C. Proposed Work Plan

When the details contained in this proposal are summarized into a single project theme, we believe that the City is looking for the most cost effective and qualified contractor to perform this work. No other company's body of work in this industry can compare to ADS, whether it be in terms of experience, magnitude, or complexity. ADS pioneered the field of sewer flow monitoring and has been at its forefront for nearly four decades. For the past 25 years, the ADS staff have been integral part of some of Michigan's most important flow monitoring programs. We have built our relationship on trust, hard work, and responsiveness. We also bring the stability of being the equipment manufacturer for this project, which will allow our team to be more responsive to service requests, equipment repairs, and system upgrades. Below are some of the details on the approach our team would take should we be awarded this project.

C.1 - Area Velocity Flow Meter and ECHO Level Meter – Proposed Hardware

Peter Petroff, the founder of ADS, created the first solid-state electronic flow monitor in 1973. Since then, our flow monitors have been in a continual state of improvement. We have developed better depth sensors, velocity sensors, sensor strategies, software, field procedures and management procedures over the years. Our monitors have won more awards than any other sewer flow monitors including the Pollution Engineering Magazine 5-Star Award. **ADS also has the only open channel flow meters that have been verified for accuracy by the US Environmental Protection Agency.** ADS flow monitors are the most versatile and stable flow monitors available today for pipes ranging from 8" to 120" in diameter.

ADS is proposing the ADS Triton+ Flow Meter, our newest flow meter model, supplied as part of this project. The Triton+ is a multiple technology monitor that is flexible enough to collect data from almost every available sensor technology that is used in wastewater applications today. The meter is adaptable to a wide range of customer applications and budgets. It can be configured as an economical single sensor monitor or a dual sensor monitor as discussed. The Triton+ offers one of the industry's longest battery life (15 months) at 15-minute logging and has fewer parts for a more reliable system. This enables its owner to lower their flow meter lifetime ownership costs and initial purchase price. The system provides the lowest power cost per data sample of any Intrinsically Safe flow monitor available on the market.

The ADS Triton+ can accommodate multiple sensor technologies and can monitor two (2) separate pipes with a single monitor and with the ability to capture depth and velocity data in both channels. Included in this proposal is the Peak Combo Sensor, this sensor combines one peak velocity sensor, one upward looking ultrasonic level sensor, and one pressure level transducer for surcharge or redundant measurement into one probe.

The ADS Peak Combo sensor is designed to operate in a wide range of conditions. Due to its very small profile, it reduces the chance of ragging especially in larger pipes. It is capable of measuring both shallow and deep water. It also has distinct advantages in measuring in less than ideal conditions due to ADS' utilization of low frequency, wide beam ultrasonic Doppler technology. The proposed system would give the County the ability to implement a redundant sensor strategy it two different channels with the same data logger.

Also included in this quote is our primary Ultrasonic level sensor, which is an above-water, down-looking sensor that uses two independent acoustic circuits to measure water depth. This non-contact, zero-drift sensing method results in a stable, accurate, and reliable flow depth calculation. Two independent ultrasonic transceivers allow for independent crosscheck, which provides built-in confidence and reliability. Advanced software filtering programed inside the flow meter helps compensate for adverse monitoring conditions, such as waves, foam, debris, etc.

One of the reasons ADS technology is selected to conduct and/or to supply equipment on so many flow monitoring projects is that the drift-free ultrasonic technology is the primary depth measurement while the pressure depth technology is used for redundancy and for measuring surcharge depth. Because both depths are measured in the same cross section of flow, ADS meters can automatically calibrate the pressure sensor to the zero-drift ultrasonic depth sensor and this calibration is automatically performed daily. **This is a critical difference between ADS technology and our competitor's technology.**

Not included in this proposal but available is our Surface Combo Sensor, a revolutionary new sensor featuring four technologies such as a non-contacting surface velocity, redundant ultrasonic depth, surcharge continuous wave velocity, and pressure depth. ADS also has a special Long-Range Depth (LRD) sensor we can use if there is a need to monitor depths very accurately and up to the manhole rim level. We mention these sensors because they are available if needed or for future applications and fully compatible with the Triton+ system.

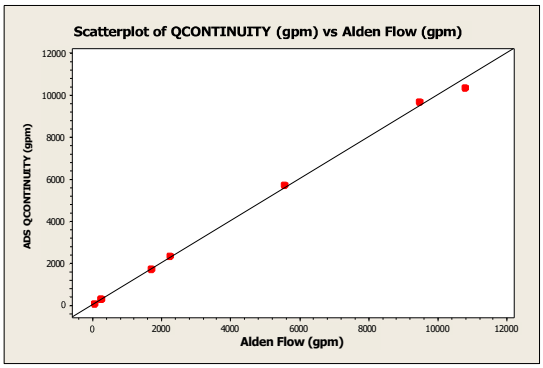
Internal modems come standard in the Triton+ system, and will include a SIM card and antenna to utilize the built in GPRS TCP/IP system which facilitates high-speed, low-cost, efficient digital communication with the monitoring equipment. ADS uses AT&T as our preferred wireless provider in Michigan. A variety of antennas styles are available such as flush mount, whip, Hirschmann and pedestal if reception is poor, and if an alternative antenna mounting option can be accommodated.

Although Intrinsic Safety may not have been outlined by our competitors, the ADS Triton+ flow meter has been certified under IECEx (International Electrotechnical Commission Explosion Proof) Intrinsic Safety (IS) standards for use in Zone 0/Class I, Div. 1, Groups C&D rated hazardous areas. The ADS Triton+ GSM modem is certified for installation and operation in the hazardous area and draws its power from the Triton+ battery pack.

To build on the accuracy of our flow monitors, ADS has developed algorithms within the monitor to help reduce the occurrence of erroneous reading. This technology is called Monitor Level Intelligence (MLI™). MLI™ automatically adjusts to site conditions to extract accurate, reliable measurements. While all other Doppler manufacturers calibrate instruments, and establish sensor-reading algorithms at the factory, MLI™ is flow dependent.

MLI™ optimizes sensor performance and readings by continually learning the site-specific hydraulics and the changing dynamics of depth/velocity relationships. MLI™ uses built in intelligence to learn the hydraulics of the specific monitoring location. Once MLI understands the site hydraulics, it looks at previous and historical readings to insure consistency and repeatability and eliminates erroneous firings. This "smart" feature will be a benefit to the City by ensuring data reliability and system uptime, the most critical element of a flow monitoring program.

Judging the accuracy of flow metering equipment, procedures and manufacturer claims can be a difficult task. To help our customers have more faith in the quality of data that ADS provides, ADS subjected our flow metering technology and procedures to the US EPA's Environmental Technology Verification (ETV) program to provide the industry and our customers an impartial and unbiased verification of ADS' accuracy claims. Virtually every US flow monitoring manufacturer participated and signed off on the EPA's lab and field test protocols, but ADS is the only firm to subject our technology and procedures to the EPA's rigorous verification. The EPA ended the voluntary ETV program in 2013, however ADS continues to utilize the procedures and technology tests verified by other independent agency on our flow metering verifications. In 2014, the ADS TRITON+ monitor was tested in a 35" pipe at Alden Labs in Massachusetts. The testing was performed under different flow conditions with independent flow quantification and the TRITON+ provided excellent precision and accuracy. The chart below presents the test results.



www.adsenv.com/triton

TRITON+® Flow Monitoring System

ADS *TRITON+*®

Flow Monitoring for Open Channel Flows

The ADS® ***TRITON+***® is the most versatile and cost-effective flow monitor on the market. The ***TRITON+*** includes connections for multiple sensor technology options and provides users with industry-standard data for a variety of applications.

The ***TRITON+*** is an intrinsically safe, "Fit-for-Purpose" open channel flow monitor for use in sanitary, combined, and storm sewers. It supports single pipe or dual pipe flow measurement installations.

The ***TRITON+*** Flow Monitoring System is used to gather data for use in a variety of applications:

- Sanitary sewer overflows (SSOs)
- Combined sewer overflows (CSOs)
- Infiltration and inflow (I/I) analysis
- Sewer model validation
- Optimize cleaning process
- Lift/pump station backup
- Regulatory reporting
- Mitigate SSOs
- Bypass monitoring
- Inter-jurisdictional billing

Versatile and Accurate
Monitor-Level Intelligence (MLI®) enables the ***TRITON+*** to effectively operate over a wide range of hydraulic conditions. The ***TRITON+*** supports single or dual pipe/monitoring point measurement capabilities. It supports actuation of a water quality sampler for flow proportional or level-based operation.

Access Data with Ease
Wireless options make it easy to collect data from your ***TRITON+***. The ADS web software **PRISM™** enables you to access all your data in one platform from any device (PC, tablet, phone).

Configure to Suit Your Budget
The ***TRITON+*** has the lowest operational cost per data sample of any ***Intrinsically Safe*** flow monitor available. The platform adapts to a wide range of customer applications and budgets, and can be configured as an economical ***single sensor monitor or dual sensor monitor.***

Extended Asset Life
The ***TRITON+*** has industry-leading battery life. It offers a longer battery life and fewer parts for a more reliable system, providing a lower purchase price and lower ownership cost over the life of the monitor.

www.adsenv.com/triton

ADS *TRITON+* Sensors are Adaptable to a Wide Variety of Applications


Non-Contact Depth Sensor


Submerged Velocity Sensor

The ***TRITON+*** flow monitor is compatible with a suite of sensors designed to cover a wide range of applications and a wide range of flow conditions in sanitary sewer, combined sewer, and storm sewer applications. Choose from area-velocity (AV) sensors and depth sensors using submerged or non-contact mounting options. There is even an available inclinometer. The ***TRITON+*** is configurable with one or two sensors measuring one or two monitoring points. See the sensor specifications at *www.adsenv.com/triton.*

ADS Sensor Technologies Include: Pressure depth, Ultrasonic depth (non-contact & submerged), Doppler velocity, Gated velocity, Surface velocity, Temperature, Inclinometer (tilt sensor)


