
5. Provide and install new transfer switch
6. Coordinate efforts with System Integrator, Panel Shop, and Mapleton City
7. Assist in Testing, Startup and Commissioning of the System.

2.2. Task 2 – Equipment

The following equipment will be provided for the project:

1. Duplex Pump/PLC Control Panel (Electro Power Utah – \$28,875.00) – Provide a Panel with the following equipment:
 - Flange Enclosure with mounting tabs, backpanel, inner door, cable operated mechanism and handle, and drip shield kit.
 - Enclosure includes EPU insulation package for outdoor installation.
 - Panel Heater and Heat Exchanger.
 - Main disconnect circuit breaker.
 - Control Power Transformer with fusing.
 - Two (2) Feeder breakers for (2) motor starters.
 - 480VAC TVSS with fusing.
 - 201A MotorSaver monitoring relay and socket.
 - Two (2) FVNR Motor Starters sized to the pump loading.
 - Provision for Client-provided Pump Monitoring Relays.
 - Cabinet Signal Separation Plate.
 - HV Section Dead Front Cover.
 - Provision and installation of Client-provided PLC and Network Equipment in panel.
 - 1000VA 120V UPS with Mounting Bracket.
 - Two (2) Quint 10 24VDC Power Supplies.
 - Quint 10 DC UPS with 12Ah Battery.
 - Signal IS Barriers

- Wiring and Terminals as required
 - EPU drawing and submittal package is included.
 - Panel to be labeled UL508A for Industrial Control Panels.
 - Panel to be labeled UL698 for Hazardous Locations.
2. PLC/Network Switch Equipment and Programming (SKM Inc. - \$7000.00)
 3. 480V ASCO Transfer Switch Model: D03ATSA30104NGXF (Royal Wholesale - \$3246.72)
 4. Conduit, Conduit Bodies, Connectors, Couplings, Conduit Supports, Panel Rack Material and Associated Hardware: (\$1000.00)
 5. Power, Control, and Signal Cabling. (\$500.00)

**ESTIMATED COST FOR 1600 N. LIFT STATION ELECTRICAL AND
CONTROLS UPGRADE PROJECT: \$48,621.72**

Thank you for the opportunity to estimate this project. Let me know if you have any questions or need additional information.

Very Best Regards,

**Eric Clark - PRESIDENT
Total Power & Controls**