Proposal

December 19, 2025

To Obe Tejada
City of Moab

Re: Moab Utilities SCADA Replacement Project

SKM is pleased to provide the following scope of work and costs for the City of Moab SCADA Replacement project. This document is meant to serve as an attachment to our original proposal.

Project Scope

1. **Task 0 – Design**

   a. **Comprehensive review of existing hardware, software, and programming**

   b. **Recommendations based on findings**

   c. **Drafting and designing replacement panels, communications**

2. **Task 1 - SCADA Server Software, Hardware and Configuration**

   a. Qty 2 Dell Tower Servers (Primary and Backup)

   b. Ignition Licensing for Primary and Backup server

      i. Unlimited tags and clients

      ii. Voice, E-mail and Text Alarming

      iii. Historian

      iv. Perspective Visualization package

   c. Cradlepoint Firewall/Router

   d. Labor for server setup and configuration

   e. Labor for reporting setup

3. **Task 2 – Sewer Plant SCADA Migration**

   a. Migrate existing sewer plant SCADA from iFix system into Ignition SCADA system

   b. Migrate 1 year of historical data from existing system

4. Task 3 – Skakel Booster Station SCADA

    a. SCADA Backpanel replacement buildup

        i. Allen-Bradley 1769-L18ER PLC with IO

        ii. Phoenix Quint Power system and UPS

        iii. Cradlepoint router for communications with external antennas

        iv. Drawings for new buildup

    b. Installation of new backpanel and testing of existing IO

    c. Installation of new MP8000 to replace existing 777 Motor savers

    d. Run two Ethernet cables to the MP8000

    e. Run new cabling to tie in the CL2 Weight Sensor

    f. Install on-site switch for intrusion alarming

    g. Install surge arrestors from tank level sensor and abandon SCADA at the tank site

    h. Programming of PLC and SCADA Integration

5. **Task 4 – Well 6 SCADA**

    a. SCADA Backpanel replacement buildup

        i. Allen-Bradley 1769-L18ER PLC with IO

        ii. Phoenix Quint Power system and UPS

        iii. Cradlepoint router for communications with external antennas

        iv. Drawings for new buildup

    b. Installation of new backpanel and testing of existing IO

    c. Installation of new MP8000 to replace existing 777 Motor saver

    d. Run one Ethernet cable to the MP8000

    e. Install on-site switch for intrusion alarming

    f. Programming of PLC and SCADA Integration

6. **Task 5 – Well 10 SCADA**

    a. New SCADA Panel buildup

        i. Allen-Bradley 1769-L18ER PLC with IO

        ii. Phoenix Quint Power system and UPS

        iii. Cradlepoint router for communications with external antennas

       iv.   AC Unit for temperature control

       v.   Drawings for new buildup

  b.   Installation of new panel and testing of existing IO

  c.   Installation of new MP8000 to replace existing 777 Motor saver

  d.   Run one Ethernet cable to the MP8000

  e.   Install on-site switch for intrusion alarming

  f.   Programming of PLC and SCADA Integration

7. **Task 6 – Well 12 SCADA**

  a.   New SCADA Panel buildup

       i.   Allen-Bradley 1769-L18ER PLC with IO

       ii.   Phoenix Quint Power system and UPS

       iii.   Cradlepoint router for communications with external antennas

       iv.   RS485 Converter for the Flow Meter

       v.   Drawings for new buildup

  b.   Installation of new Panel, wiring and testing of existing IO

  c.   Run one Ethernet cable to the VFD

  d.   Install on-site switch for intrusion alarming

  e.   Programming of PLC and SCADA Integration

8. **Task 7 – Lower Booster SCADA**

  a.   New SCADA Backpanel buildup

       i.   Allen-Bradley 1769-L18ER PLC with IO

       ii.   Phoenix Quint Power system and UPS

       iii.   Cradlepoint router for communications with external antennas

       iv.   RS485 Converter for the Flow Meter

       v.   Drawings for new buildup

  b.   Installation of new backpanel, wiring and testing of existing IO

  c.   Install on-site switch for intrusion alarming

  d.   Programming of PLC and SCADA Integration

9. **Task 8 – Upper Booster SCADA**

   a. New SCADA Backpanel buildup

      i. Allen-Bradley 1769-L18ER PLC with IO

      ii. Phoenix Quint Power system and UPS

      iii. Cradlepoint router for communications with external antennas

      iv. RS485 Converter for the Flow Meter

      v. Drawings for new buildup

   b. Installation of new backpanel, wiring and testing of existing IO

   c. Install on-site switch for intrusion alarming

   d. Programming of PLC and SCADA Integration

10. **Task 9 – Lionsback Lift Station SCADA**

   a. New SCADA Backpanel buildup

      i. Allen-Bradley 1769-L18ER PLC with IO

      ii. Phoenix Quint Power system and UPS

      iii. Cradlepoint router for communications with external antennas

      iv. Drawings for new buildup

   b. Installation of new backpanel, wiring and testing of existing IO

   c. Installation of new MP8000 to replace existing 777 Motor savers

   d. Run two Ethernet cables to the MP8000

   e. Programming of PLC and SCADA Integration

11. **Task 10 – North Trunk Lift Station SCADA**

   a. New SCADA Panel buildup

      i. Allen-Bradley 1769-L18ER PLC with IO

      ii. Phoenix Quint Power system and UPS

      iii. Cradlepoint router for communications with external antennas

      iv. AC Unit for temperature control

      v. Drawings for new buildup

   b. Installation of new Panel, wiring and testing of existing IO

    c.   Installation of new MP8000 to replace existing 777 Motor savers

    d.   Run two Ethernet cables to the MP8000

    e.   Programming of PLC and SCADA Integration

12. **Task 11 – Powerhouse Tank SCADA**

    a.   Remove existing SCADA Hardware

    b.   Install the following:

        i.   Cradlepoint for communication

        ii.   Moxa e1242 extended temperature for IO

    c.   Utilize existing solar setup and system

13. **Task 12 – Mountain View Tank SCADA**

    a.   Remove existing SCADA Hardware

    b.   Install the following:

        i.   Cradlepoint for communication

        ii.   Moxa e1242 extended temperature for IO

    c.   Utilize existing solar setup and system

14. **Task 13 – Old City Park SCADA**

    a.   Remove existing SCADA Hardware

    b.   Install the following:

        i.   Cradlepoint for communication

        ii.   Moxa e1242 extended temperature for IO

        iii.   Phoenix Power system with UPS

        iv.   Drawings for buildup

    c.   Utilize existing enclosure

    d.   Run new conduit and cabling from flow meter in yard and tie into SCADA

15. **Task 14 – Whites SCADA**

    a.   Remove existing SCADA Hardware

    b.   Install the following:

        i.   Cradlepoint for communication

      ii. Moxa e1242 extended temperature for IO

      iii. Phoenix Power system with UPS

      iv. Drawings for buildup

  c. Utilize existing enclosure

16. Task 15 – Spring 3 SCADA

  a. Remove existing SCADA Hardware

  b. Install the following:

      i. Cradlepoint for communication

      ii. Moxa e1242 extended temperature for IO

  c. Utilize existing solar setup and system

17. Task 16 – Spring 2 SCADA

  a. New enclosure buildup with the following:

      i. Cradlepoint for communication

      ii. Moxa e1242 extended temperature for IO

      iii. Phoenix power system with UPS

      iv. Drawings for new buildup

  b. Run conduit to meter to tie into SCADA

18. Task 17 – Williams Way SCADA

  a. New enclosure buildup with the following:

      i. Cradlepoint for communication

      ii. Moxa e1242 extended temperature for IO

      iii. Phoenix power system with UPS

      iv. Drawings for new buildup

  b. Run conduit and cabling to existing control box to pick up IO

19. Task 18 – Lions Park SCADA

  a. New enclosure buildup with the following:

      i. Cradlepoint for communication

      ii. Moxa e1242 extended temperature for IO

      iii.   Phoenix power system with UPS

      iv.   Drawings for new buildup

  b.   Run conduit and cabling to existing control box to pick up IO

20. **Task 19 – Lionsback Tank SCADA**

  a.   Install the following in existing enclosure:

      i.   Moxa e1242 extended temperature for IO

      ii.   Phoenix power system with UPS

      iii.   Drawings for new buildup

  b.   Utilize existing radio to Upper Booster

Costs

Task	Cost
Task 0 – System Design	$22,300
Task 1 - SCADA Server Software, Hardware and Configuration	$63,650
Task 2 - Sewer Plant SCADA Migration	$33,300
Task 3 – Skakel Booster SCADA	$26,155
Task 4 – Well 6 SCADA	$29,350
Task 5 – Well 10 SCADA	$24,710
Task 6 – Well 12 SCADA	$29,930
Task 7 – Lower Booster SCADA	$27,935
Task 8 – Upper Booster SCADA	$27,900
Task 9 – Lionsback Lift Station SCADA	$24,645
Task 10 – North Trunk Lift Station SCADA	$32,360
Task 11 – Powerhouse Tank SCADA	$5,785
Task 12 – Mountain View Tank SCADA	$5,785
Task 13 – Old City Park SCADA	$6,345
Task 14 – White's SCADA	$6,345

Task 15 – Spring 3 SCADA	$5,445
Task 16 – Spring 2 SCADA	$13,445
Task 17 – Williams Way Lift Station SCADA	$14,445
Task 18 – Lions Park Lift Station SCADA	$14,150
Task 19 – Lionsback Tank SCADA	$6,345

Total Design: $22,300

Total Implementation: $398,025

Letter of Credit: $13,700

Total Project Cost: $434,025

Exclusions and Exceptions

1. Encoders for flow meters are to be provided by the city.

2. Trenching at Old City Park for conduit run is to be provided by the city.

3. Pricing for Spring 2 was with the assumption 120VAC power would be available.

Confidentiality

The Client agrees that the technical methods and techniques utilized by SKM for the project shall not be shared with third parties without express written consent of SKM.

Standard Rates

Any work performed outside of the listed scope of items will be billed time and materials at our standard rates:

1. Electrical Engineer: $235
2. Programmer: $195
3. Materials and travel expenses billed at cost plus 10%

Closing,

Allen Rogers
SKM Engineering, LLC