Peak Combo™
Area-Velocity
Submerged


AV|Max™
Area-Velocity
Submerged


AV|GATED®
Gated Velocity
Submerged


Surface Combo™
Area-Velocity
Non-Contact


ParaFlow™
Area -Velocity
Non-Contact


ParaDepth™
Depth
Non-Contact

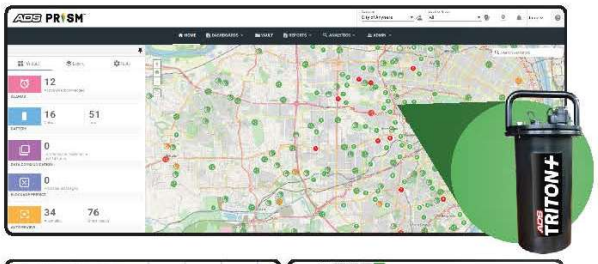

Long Range Depth™
Depth
Non-Contact

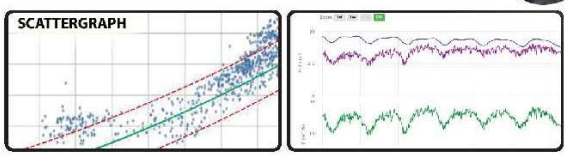

INCLINOMETER™
Angle Tilt

ADS PRISM™ Software Enhances Understanding

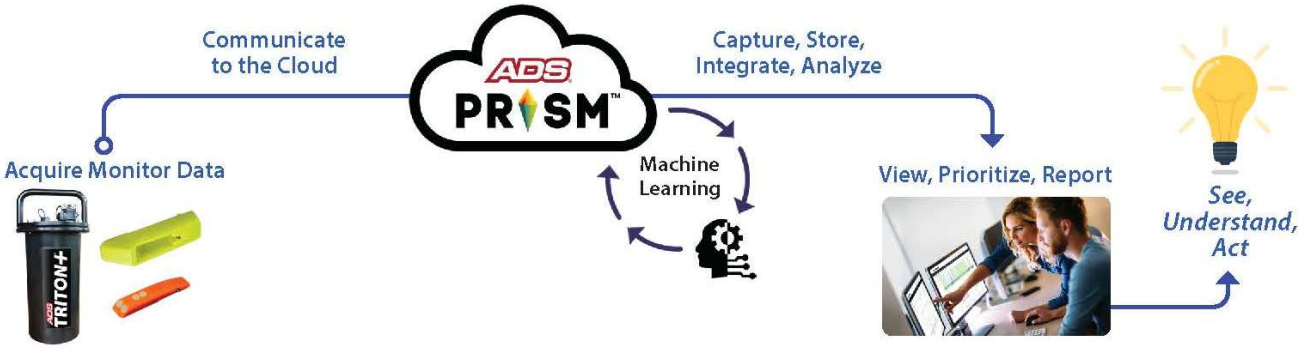
PRISM is a cloud-based, secure software system that acquires, stores and presents data with ongoing user access. The home page (right) provides a map view and a dashboard for quick access to essential parameters. Individual site details, hydrographs and remote site system settings are all accessible. **PRISM** APIs enable third party data exchange.

- Configure and activate
- Set alarms
- Manage data
- Manage blockages with **blockage PREDICT™**
- Conduct I/I studies with the *NEW* **SLiiCER™** app
- Utilize GIS





Real-time data is collected and communicated to the cloud-based **PRISM** software and analytics. With continuous user access, informed actions are enabled. Learn more about **PRISM** at *www.adsenv.com/prism.*



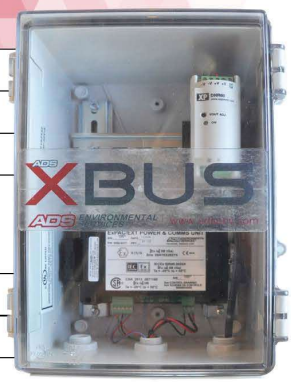
Self-Contained Solutions for Power, Communication, Analog and Digital I/O and Modbus

The ADS ***TRITON+*** COMM+EXT PWR port is used for external power via the ADS XIO, XBUS or ExPAC devices, delivery of Modbus output values as well as for on-site, direct monitor communication.

XIO Features

- Process variables measured by the ***TRITON+*** can be converted to two (2) 4-20mA loop output signals for SCADA systems or local display and control
- Logging capabilities of the ***TRITON+*** can be used for two (2) 4-20mA input process variables measured by other instrumentation
- Alarms produced by the ***TRITON+*** can be output on the two (2) XIO relay contacts for process actuation
- Two (2) switch, solid state or dry contact digital inputs can be sampled and logged
- Design facilitates easy field wiring
- Supports easy plug and play configuration and start-up
- Associated Apparatus **IECEx certification** for use with approved equipment in **Zone 0** (equivalent to Class I, Division 1, Groups C & D); **ATEX Zone 0**; and **CSA Class I**, Zone 0, IIB hazardous areas
- Rugged indoor/outdoor NEMA 4x case with hinged clear cover
- Accepts 85-264 VAC, 120-375 VDC; 47-62 Hz; 1.1A@110/0.59A @250 VAC
- Supplies 8 – 11.5 VDC, 500mA power to the ***TRITON+*** flow monitors

XBUS Features



- Supports Modbus RTU, ASCII and TCP communications
- Connects to wired networks via RS485 or RS232
- Supports easy plug and play configuration and start-up
- Associated Apparatus **IECEx certification** for use with approved equipment in **Zone 0** (equivalent to Class I, Division 1, Groups C & D); ATEX Zone 0; and CSA Class I, Zone 0, IIB hazardous areas
- Rugged indoor/outdoor NEMA 4x case with hinged clear cover
- Accepts 85-264 VAC, 120-375 VDC; 47-62 Hz; 1.1A@110/0.59A @250 VAC
- Supplies 8 – 11.5 VDC, 500mA power to the ***TRITON+*** flow monitors

ExPAC Features

- Designed to be housed in another enclosure
- Associated Apparatus **IECEx certification** for use with approved equipment in Zone 0 (equivalent to Class I, Division 1, Groups C & D); ATEX Zone 0; and CSA Class I, Zone 0, IIB hazardous areas
- Requires DC power input between 9 and 36 volts and a minimum of 15 watts
- Supplies DC power of 8 to 11.5 volts, 500mA to the ***TRITON+*** flow monitors
- RS485 and RS232 Modbus output connections to SCADA systems
- Supports Modbus RTU, ASCII and TCP/IP communications

Specifications subject to change without notice.

ADS TRITON+®

Flow Monitor Specifications

Connectors	U.S. Military specification MIL-C 26482 series 1, for environmental sealing, with gold-plated contacts
Communication	Third-party, FCC/IC/EC- and carrier-approved wireless modem
	Compatible with all 4G LTE-M networks worldwide with 2G fallback (where available)
	Automatically detects installed SIM upon boot up to determine correct network
	Modem FCCID: R17ME910C1WW
Monitor Interfaces	Supports simultaneous interfaces with up to two combo sensors
	Supports optional Analog and Digital I/O with ADS XIO: two 4-20 mA inputs and outputs, two switch inputs and two relay outputs
Power	**Internal** - Battery life with a cellular modem: • Over 15 months at a 15-minute sample rate* • Over 6 months at a 5-minute sample rate*
	External - Optional external power available with ADS External Power and Communications Unit (ExPAC) with an ADS- or customer-supplied 9-36 Volt DC power supply * Rate based on collecting data once a day and varies according to sensor configuration and operating temperature
Connectivity	**Modbus ASCII:** Wireless; Wired using ADS ExPAC or XBUS
	Modbus RTU: Wireless; Wired using ADS ExPAC or XBUS
	Modbus TCP: Wireless only
Operating and Storage Temperature	-4° to 140° F (-20° to 60° C)
Compatibility	Attachable ADS Sensors
	Qstart™XML with ADS ***TRITON+®*** firmware version 6.43 and higher
	PRISM™

Mounting Options	**Mount on the manhole rung** using standard hook (ADS p/n 8000-0021)
	Mount permanently to the manhole wall using monitor mounting bracket/flange (ADS p/n I40-0009)
	Mount to the manhole rim using monitor bracket/flange (ADS p/n I40-0009)
Intrinsic Safety Certifications	**Certified under the ATEX** European Intrinsic Safety standards for Zone 0 rated hazardous areas
	Certified under IECEx (International Electrotechnical Commission) Intrinsic Safety Standards for use in Zone 0 rated hazardous areas (equivalent to Class I, Division 1, Groups C & D)
	CSA Certified to Class 225803 Process Control Equipment, Intrinsically Safe and Non-Incendive Systems – For Zone 0 Hazardous Locations, Ex ia IIB T3 (152° C) in Canada
	CSA Certified to Class 225883 Process Control Equipment, Intrinsically Safe and Non-Incendive Systems – For Class I Zone 0 Hazardous Locations, AEx ia IIB T3 (152° C) in the USA (equivalent to Class I, Division 1, Groups C & D)
Other Certifications/ Compliances	FCC Part 15 compliant
	Carries the EU CE mark
	ROHS (lead-free) compliant
	Canada IC CS-03 compliant
	IP68 compliant

Learn more about ADS *TRITON+*
www.adsenv.com/triton

Call: 800.633.7246
Email: adssales@idexcorp.com

Specifications subject to change without notice.

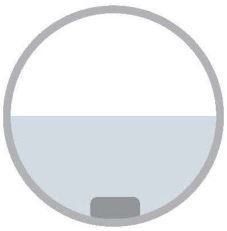
TRI+_03-29-23

TRITON+®
Sensor Specifications

The ADS® ***TRITON+***® features three depths and two velocities with five sensor options. Each sensor provides multiple technologies for continuous running of comparisons.

Peak Combo Sensor

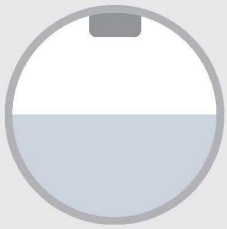
This versatile and economical sensor includes three measurement technologies in a single housing: ADS-patented continuous wave *peak velocity, uplooking ultrasonic depth,* and *pressure depth*.



Dimensions	**Height:** 0.83 in (21 mm), **Width:** 1.23 in (31 mm), **Length:** 6.76 in (172 mm)
Continuous Wave Velocity	**Operating Range:** -30 fps to +30 fps (-9.1 m/s to +9.1 m/s)
	Resolution: 0.01 fps (0.003 m/s)
	Accuracy: +/- 0.04 fps (0.01 m/s) in velocities < 1 fps; +/- 2% of actual velocity in velocities > 1 fps (0.30 m/s) in uniform flow
Uplooking Ultrasonic Depth	Performs with rotation of up to 15 degrees from the center of the invert; up to 30 degrees rotation with Silt Mount Adapter
	Operating Range: 1.0 in (25 mm) to 5 ft (152 cm)
	Resolution: 0.01 in (0.254 mm)
	Accuracy: 0.5% of reading or 0.125 in (3.2 mm), whichever is greater
Pressure Depth	**Operating Range Option:** 0 - 05 PSI up to 11.5 ft (3.5 m) 0 - 15 PSI up to 34.5 ft (10.5 m) 0 - 30 PSI up to 69 ft (21.0 m)
	Resolution: 0.01 in (0.25 mm)
	Accuracy: +/-1.0% of full scale

Surface Combo Sensor

This sensor features four technologies including surface velocity, ultrasonic depth, surcharge continuous wave velocity, and pressure depth.



