



## REQUEST FOR QUOTES

The Town of Munster is requesting quotes for two hypochlorite dosing systems and three flow meters for the Riverbend and Calumet Avenue pump stations. Sealed quotes will be received by the Town of Munster, Office of the Town Manager, at the Town Hall 1005 Ridge Road, Munster, Indiana, until 2 PM (local time), on December 28, 2022 and then will be publicly opened and read aloud. Quotes shall be sealed and clearly labeled "Flow Metering and Hypochlorite Dosing Equipment". Any quotes received later than the above time will be returned unopened.

**DESCRIPTION OF WORK:** This work will include supplying hypochlorite dosing equipment and magnetic flow meters at the Town's two water pump stations.

Riverbend Pump Station: Hypochlorite dosing system shall include dosing pump, motor and controller, multi-function valve and installation kit.

Calumet Avenue Pump Station: Hypochlorite dosing system shall include dosing pump, motor and controller, multi-function valve, installation kit, and chlorine residual analyzer. Flow metering equipment shall include three magnetic flow meters and all accessories and appurtenances necessary for installation and operation.

All PLC programming modifications, HMI graphical modifications, and MetroCloud SCADA modifications necessary to ensure complete integration with the Town's SCADA system shall be included in the quote. The successful quoter shall provide start-up assistance and training as necessary.

Installation of all equipment to be completed by others.

**DOCUMENTS:** Technical requirements and specifications are available for examination in the office of the Town Manager of the Town of Munster, Indiana. Electronic copies may be obtained on the Town's website: [www.munster.org](http://www.munster.org) or by email request: [jditommaso@munster.org](mailto:jditommaso@munster.org)

No quoter may withdraw his proposal within a period of sixty (60) days following the date set for receiving bids. The Town of Munster reserves the right to retain any and all quotes for a period of not more than sixty (60) days and said quotes shall remain in full force and effect during said time. The Town further reserves the right to waive informalities, and to award the contract to any Quotes, all to the advantage of the Town of Munster, or to reject all quotes.

Jill E. DiTommaso, PE  
Deputy Town Manager  
Town of Munster, Lake County, Indiana

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## TECHNICAL SPECIFICATIONS

### PART 1 GENERAL

#### 1.01 SCOPE OF WORK

- A. The work consists of supplying hypochlorite dosing equipment and flow metering equipment at the Riverbend Pump Station and Calumet Avenue Pump Station as follows:
1. Riverbend Pump Station
    - a. Hypochlorite Dosing System
      - 1) Dosing pump with integral motor and controller
      - 2) Control cable and plug
      - 3) Multi-function valve
      - 4) Installation kit
      - 5) PLC programming modifications
      - 6) HMI graphical modifications
      - 7) MetroCloud SCADA modifications
      - 8) Set-up and start-up assistance
      - 9) Training
    2. Calumet Avenue Pump Station
      - a. Hypochlorite Dosing System
        - 1) Dosing pump with integral motor and controller
        - 2) Control cable and plug
        - 3) Multi-function valve
        - 4) Chlorine residual analyzer
        - 5) Installation kit
        - 6) PLC programming modifications
        - 7) HMI graphical modifications
        - 8) MetroCloud SCADA modifications
        - 9) Set-up and start-up assistance
        - 10) Training
      - b. Flow metering
        - 1) Magnetic flow meter (3)
        - 2) Signal converter remote (3)
        - 3) Piping spools (3)
        - 4) Elastomer pipe connectors (3)
        - 5) PLC analog input/output card including field installation
        - 6) PLC programming modifications
        - 7) HMI graphical modifications
        - 8) MetroCloud SCADA modifications
        - 9) Set-up and start-up assistance
        - 10) Training
  - B. Quoted prices shall include freight.
  - C. The Town of Munster is exempt from all Federal, State, and Local taxes. Quoted prices should exclude all taxes.

### PART 2 PRODUCTS

#### 2.01 HYPOCHLORITE DOSING SYSTEM

- A. Dosing pump

1. Integral motor and controller
2. Flowrate: up to 2 gallons per hour
3. Pressure: up to 232 psi
4. Dosing head material: PVDF
5. FKM rubber gaskets
6. Ceramic ball check valve
7. Front mounted control position
- B. Control cable and plug
  1. Pulse
  2. 4 – 20 mA
- C. Multi-function valve
- D. Installation Kit
- E. Chlorine residual analyzer measuring for "Total"
  1. Calumet Avenue station ONLY
  2. Measurement Type: Combined chlorine
  3. Accuracy = 0.5% of selected range or 0.02 ppm
  4. Operating temperature: -20 to 60 °C
  5. Power: 100-240 VAC, +/- 10%, 50/60 Hz
  6. Sensor style: sensor with contract head flowcell and 25 ft cable
  7. System assembly: panel with flow controls, without flow switch
  8. Polarographic membraned sensor to measure chlorine directly

## **2.02 FLOW METERING**

- A. Magnetic flow meter
  1. 12-inch nominal size, 19.7"L x 18.8"H x 19.0"W
  2. Minimum straight inlet and outlet pipe length of zero DN
  3. Capable of measuring bi-directional flow
  4. NSF61/IP67
  5. Primary measured value = flow velocity, secondary measured value = volume flow
  6. Sensor housing: sheet steel
  7. Measuring tube: metallic alloy
  8. Polyurethane coating on meter exterior, flanges, housing
  9. Measuring and reference electrode: stainless steel 1.4301/AISI 304
- B. Signal converter remote
  1. 120 V
  2. 4 - 20 mA
- C. Piping spools
  1. 12-inch diameter
  2. NSF 61
  3. Stainless steel integral gusset rings and hardware

## **2.03 PLC ANALOG INPUT/OUT CARD**

- A. Include field installation

## **PART 3 EXECUTION**

### **3.01 INSTALLATION OF EQUIPMENT BY OTHERS**

### **3.02 MODIFICATIONS**

- A. Quote shall include cost for modifications to ensure integration with the Town's existing SCADA instrumentation.

1. PLC programing modifications
2. HMI graphical modifications
3. MetroCloud SCADA application modifications

B. Quote shall include references illustrating the company's ability to provide the modifications described above.

1. Provide references on State Form 96 Part II, Section I

### **3.03 START-UP ASSISTANCE AND TRAINING**

A. Quote shall include cost for any start-up assistance and training required to provide a complete and functioning system.

**END OF SECTION**