The contractor will only be responsible for purchasing and delivering the flow meter and signal converter to the public works maintenance facility.

1. Krohne Optiflux 2000 4" flow meter
    a. Flow meter accuracy shall be +/- 0.5% of actual flow rate from 2 to 20 ft/sec and +/- 1% from 1 to 3 ft/sec. Repeatability shall be +/- 0.1% and response time programmable from 1 seconds to 100 seconds.
2. Krohne IFC 100 signal converter with 75' of shielded cable attached to the meter at the factory

Meter Requirements:

Flow Meter

1. Low frequency, electromagnetic induction type: Produce dc pulse signal directly proportional and linear to liquid flow rate.
2. NEMA 6 housing: Watertight external and internal electrical conduit connections.
3. Power from signal converter.
4. Flow meter liner shall be hard rubber. Electrode materials shall be 316SST. Electrode shall be self-cleaning design.
5. Use stainless steel or Hastelloy C grounding rings on each end of magnetic flow meter to provide ground path and prevent interference with flow signal on non-metallic or lined pipe. Do not provide grounding probes. Provide braided grounding cable from grounding ring to approved point of earth ground.
6. Sensing head shall be interchangeable with meter body without performing flow recalibration.
7. High impedance device of not less than 1012 ohms to minimize span shift due to electrode coating.
8. Explosion proof sensor certified by Factory Mutual Research for Class I, Division I or Division H as specified or shown, Groups C and D when sensor is located in hazardous area.

Signal Converter

1. Remote mounted, microprocessor controlled.
    a. Operate on 120 VAC, 60 Hz power.
    b. Provide pulsed dc voltage to magnet coils of magnetic flow meter to establish magnetic field.
    c. Convert flow signal from magnetic flow meter to analog and digital output signals, for bidirectional flow.
2. Span shall be continuously adjustable between 1 and 33 ft/sec. Adjustment shall be by keypad.
3. Display flow rate scaled in field selectable engineering units. Display shall have 2 rows of 16 alpha numeric characters. Top row shall indicate instantaneous flow.
4. Converter interchangeable with magnetic flow meter element and require no additional flow calibration.
5. Isolated 4-20 mAdc analog current output into 0 to 500 ohm load and 24 VDC scaled, software adjustable pulse output.
6. NEMA 4 enclosure.
7. Noise reduction feature to stabilize flow reading.
8. Automatic empty pipe detection.
9. Suitable for -40'F to 150'F ambient temperature. 2.04