Dimensions	**Height:** 2.45 in (62 mm), **Width:** 2.03 in (52 mm), **Length:** 10.61 in (269 mm)
Surface Velocity	**Minimum air range:** 3 in (76 mm) from bottom of rear, descended sensor
	Maximum air range: 42 in (107 cm)
	Range: 1.00 to 15 fps (0.30 to 4.57 m/s)
	Resolution: 0.01 fps (0.003 m/s)
	Accuracy: +/-0.25 fps (0.08 m/s) or 5% of actual reading (whichever is greater) in flow velocities between 1.00 and 15 fps (0.30 and 4.57 m/s)
Ultrasonic Depth	**Minimum dead band:** 1.0 in (25.4 mm) from the face of the sensor or 5% of the maximum range, whichever is greater
	Maximum operating air range: 10 ft (3.05 m)
	Resolution: 0.01 in (0.25 mm)
	Accuracy: +/- 0.125 in (3.2 mm) with 0.0 in (0 mm) drift, compensating for variations in air temperature
Surcharge Continuous Wave Velocity	*When submerged, this technology provides the same accuracy and range as Continuous Wave Velocity for Peak Combo Sensor*
Surcharge Pressure Depth	*When submerged, this technology provides the same accuracy and range as Pressure Depth for Peak Combo Sensor*

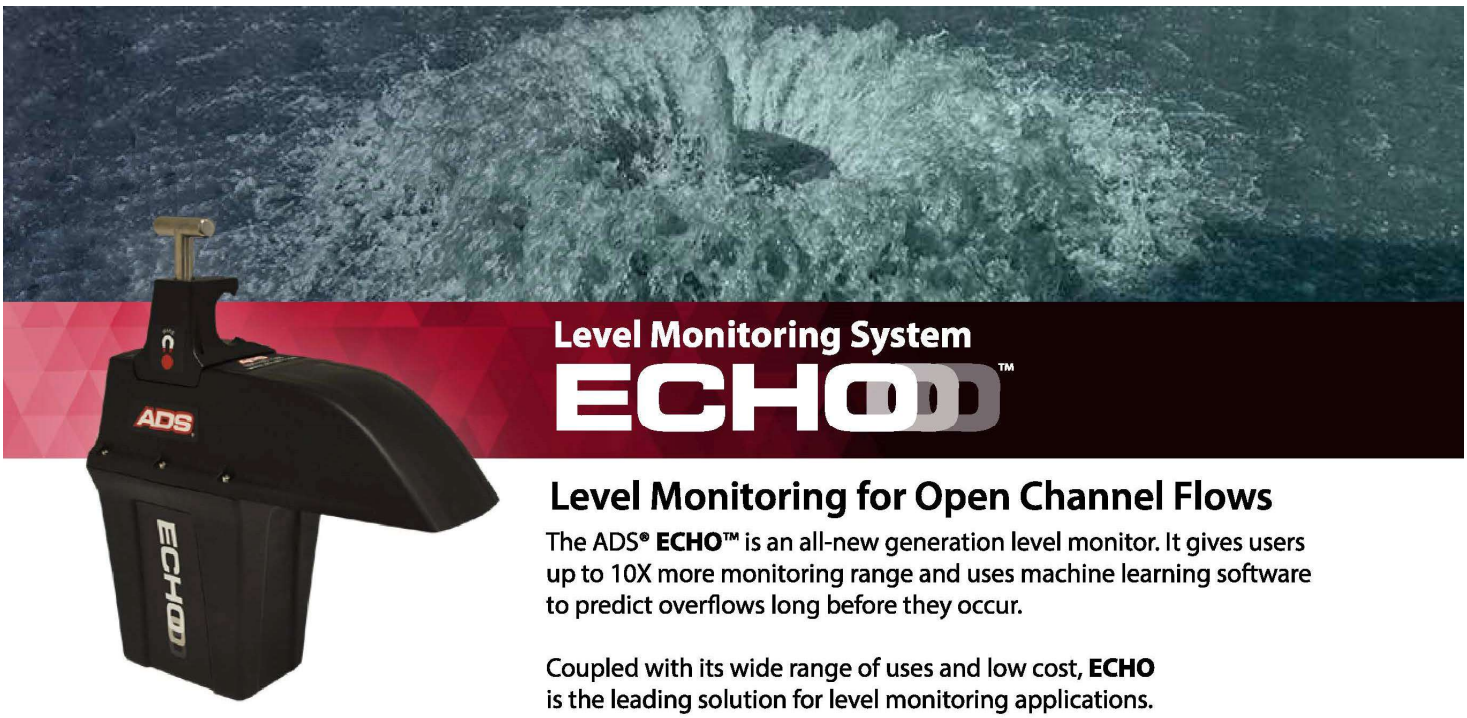
The **Ultrasonic Depth Sensor** version of this sensor specializes in depth measurement. This non-intrusive, zero-drift sensing method results in stable, accurate, and reliable flow depth calculation. Two independent ultrasonic transducers allow for independent cross-checking.

The ADS® *ECHO*™ is the only level monitoring system that provides continuous visibility of flow levels within a manhole from the invert to the rim and beyond. The ADS *ECHO* was designed to provide advanced notification of pending SSO conditions and ultimate prevention of SSOs. This is achieved by providing continuous monitoring of the water level and alarming once predetermined thresholds are reached. The *ECHO* system is also a great tool to deploy upstream of traditional area/velocity meters when performing an RDII study, since they will capture additional information about the performance of the basin, while minimizing the cost.

The patent pending design uses a parabolic reflector to create a narrow focused beam to read water levels directly in the invert. By reading into the invert, low level alarms can be set to identify flow losses that may indicate a blockage upstream, while a variety of high level alarms can be configured to detect downstream blockages. ADS would provide alarming services to the City if desired, but this function can easily be deactivated if it is not needed.

The ADS *ECHO* is mounted within a manhole from the surface and a span of up to 20 feet can be fully monitored up to the ultrasonic sensor with no "dead band." Once the ultrasonic sensor is submerged, the ADS *ECHO* transitions to an embedded pressure sensor to measure water levels up to the manhole rim and beyond.

Enhanced collection system visibility enables the ADS team to identify issues early, in strategic locations or to supplement the traditional area/velocity flow meters. We suspect that parts of the collection under study suffer from or have a high risk for overflows due to blockage or structural condition. The ADS *ECHO* provides additional information (and alarms) to better monitor the system during a flow study.



Level Monitoring System
ECHO™

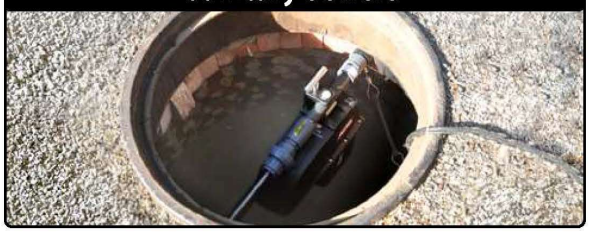
Level Monitoring for Open Channel Flows

The ADS® **ECHO**™ is an all-new generation level monitor. It gives users up to 10X more monitoring range and uses machine learning software to predict overflows long before they occur.

Coupled with its wide range of uses and low cost, **ECHO** is the leading solution for level monitoring applications.

Collection Systems, Plants, Surface, and Storm Water Structures

Sanitary Sewers



Combined Sewers

Wastewater Treatment Plants

Lagoons and Ponds

Rivers and Streams

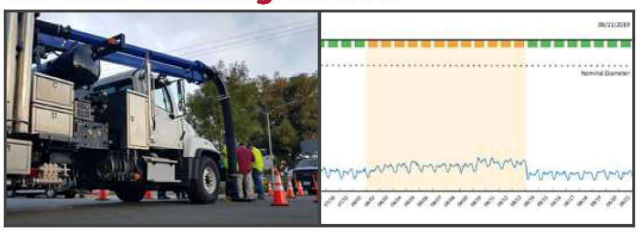
Canals

ADS®
www.adsenv.com/echo

The Wide Range of ECHO Applications Gives You Flexibility

Operations, Engineering, Planning, Modeling, and Contractor Professionals

Efficient Cleaning Process

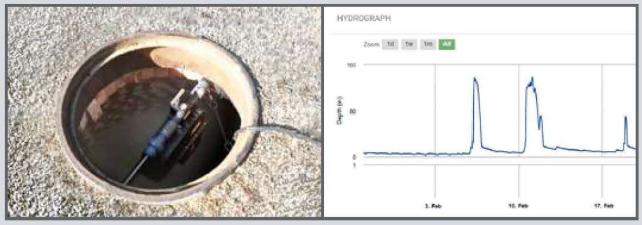


Reduce cleaning frequency and mitigate Sanitary Sewer Overflows (SSOs) with continuous monitoring and blockage prediction software.

CSO Data and Reporting

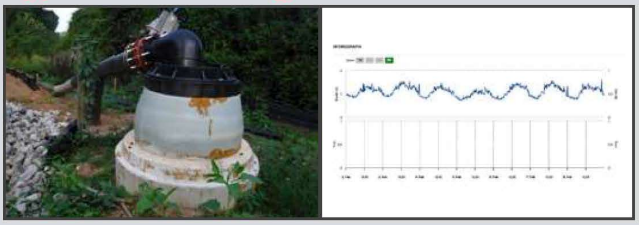
Monitor Combined Sewer Overflows (CSO) activation and de-activation in real-time. Calculate overflows, prepare reports.

Hydraulic Model Validation



Acquire data for updating and validating hydraulic models. Low cost means higher sensor density.

Bypass Monitoring



Secure 24/7 protection from overflows with bypass monitoring.

Wastewater Pump Station Back-up

Avoid pump station overflows from power failures, partial pump blockages, or failed alarms with **ECHO** back-up.

SSO Mitigation

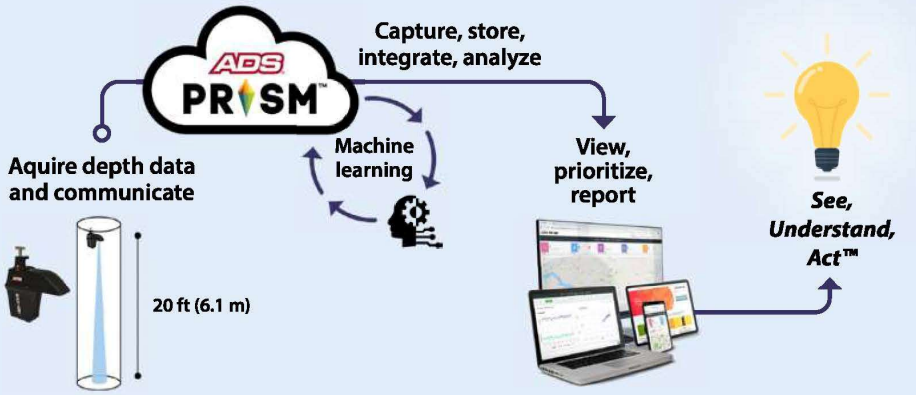
ECHO is the latest generation level monitor. This means you get:

- Predictive, early-stage notices of developing blockages
- Precise, long range ultrasonic measurements
- Multiple high and low flow alarms
- Fast, easy installation
- Stabilized mounting with integral sensor that avoids false alarms

ADS www.adsenv.com/echo

Continuous Monitoring Drives Informed Actions

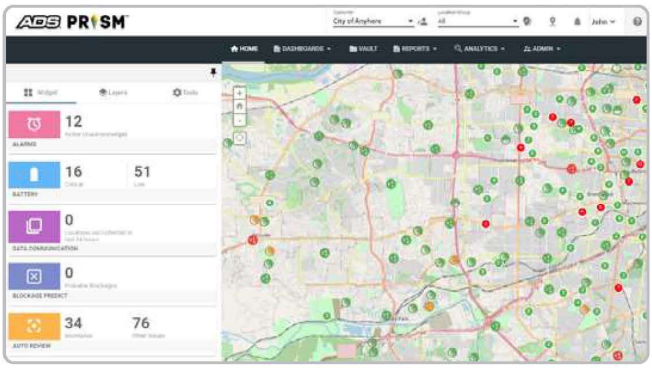
Real-time depth data is collected and communicated to the cloud-based **PRISM** software and analytics. With continuous user access, informed actions are enabled.



ADS PRISM™ Software Enhances Understanding

PRISM is a cloud-based, secure software system that acquires, stores and presents data with ongoing user access. Its home page (right) provides a map view and a dashboard for quick access to essential parameters. Individual site details, hydrographs and remote site system settings are all accessible. **PRISM** APIs enable third party data exchange.

