**F-3500 Master Specification**

Basis of Design: **ONICON Model F-3500** Series Insertion Electromagnetic Flowmeter. Manufacturers approved to bid, subject to compliance with requirements include:

Insert additional MFG’s pre-approved to bid.

Description: Provide an insertion electromagnetic flowmeter complete with NIST traceable, wet calibrated flow-measuring element, integral transmitter, installation valves, installation depth gage and calibration certificate. Flowmeter shall be wet tappable, allowing insertion and removal from the flow stream without system shutdown.

Application Range: This contractor shall be responsible for selecting the flowmeter options submitted based on the application, refer to section for 230519.3.4 “Flowmeter Schedule by Application”. Flowmeter shall be constructed, calibrated and scaled for the intended application in terms of pipe size, pipe material, installation requirements, expected flow rate, ambient conditions and fluid characteristics which include but are not limited to pressure, temperature, conductivity and viscosity.

Sensing Technology: Electromagnetic velocity-measuring element.

Design: Electromagnetic sensing element shall utilize two sets of diametrically opposed electrodes to measure the average flow rate velocity.

Construction: Wetted components shall be constructed of 316L stainless steel with attached tag indicating calibration information.

Maximum Pressure Rating: 400 psig.

Maximum Temperature Rating: 200 deg F.

End Connections for NPS 1.25” and Larger: 1” Male NPT Hot Tap Adapter fitting. Installation through 1” full port isolation valve, minimum.

Flow Range: Flow-measuring element and transmitter shall cover operating range of equipment or system served.

Accuracy: Flowmeter shall provide calibrated outputs directly from the integral transmitter, throughout the operating range with the accuracy stated as follows:

Plus or minus 1.0% of rate from 2.0 to 20.0 ft/sec velocity (10:1 turndown).

Plus or minus 0.02 ft/sec below 2 ft / sec

Calibration: Each flowmeter shall receive a wet calibration, within the expected operating range, against a primary volumetric standard that is traceable to NIST.

Optional Local Display: Local display shall provide instantaneous flow rate information and totalized flow information and shall be factory configured for connection to a specific flowmeter.

Operating and Installation Instructions: Installation and operating instructions shall be provided for each flowmeter. Refer to section 230519.3.4 “Flowmeter Schedule by Application” for additional installation requirements.

Warranty: Each flowmeter shall be covered by the manufacturer’s three-year warranty.