PRISM's **blockage** PREDICT™ app (below) uses machine learning and will predictively detect blockages, with days' or weeks' worth of warning. When detected, blockages are presented in the dashboard.

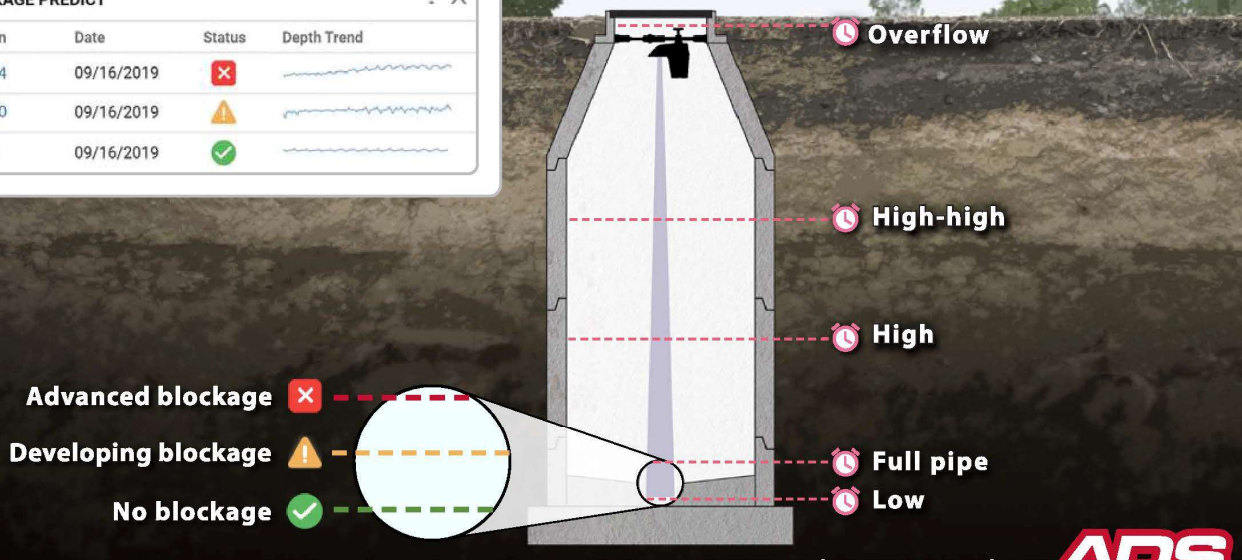


Dashboard Reveals Prioritized List

blockage PREDICT lists prioritized, colored-coded symbols and access to details for sites of interest (below).

Real-Time Alarms

Dashboard summarizes Alarms and gives access details. Five redundant SSO alarms (below) guard against fast developing events.



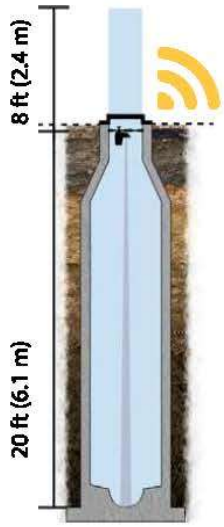
www.adsenv.com/echo

ADS

The ECHO Difference Means New Standards in Performance:

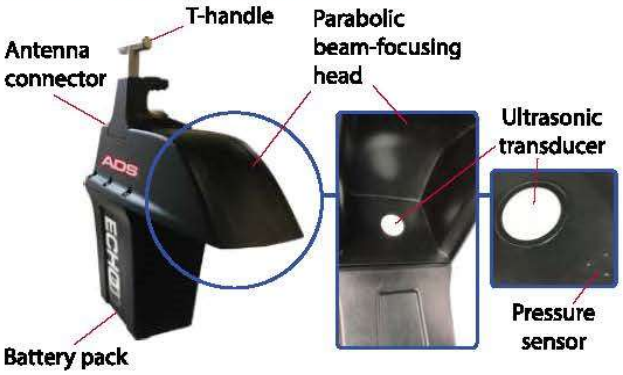
New LTE-M communications
LTE-M communications provide improved reliability often allowing the antenna to be installed in the manhole, eliminating drilling. Set-up is fast and easy, taking just minutes.

Total manhole visibility
ECHO's unique narrow beam technology provides up to a 20 ft (6.1 m) range and its pressure sensor can read up to 8 ft (2.4 m) above the **ECHO**.



SPECIFICATIONS	
System	Dual-measurement sensor (ultrasonic and pressure), tilt alarm for sensor alignment, battery powered, wireless communication
Software	**PRISM**, cloud-based with data storage, dashboard, analytics, and reports
Communications	Third-party, FCC/IC/EC- and carrier-approved wireless modem
	Compatible with all 4G LTE-M networks worldwide with 2G fallback
	Automatically detects installed SIM upon boot up to determine correct network
	Modem FCCID: R17ME910C1WW
Battery Life	Up to 2 years depending on operating temperature, modem power management,for the and frequency/type of communications
Submersible	Meets IP68
Manufacturing Standard	ISO-9001

ECHO System Components:




"Bullseye" level located on top assures alignment in seconds

Installation Options:

The ADS **ECHO** installs quickly making it easy to move from one location to another.


ECHO with tension bar installation


PVC wall mount bracket


Stainless steel wall mount bracket


Adjustable tension bar

Tailored, Affordable Purchase Programs

Purchase
The ADS **ECHO** can be purchased bundled with communications and software.

D-Site Turn-Key Service
ADS takes care of your monitoring network including equipment, software, and onsite maintenance through one low monthly fee.

2 Year Warranty
Our two-year warranty gives you added assurance of its quality and reliability.

Learn more about ECHO:
www.adsenv.com/echo

Access PRISM:
https://www.adsprism.com

Call: 800.633.7246
Email: adssales@idexcorp.com

Specifications subject to change without notice.

ECHO_07-31-2022

PRISM™

Software

ADS PRISM was developed in 2017 and the software is a culmination of 40+ years of ADS' experience. Prior to PRISM, ADS developed similar online web applications (branded as ADS Intelliserve and ADS FlowView) to help distribute data to our clients. In our development of this software specifically for flow monitoring services and applications, ADS has gathered extensive client and customer feedback, which has been used to assist in prioritizing feature enhancements and improvements.

PRISM will connect the City to the flow and rainfall monitoring network, delivering operational intelligence at each location. PRISM offers a fast and easy way to visualize the condition of a collection system and delivers data in a secure platform.

PRISM offers dynamic analytical functions in a Cloud-based platform that can be utilized through individual login accounts. The system includes an ESRI map view reflecting flow, level, and rainfall monitors with location and condition details, and leaderboard tiles that outlines the equipment status, quick access to a data vault to store files related to the monitoring program, as well as specialized report features that can be tailored for project specific needs. Additionally, users can import or export data and events through a fully functional API to automate and enhance specific workflow tasks.

PRISM will specifically help the City of Ann Arbor and its stakeholders by:

1. Transforming data into actionable insight with powerful data viewing and analytics
2. Visualizing sewer system performance through dashboards and graphical displays
3. Provide notifications with configurable alarms for overflows and developing problems
4. Can quickly ingest ESRI Map Server or Feature Server Geographic Data (GIS)
5. Allows data sharing, reports, and related files among cross-functional groups
6. Provides an easy and transformative user experience for monitoring data management
7. Provides user configured Exporting Templates that can quickly be replicated

What dashboards are provided with ADS PRISM

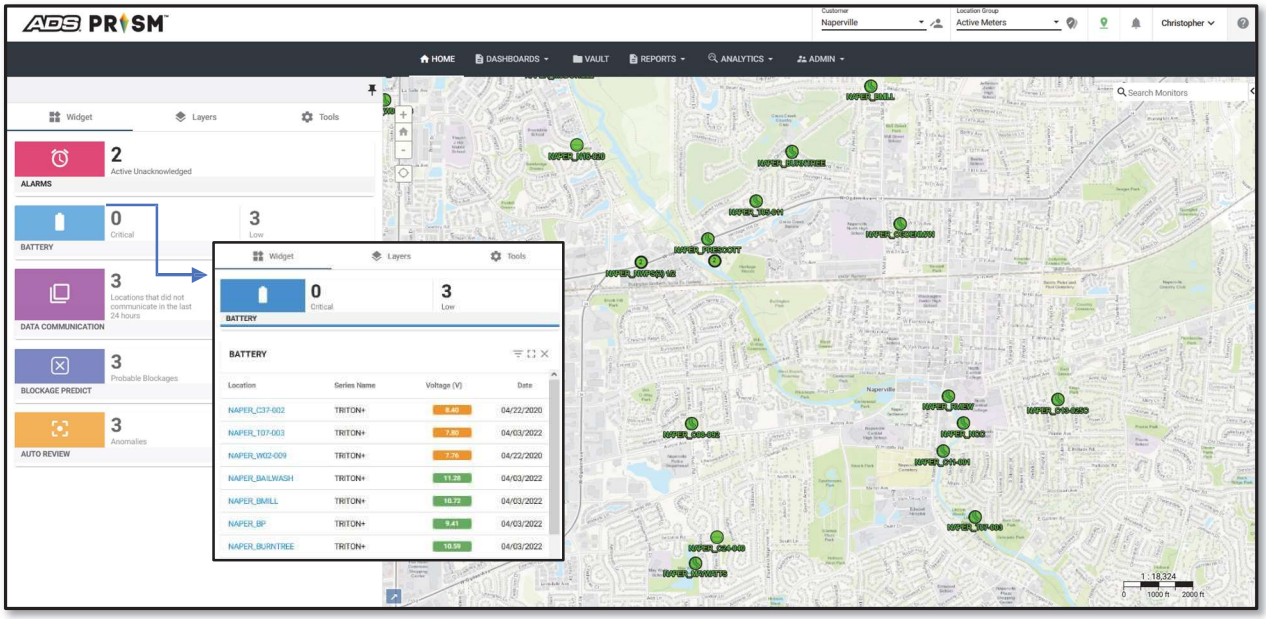
With such a dynamic and feature rich software system, it challenging to provide the full details of PRISM and it's dashboard within this proposal. However, we have highlighted some of the key dashboard features of this software in the graphics and text below.

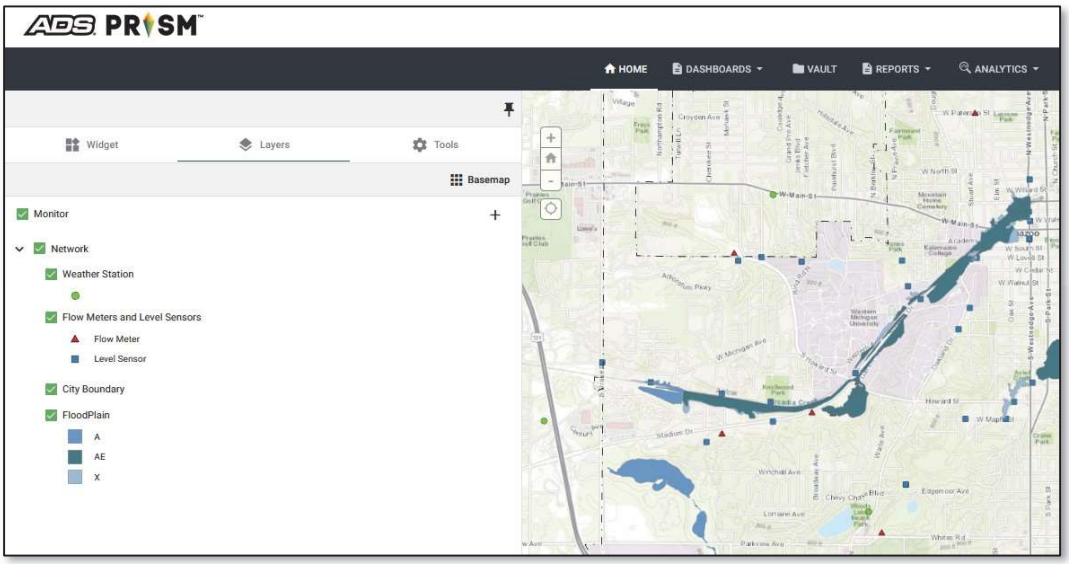
ADS is available to offer a full demonstration of the software, should the City be interested.

Upon login, users are presented with a Widget Tile Board and System Map. These features are dynamic and will update on a regular basis. Active alarms are available and identifiable though the Alarms Widget to prompt users of configurable alarm state detected by the monitor. The Battery Widget will update each time data is collected or pushed into the PRISM system. And the Data Communication widget provides details on monitors that may be experiencing communication issues or interruptions.

A simple navigation at the top of the software bar allows users to quickly jump into other dashboards, such as data viewing, the data vault, reports and analytics. Additionally, Location Groups can be created, customized, and accessed quickly and easily for filtering and fast navigation.

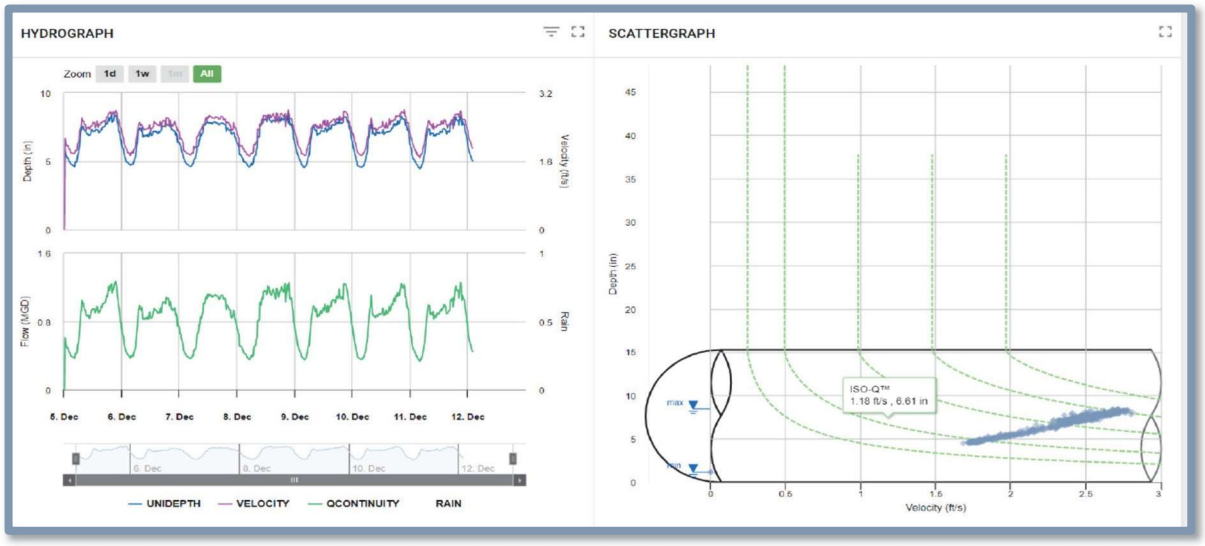
The main display provides Widgets and Maps. For each widget in the dashboard, users can drill down to find additional information that pertains to each device summarized in the main display. The dashboard was designed to provide the user both early notifications as well as critical notifications as the monitoring network changes with the actual field conditions.





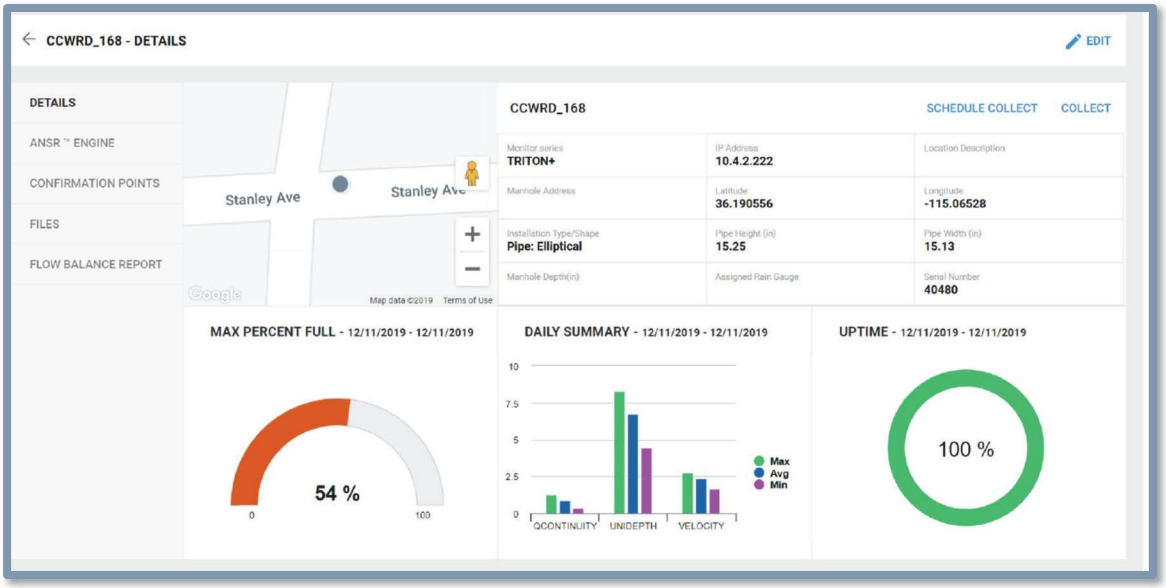
PRISM is GIS ready and built for ESRI integration. ArcGIS services are built into PRISM and ready to use **today**. PRISM can consume MapServer or FeatureServer information from ArcGIS Online and without any additional development required.

Viewing data is simplified through our locations dashboard. In PRISM, both Hydrographs and Scattergraphs are shown on the same site-location page, as shown in the example below. PRISM allows for great flexibility to choose individual sites, groups of sites, entities such as velocity, depth and flow, raw or finalized data, data ranges, etc.



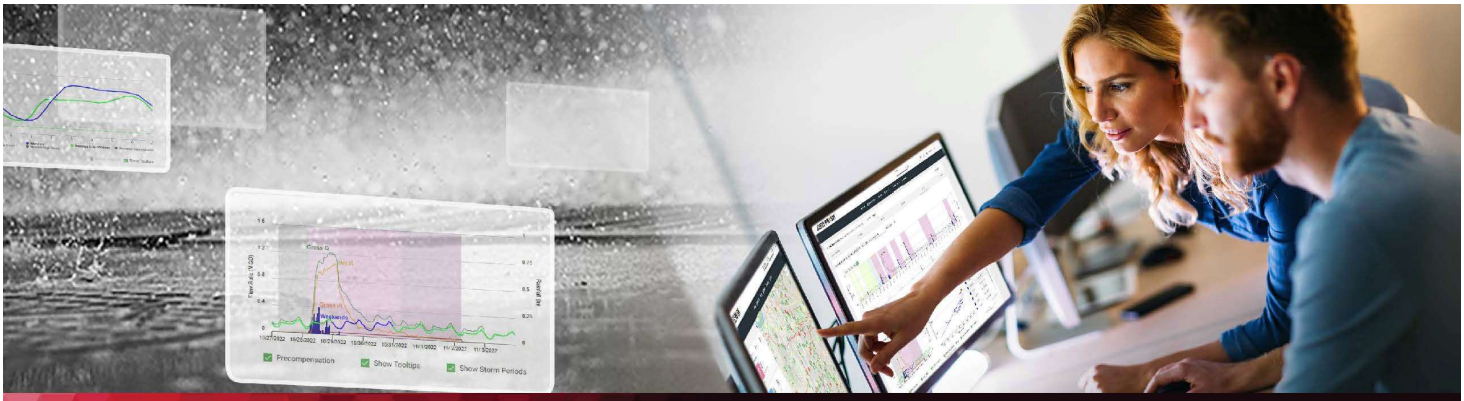
The example above shows the connections of Hydrographs and Scattergraphs and where overlays of Iso- Q lines and Pipe Visualization is shown on the Scattergraph. Other overlay choices include alarms, pipe height, manhole depth, data quality, confirmation points, rain, silt, and estimated data quality.

Each site location also has a Site Details page as shown below, with a zoomed location map, monitor installation details, confirmation points data, files folder for storing site reports/photos/notes, a daily summary on depth, velocity, flow, as well as metrics on data uptime.



Additionally, the quick-reference graphs shown above for the *Percent Full* graphic offers a drill-down report which will open the associated report page for viewing of the data in more detail.

Finally - exporting Data has been simplified within PRISM. Any Hydrograph, Scattergraph, report, table, etc. can be exported as a pdf file or CSV file depending on the nature of the report/graph, that can then be incorporated into hydraulic models, I&I software, capacity studies, etc. There is also a customizable "Flow Monitoring Report" that can provide great flexibility to include variables, entities and additional location summary information and can be replicated at various time intervals and through a saved template. Our "Vault Dashboard" provides users with a quick way to save their exporting template and get the data they need quickly and easily in a recognizable display similar to Windows File Explorer.



PRISM™ Proactive Insight for Collection System Management

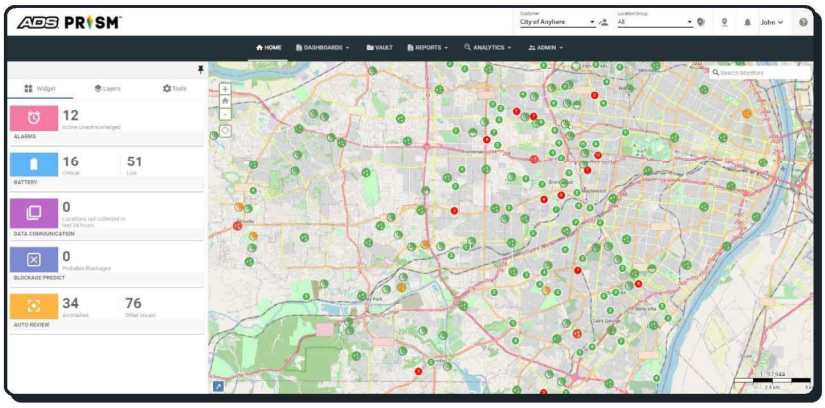
PRISM Transforms Your System Management

PRISM™ is a web application that puts critical data at your fingertips to support management, engineering, and operational decisions within your wastewater collection system. **PRISM** connects clients to an **ADS®** monitoring network, delivering near real-time operational intelligence on the status of your wastewater collection system. It is the fastest and easiest way to visualize the condition of your collection system. It offers dynamic analytical functions to fuel discoveries that will lead to enhanced management of your system.

- **Visualize** sewer system performance through intuitive dashboards and graphical displays
- Transform data into **actionable insight** with powerful analytics
- Ensure timely **performance notifications** with configurable alarms for advance notice of developing problems
- Provides an **easy and transformative** user experience for sewer data management
- **Collaborate for success** by sharing data, reports, and related files among cross-functional groups
- Display the full sewer network by linking **PRISM** to your **GIS Server** to have full control over symbology and visible layers

System Wide Performance at a Glance

Access your data and device status on our cloud-based Collection System Management platform, **PRISM**. The home page provides immediate system insight including a map view reflecting flow, level, and rainfall monitors with location and condition details, leaderboard tiles with system status, and quick access to the data vault as well as specialized reports. The intuitive interface allows you to quickly manage alarms, check collection and device status, generate reports, and link third party data through our self-service API to automate and enhance your specific workflow.



Flow

Level

Rain

ADS®
www.adsenv.com/prism

PRISM™

ADS®
www.adsenv.com

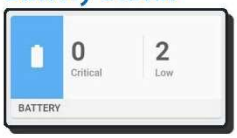
Easy, Intuitive, Actionable

PRISM's dashboard transforms your experience. Get in-depth system analysis that places operational intelligence at your fingertips.

Alarms

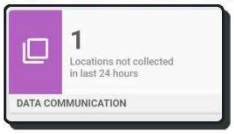
Self manage and review alarms to inform you of events, performance, and data anomalies at flow, level, or rainfall monitoring locations.

Battery Status

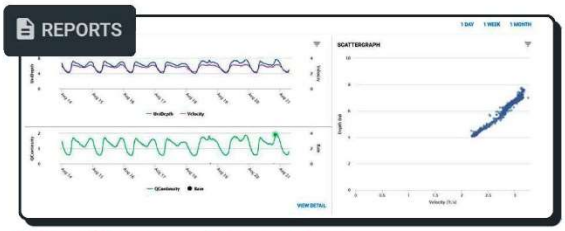


Easy battery status management ensures seamless operation of flow, level, and rainfall monitors.

Data Communication

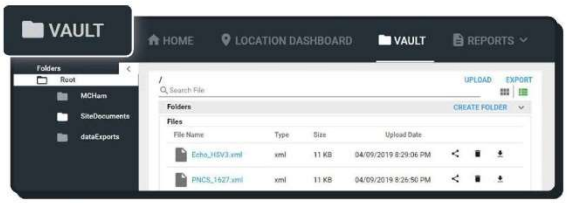


Track monitor communication status to identify any data collection problems that may arise.



Visualizing and Reporting

Graphing and reporting capabilities include side-by-side Hydrograph and Scattergraph comparisons for rapid viewing of each site's status.

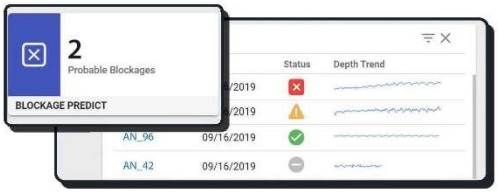


Data Vault

Upload, store, organize, and delete any files pertinent to your project. Share a time-sensitive link of your files with **PRISM** users or non-users.

Advanced Features

ADS is introducing new advanced features so you can stay on top of your collection system with in-depth insights and specialized tools. Contact us for demos or to purchase.



blockage PREDICT™

Prevent sewer overflows by coupling flow depth data with smart algorithms to sense developing sewer blockages. This *advanced machine learning* application recognizes flow anomalies and provides advance notifications so you can direct resources in a timely, cost-effective manner to proactively prevent sewer overflows before they become a problem. See www.adsenv.com/blockagePREDICT to learn more.

New Auto Review™ & Advanced Data Editing

Perform quality control operations on your data within **PRISM.** Within the editing interface, eliminate suspicious data from final entity generation and correct errors at will with the ability to add commentary about site conditions. The ability to design custom pipe shapes, create calculation based entities, and edit data is at your fingertips.

New SLiiCER®

Together, **PRISM** and **SLiiCER** provide a powerful set of online engineering tools designed to extract rigorous Dry and Wet Weather Performance measurements from sewer flow and rain data with speed and precision.
See www.adsenv.com/SLiiCER to learn more.

PRISM Links:
https://www.adsprism.com
https://www.adsprism.com/sliicer

Video Tutorials:
www.adsenv.com/video-library/

Talk to a Trained Representative:
T: 800.633.7246
E: adssales@idexcorp.com

Specifications subject to change without notice.

PRISM_04-12-23

Site Selection

Locations for flow meter sites were already determined by City staff based on previous goals and as outlined in the RFP. We will consider and use any historic flow records, if available, to further understand the site hydraulics at each location. After site investigations are performed in the field, and after discussion those details with City personnel, final meter locations will be confirmed with the City. Typically, a suitable flow meter location has straight pipes, free of debris, flowing into the selected manhole to provide laminar flows.

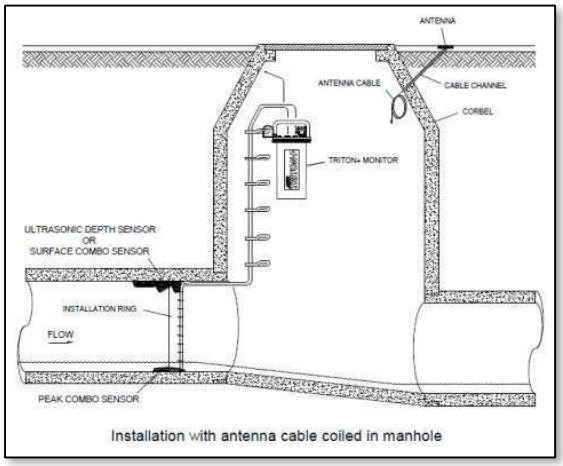
Site Inspections for Monitoring Suitability

Selecting suitable locations will be critical towards the overall success of the project. Our team has the experience to successfully identify locations that will provide the City with optimal meter up-time and valid data. For flow monitoring sites, manhole and pipe accessibility is evaluated along with flow characteristics. The following information is collected during a site investigation phase of a monitoring project:

- Channel cross section (round, elliptical, box, flume, etc)
- Channel slope and uniformity
- Inlet and outlet flow characteristics
- Laminar flow free of turbulence
- Silt/debris

Monitor Installation

Installation of flow monitoring equipment will begin once the site reports and locations have been approved by the City. ADS flow sensors are typically installed in the lines incoming to the monitored manhole. The monitor and sensor cables will be secured to the manhole walls and/or steps to allow ready access by ADS personnel and to minimize chances that debris would obstruct the sensors. Meters are then activated on a set sample rate (5-minutes) and data is immediately available for download or transfer to a 3rd party software, such as H2OMetrics.



Example of a typical ADS Flow Meter Installation

C.3 - Field Services on ADS Equipment

As part of a monthly maintenance or service agreement, ADS will perform preventive maintenance services on the twelve (12) ADS flow monitors. Andrew Rood, Project Manager, will be designated as the immediate contact for problems associated with maintenance and confirmation work. Tom Pientak, will be the active field manager, and will also be readily available for all service items for this project. The services required to maintain the hardware include the following:

Service Schedule: The field service shall accommodate normal operating hours of 8:00 a.m. to 4:00 p.m. Monday through Friday. Should ADS need to accommodate and/or coordinate service work outside of these operating hours, we will provide the City with advanced notification for any work outside of these hours. ADS will provide the City Representative with a schedule of maintenance based off bi-weekly data checks by our data analysts.

Diagnostics: Remote diagnostic evaluation of all equipment will be performed using the most current ADS procedures and programs from its facilities in Troy, MI. Our local office is staffed with our Project Manager, Field Managers, and Field Associates to ensure quick resolutions will be provided for the installed equipment.

Repair: Repair and preventative maintenance services are essential and necessary to keep the equipment operating in accordance with the manufacturer's design specifications. The types of services to be performed under this Agreement include but are not limited to the following:

- ✓ Routine testing and verification of proper operation by Data Analyst and Field Technicians
- ✓ Cleaning of any sensors installed at the monitoring locations (monthly/as needed)
- ✓ Communication link monitoring for the detection of failures (as needed)
- ✓ Confirmation of equipment performance as directed by a trained Data Analyst or as requested
- ✓ Sensor Replacement (a depth sensor shall be considered for replacement if the sensor undergoes troubleshooting by a field representative and is found to be damaged or out of its specified tolerance range); (a velocity sensor shall be considered for replacement if the sensor readings are a constant value or zero, indicating a loss of sensitivity and/or does not meet its specified tolerance when compared to a confirmation measurement).
- ✓ Battery replacement (When needed, ADS will monitor the battery voltages of any ADS equipment covered in this contract)
- ✓ Installing firmware updates
- ✓ Pressure sensor desiccant replacement (annually)

Warranty: All new products manufactured by ADS will be free from defects in material and workmanship for up to one (1) year following the date of shipment from ADS. Any unauthorized repair or replacement, use, installation or incorporation of unauthorized parts or accessories, including without limitation opening up a monitor, will void this product warranty. Any repaired or replaced part will be covered by this warranty for ninety (90) days from the date that such repaired or replaced product occurs. This warranty is available to the Client as the original purchaser of the product and only if it has been installed, operated, and maintained in accordance with ADS' standards. This warranty does not apply to damage by catastrophes of nature, fire, explosion, acts of God (including, but not limited to, lightning damage and power surges), accidents, improper use or service, damage during transportation, or other similar causes beyond ADS' control.

Response Time: ADS will investigate any perceived malfunction of the monitor, sensors, or communication equipment within three to five (3-5) business days of discovery of the malfunction. Furthermore, the equipment will be returned to a fully operational state within five to seven (5-7) business days after the malfunction is discovered.

Substitute Unit: If any equipment must be removed from the site for offsite repair within the 1-year warranty period, ADS will install a temporary substitute flow monitor to continue data gathering until the original meter is repaired and reinstalled or replaced at no additional charge. ADS will ensure that only identical monitoring units will be used on this project. This will ensure the highest consistency with the data should any offsite repairs be required.

Monthly Service Reports: ADS can provide the City Representative with a monthly listing of all repair work, maintenance work and diagnostics performed, including any internal flow meter adjustments and firmware upgrades. These high quality reports can be produced quickly from our mobile tablet work order and paperless system.

Communications: ADS will provide communications services on a continuous basis and shall procure communications services as required. As part of this proposal, ADS has included in its cost all communication charges and/or fees as part of our service costs for wireless data transmission.

Parts and Supplies Inventory: All ADS Field Fleet Vehicles are equipped with all the necessary parts, supplies and materials for any required maintenance and repair of the ADS flow monitors and rain gauges. As directed by the city, ADS will carry sufficient inventory to promptly make repairs and avoid downtime. Out of warranty items that require repair/replacement will be quoted and discussed with the City before any work is performed.

Data Collection: A fully trained and certified ADS Data Analyst will first ensure the accuracy of the location information file (LIF) for each site and will assist in the creation of a site sheet. The analyst will collect data from each monitoring location on a bi-weekly basis. If the monitor does not collect successfully, the analyst will schedule immediate service for the site. This bi-weekly data check is included as part of our monthly maintenance schedule for the City.

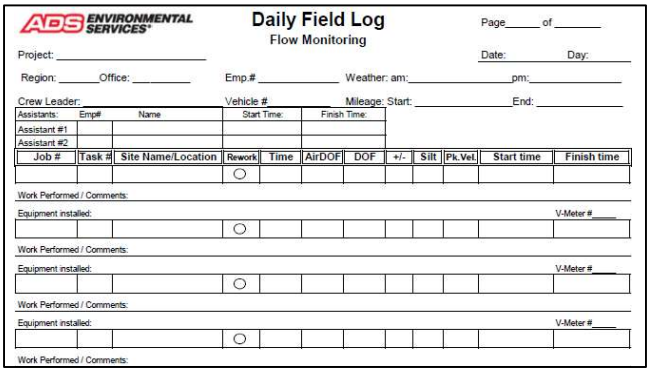
Field Maintenance Schedule: The monitors and rain gauges will be collected for final processing at least two times per week via wireless communication. Data will be reviewed as it is collected and monitor maintenance and sensor cleaning will be performed by field crews on site within 5-7 days of an issue being discovered. In addition, independent manual readings of depth and velocity will be performed periodically to confirm the accuracy of the flow monitor in each specific site. Scheduled maintenance can vary from week to week depending on the type of maintenance or depending on the issues discovered by the analyst.

C.4 - Field Maintenance Procedures and Checklists for Flow Monitors

Data integrity and uptime is critical to the success of this flow monitoring project. Therefore, we take great pride in stressing the importance of our field maintenance procedures because we know that our processes lead to the most accurate and consistent data in the industry. ADS field crews repair ADS flow monitors using the most accurate and up-to-date manufacturing standards and using the most rigorous and demanding recording keeping standards. They follow ISO 9001 quality management systems to optimize readings and uptime as outlined above. All field personnel must pass field certification training before being assigned to a field crew. These training and operational procedures ensure that ADS data will be defendable under any special requirements of Consent Orders.

Procedures related to flow monitoring operations are maintained in an online document library that is accessible to all employees. There are over 190 documented procedures in the library. **Printed out, the ADS Field Services Manual for flow monitoring is 434 pages of detailed, illustrated instruction covering every aspect of monitoring, from hydraulics, to sensors, to equipment, software, management procedures and error handling.** Our procedures, our built-in redundancies, and our fail-safe mechanisms allow us to avoid most mistakes and to produce reliable, accurate information for our customers. If awarded this project, ADS can make many of these forms available to the City's Representative for further review.

Field Crews are also equipped with Digital Tablets to assist with paperless reporting and checklists. All field work is recorded on a "Daily Form" using a tablet or on paper. These Daily Forms provide snapshots of all the field work performed on each site in a workday. Also, due to the nature of this business, all crew members are fully trained in confined space entry. Confined Space Entry (CSE) forms are REQUIRED for all maintenance in which "manned entry" is required.



ADS ENVIRONMENTAL SERVICES

Daily Field Log

Flow Monitoring

Page_____ of _____

Project: _____ Date: _____ Day: _____

Region: _____ Office: _____ Emp.# _____ Weather: am: _____ pm: _____

Crew Leader: _____ Vehicle #_____ Mileage: Start: _____ End: _____

Assistants:	Emp#	Name	Start Time:	Finish Time:
Assistant #1				
Assistant #2				

Job #	Task #	Site Name/Location	Rework	Time	AirDOF	DOF	+/-	Silt	Pk.Vel.	Start time	Finish time
			○								

Work Performed / Comments:

Equipment installed: V-Meter #____

			○								

Work Performed / Comments:

Equipment installed: V-Meter #____

			○								

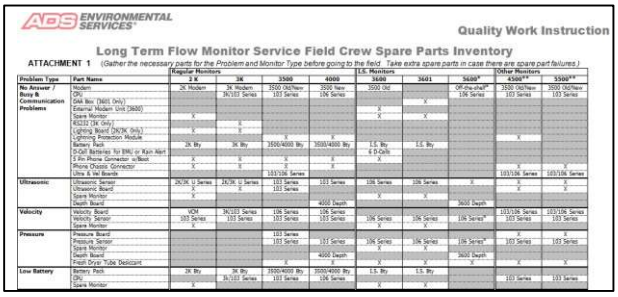
Work Performed / Comments:

Equipment installed: V-Meter #____

			○								

Work Performed / Comments:

Example of the ADS Daily Field Log Checklist



ADS ENVIRONMENTAL SERVICES

Quality Work Instruction

Long Term Flow Monitor Service Field Crew Spare Parts Inventory

ATTACHMENT 1 (Gather the necessary parts for the Problem and Monitor Type before going to the field. Take extra spare parts in case there are spare part failures.)

Problem Type	Part Name	Regular Monitors: 2 K	3K	3500	4000	I.S. Monitors: 3600	3601	3600*	Other Monitors: 4500**	3500**
No Answer / Busy & Communication Problems	Modem	2K Modem	2K Modem	3500 Old/New	3500 New	3502 Old		Off-the-shelf*	3500 Old/New	3500 Old/New
	CPU		3K/103 Series	103 Series	106 Series			106 Series	103 Series	103 Series
	Data Box (3601 Only)						X			
	External Modem Unit (3600)					X				
	Spare Monitor	X				X	X			
	RS232 2K Only		X							
	Lighting Board (2K/3K Only)	X	X							
	Lightning Protection Module			X					X	
	Battery Pack	2K Wy	3K Wy	3500/4000 Wy	3500/4000 Wy	I.S. Wy	I.S. Wy			
	D-Cell Batteries for BMU or Main Alert					6 D-Cells				
	9 Pin Phone Connector w/Boot	X	X	X	X	X				
	Phone Chassis Connector	X	X	X	X					
	Ultra & Yel Brands			103/106 Series					103/106 Series	103/106 Series
Ultrasonic	Ultrasonic Sensor	2K/3K U Series	2K/3K U Series	103 Series	103 Series	106 Series	106 Series	X	X	X
	Ultrasonic Board	X	X	103 Series					X	X
	Spare Monitor	X				X	X			
	Depth Board				4000 Depth			3600 Depth		
Velocity	Velocity Board	VCM	3K/103 Series	106 Series	106 Series				103/106 Series	103/106 Series
	Velocity Sensor	103 Series	103 Series	103 Series	103 Series	106 Series	106 Series	106 Series*	103 Series	103 Series
	Spare Monitor	X				X	X			
Pressure	Pressure Board			103 Series						X
	Pressure Sensor			103 Series	103 Series	106 Series	106 Series	106 Series*	103 Series	103 Series
	Spare Monitor					X	X			
	Depth Board				4000 Depth			3600 Depth		
	Fresh Dryer Tube Desiccant					X	X	X	X	X
Low Battery	Battery Pack	2K Wy	3K Wy	3500/4000 Wy	3500/4000 Wy	I.S. Wy	I.S. Wy			
	CPU		3K/103 Series	103 Series	106 Series				103 Series	103 Series
	Spare Monitor	X				X	X			

ADS has Advanced Checklists for all Hardware Maintenance

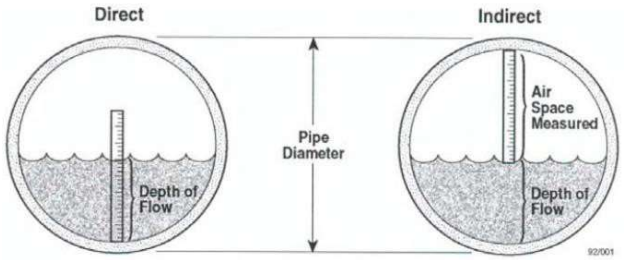
C.5 - Procedures for Confirmation and Flow Verification

Two field skills form the foundation for site quality control: performing depth of flow (DOF) measurements and performing site confirmations. DOF measurements are performed to verify the monitor's depth sensor measurements. Site confirmations are performed to verify the monitor's velocity sensor measurements and to calculate flow quantities.

To verify the accuracy of ADS flow depth sensors, manual flow depth measurements are performed independent of the monitor's depth sensors using a ruler to measure the flow depth. The resulting measurements are then compared to monitor's measurements to verify the sensor accuracy. There are two types of flow depth measurements: DOFs and air DOFs.

- DOF: This involves placing a ruler directly in the flow to measure the flow depth. This type of measurement is also called a direct measurement.

- Air DOF: This involves measuring the air space above the flow with a ruler to determine the flow depth. Flow depth is determined by subtracting the resulting measurement from the pipe height. Air DOFs often are taken from the face of the ultrasonic sensor or from the crown of the pipe. This type of measurement is also called an indirect or a range measurement.



Two types of flow depth measurements: DOFs and Air DOFs

Taking flow depth measurements requires skill in six areas in which all ADS Field Crews Members are trained and certified in including:

- Using the correct tools
- Positioning yourself correctly in the manhole
- Performing DOF and air DOF measurements
- Taking DOF measurements in the right location
- Measuring flow depth in varying flow conditions
- Measuring silt and debris

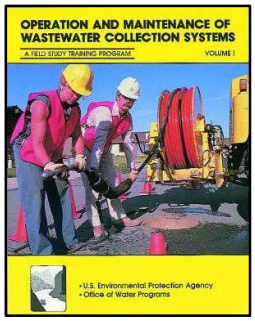
A site confirmation is a manual depth, velocity, or quantity measurement taken at a monitoring site to independently verify the accuracy of the monitor's sensors and to develop the various components of the flow equations used to quantify flow data. Site confirmations are the primary quality control procedure performed on a flow monitoring project. Every confirmation must include, at a minimum, a depth, velocity (except weirs), silt, and time/date. As described above, depth is the first part of a successful confirmation, velocity is the second. **ADS will perform confirmations at each location, as identified by our data analyst during their review review process, and as part of our proposed work plan when needed.**

C.6 - QAQC Process for Flow Data Gathering and Analysis

Our comprehensive Quality Assurance/Quality Control (QA/QC) Program is unmatched in the industry and will provide a consistent approach to quality to ensure that all products and deliverables meet project requirements. The program will address methodologies, work review, frequency and timing of review, review documentation and distribution, and approval/sign-off requirements. This ensures a data editing and processing "paper trail" to address any outside questions regarding data accuracy, overflow volume calculations, etc. ADS is ISO 9001 certified for manufacturing, field services, engineering, data analysis and management.

ADS follows careful monitoring procedures to direct the manufacture of state-of-the-art instrumentation and equipment. This kind of activity, coupled with ADS's continuous efforts to improve field processes and methodologies, underscores the company's commitment to provide high value/high quality products. The City will be able to draw upon ADS's ability to bring this industry knowledge to the project. ADS' quality programs are unmatched and result in attaining accurate, reliable flow information.

The quality of flow monitoring data is a function of the quality of the measuring equipment employed and the competence of the field crews and data analysts that work on the project. ADS maintains an internal training certification program for the field managers, field technicians, and data analysts who work on any ADS project. There are 18 training modules for field managers and 8 flow monitoring modules for field technicians. Data Analysts must complete classroom training plus a 6-month internship. Employees are not allowed to work independently until they have passed certification exams in each module and have demonstrated proficiency to a qualified trainer.



All Field Managers at ADS are required to complete the two-volume "Operation and Maintenance of Wastewater Collection Systems" course. This course is developed and administered by California State University, Sacramento for the U.S. Environmental Protection Agency. In some states, this course qualifies the graduate to become a Wastewater Collection System Operator.

ADS' QA/QC and training methodologies are unparalleled within the industry and we believe this approach meets the City's needs for the most accurate and reliable flow information.

REQUEST FOR PROPOSAL

RFP # 23-39

SANITARY SEWER FLOW METERING SERVICES

City of Ann Arbor
Public Services Area

Due Date: August 15, 2023 by 2:00 p.m. (local time)

Issued By:

City of Ann Arbor
Procurement Unit
301 E. Huron Street
Ann Arbor, MI 48104

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SECTION I - GENERAL INFORMATION

A. OBJECTIVE

The City of Ann Arbor is seeking a firm to provide flow metering services for it's existing flow metering network for a period of three (3) years. The existing flow metering network is utilized to help direct sanitary sewer operation and maintenance activities, calibrate city's hydraulic model, and measure the effectiveness of sanitary sewer rehabilitation projects.

B. QUESTIONS AND CLARIFICATIONS / DESIGNATED CITY CONTACTS

All questions regarding this Request for Proposal (RFP) shall be submitted via e-mail. Questions will be accepted and answered in accordance with the terms and conditions of this RFP.

All questions shall be submitted on or before August 1, 2023 at 4:00 p.m., and should be addressed as follows:

Scope of Work/Proposal Content questions shall be e-mailed to Troy Baughman, Systems Planning Engineer – tbaughman@a2gov.org

RFP Process and Compliance questions shall be e-mailed to Colin Spencer, Buyer - CSpencer@a2gov.org

Should any prospective offeror be in doubt as to the true meaning of any portion of this RFP, or should the prospective offeror find any ambiguity, inconsistency, or omission therein, the prospective offeror shall make a written request for an official interpretation or correction by the due date for questions above.

All interpretations, corrections, or additions to this RFP will be made only as an official addendum that will be posted to a2gov.org and MITN.info and it shall be the prospective offeror's responsibility to ensure they have received all addenda before submitting a proposal. Any addendum issued by the City shall become part of the RFP, and must be incorporated in the proposal where applicable.

C. PRE-PROPOSAL MEETING

No pre-proposal meeting will be held for this RFP. Please contact staff indicated above with general questions regarding the RFP.

D. PROPOSAL FORMAT

To be considered, each firm must submit a response to this RFP using the format provided in Section III. No other distribution of proposals is to be made by the prospective offeror. An official authorized to bind the offeror to its provisions must

sign the proposal. Each proposal must remain valid for at least ninety days from the due date of this RFP.

Proposals should be prepared simply and economically providing a straightforward, concise description of the offeror's ability to meet the requirements of the RFP. No erasures are permitted. Mistakes may be crossed out and corrected and must be initialed in ink by the person signing the proposal.

E. SELECTION CRITERIA

Responses to this RFP will be evaluated using a point system as shown in Section III. A selection committee comprised of staff from the City will complete the evaluation.

The fee proposals will not be reviewed at the initial evaluation. After initial evaluation, the City will determine top proposals, and open only those fee proposals. The City will then determine which, if any, firms will be interviewed. During the interviews, the selected firms will be given the opportunity to discuss their proposal, qualifications, past experience, and their fee proposal in more detail. The City further reserves the right to interview the key personnel assigned by the selected offeror to this project. If the City chooses to interview any respondents, the interviews will be tentatively held the **week of August 21, 2023**. Offeror must be available on these dates.

All proposals submitted may be subject to clarifications and further negotiation. All agreements resulting from negotiations that differ from what is represented within the RFP or in the proposal response shall be documented and included as part of the final contract.

F. SEALED PROPOSAL SUBMISSION

All proposals are due and must be delivered to the City on or before, August 15, 2023 at 2:00 p.m. (local time). Proposals submitted late or via oral, telephonic, telegraphic, electronic mail or facsimile **will not** be considered or accepted.

Each respondent should submit in a sealed envelope

- **one (1) original proposal**
- **three (3) additional proposal copies**
- **one (1) digital copy of the proposal preferably on a USB/flash drive as one file in PDF format**

Each respondent must submit in a single separate sealed envelope marked Fee Proposal

- **two (2) copies of the fee proposal**

<u>The fee proposal and all costs must be separate from the rest of the proposal.</u>

Proposals submitted should be clearly marked: **"RFP No.23-39- – Sanitary Sewer Flow Metering Services**" and list the offeror's name and address.

Proposals must be addressed and delivered to:
City of Ann Arbor
c/o Customer Service
301 East Huron Street
Ann Arbor, MI 48104

All proposals received on or before the due date will be publicly opened and recorded on the due date. No immediate decisions will be rendered.

Hand delivered bids may be dropped off in the Purchasing drop box located in the Ann Street (north) vestibule/entrance of City Hall which is open to the public Monday through Friday from 8am to 5pm (except holidays). The City will not be liable to any prospective offeror for any unforeseen circumstances, delivery, or postal delays. Postmarking on the due date will not substitute for receipt of the proposal. Offerors are responsible for submission of their proposal. Additional time will not be granted to a single prospective offeror. However, additional time may be granted to all prospective offerors at the discretion of the City.

A proposal may be disqualified if the following required forms are not included with the proposal:

- **Attachment C - City of Ann Arbor Non-Discrimination Declaration of Compliance**
- **Attachment D - City of Ann Arbor Living Wage Declaration of Compliance**
- **Attachment E - Vendor Conflict of Interest Disclosure Form of the RFP Document**

Proposals that fail to provide these forms listed above upon proposal opening may be deemed non-responsive and may not be considered for award.

Please provide the forms outlined above (Attachments C, D and E) within your narrative proposal, not within the separately sealed Fee Proposal envelope.

All proposed fees, cost or compensation for the services requested herein should be provided in the separately sealed Fee Proposal envelope only.

G. DISCLOSURES

Under the Freedom of Information Act (Public Act 442), the City is obligated to permit review of its files, if requested by others. All information in a proposal is

subject to disclosure under this provision. This act also provides for a complete disclosure of contracts and attachments thereto.

H. TYPE OF CONTRACT

A sample of the General Services Agreement is included as Appendix A. Those who wish to submit a proposal to the City are required to review this sample agreement carefully. **The City will not entertain changes to its General Services Agreement.**

The City reserves the right to award the total proposal, to reject any or all proposals in whole or in part, and to waive any informality or technical defects if, in the City's sole judgment, the best interests of the City will be so served.

This RFP and the selected offeror's response thereto, shall constitute the basis of the scope of services in the contract by reference.

I. NONDISCRIMINATION

All offerors proposing to do business with the City shall satisfy the contract compliance administrative policy adopted by the City Administrator in accordance with the Section 9:158 of the Ann Arbor City Code. Breach of the obligation not to discriminate as outlined in Attachment C shall be a material breach of the contract. Contractors are required to post a copy of Ann Arbor's Non-Discrimination Ordinance attached at all work locations where its employees provide services under a contract with the City.

J. WAGE REQUIREMENTS

The Attachments provided herein outline the requirements for payment of prevailing wages or of a "living wage" to employees providing service to the City under this contract. The successful offeror must comply with all applicable requirements and provide documentary proof of compliance when requested.

K. CONFLICT OF INTEREST DISCLOSURE

The City of Ann Arbor Purchasing Policy requires that the consultant complete a Conflict of Interest Disclosure form. A contract may not be awarded to the selected offeror unless and until the Procurement Unit and the City Administrator have reviewed the Disclosure form and determined that no conflict exists under applicable federal, state, or local law or administrative regulation. Not every relationship or situation disclosed on the Disclosure Form may be a disqualifying conflict. Depending on applicable law and regulations, some contracts may awarded on the recommendation of the City Administrator after full disclosure, where such action is allowed by law, if demonstrated competitive pricing exists and/or it is determined the

award is in the best interest of the City. A copy of the Conflict of Interest Disclosure Form is attached.

L. COST LIABILITY

The City of Ann Arbor assumes no responsibility or liability for costs incurred by the offeror prior to the execution of a Professional Services Agreement. The liability of the City is limited to the terms and conditions outlined in the Agreement. By submitting a proposal, offeror agrees to bear all costs incurred or related to the preparation, submission, and selection process for the proposal.

M. DEBARMENT

Submission of a proposal in response to this RFP is certification that the Respondent is not currently debarred, suspended, proposed for debarment, and declared ineligible or voluntarily excluded from participation in this transaction by any State or Federal departments or agency. Submission is also agreement that the City will be notified of any changes in this status.

N. PROPOSAL PROTEST

All proposal protests must be in writing and filed with the Purchasing Manager within five (5) business days of any notices of intent. The offeror must clearly state the reasons for the protest. If an offeror contacts a City Service Area/Unit and indicates a desire to protest an award, the Service Area/Unit shall refer the offeror to the Purchasing Manager. The Purchasing Manager will provide the offeror with the appropriate instructions for filing the protest. The protest shall be reviewed by the City Administrator or designee, whose decision shall be final.

Any inquiries or requests regarding this procurement should be only submitted in writing to the Designated City Contacts provided herein. Attempts by the offeror to initiate contact with anyone other than the Designated City Contacts provided herein that the offeror believes can influence the procurement decision, e.g., Elected Officials, City Administrator, Selection Committee Members, Appointed Committee Members, etc., may lead to immediate elimination from further consideration.

O. SCHEDULE

The proposals submitted should define an appropriate schedule in accordance with the requirements of the Proposed Work Plan in Section III.

The following is the schedule for this RFP process.

Activity/Event	**Anticipated Date**
Written Question Deadline	August 1, 2023, 4:00 p.m.
Addenda Published (if needed)	Week of August 1

Proposal Due Date	August 15, 2023, 2:00 p.m. (Local Time)
Tentative Interviews (if needed)	Week of August 21, 2023
Selection/Negotiations	August 2023
Expected City Council Authorizations	September 2023

The above schedule is for information purposes only and is subject to change at the City's discretion.

P. IRS FORM W-9

The selected offeror will be required to provide the City of Ann Arbor an IRS form W-9.

Q. RESERVATION OF RIGHTS

1. The City reserves the right in its sole and absolute discretion to accept or reject any or all proposals, or alternative proposals, in whole or in part, with or without cause.
2. The City reserves the right to waive, or not waive, informalities or irregularities in of any proposal if determined by the City to be in its best interest.
3. The City reserves the right to request additional information from any or all offerors.
4. The City reserves the right to reject any proposal that it determines to be unresponsive and deficient in any of the information requested within RFP.
5. The City reserves the right to determine whether the scope of the project will be entirely as described in the RFP, a portion of the scope, or a revised scope be implemented.
6. The City reserves the right to select one or more consultants to perform services.
7. The City reserves the right to retain all proposals submitted and to use any ideas in a proposal regardless of whether that proposal is selected. Submission of a proposal indicates acceptance by the firm of the conditions contained in this RFP, unless clearly and specifically noted in the proposal submitted.
8. The City reserves the right to disqualify proposals that fail to respond to any requirements outlined in the RFP, or failure to enclose copies of the required documents outlined within RFP.

R. ENVIRONMENTAL COMMITMENT

The City of Ann Arbor recognizes its responsibility to minimize negative impacts on human health and the environment while supporting a vibrant community and economy. The City further recognizes that the products and services the City buys have inherent environmental and economic impacts and that the City should make procurement decisions that embody, promote, and encourage the City's commitment to the environment.

The City encourages potential vendors to bring forward emerging and progressive products and services that are best suited to the City's environmental principles.

SECTION II - SCOPE OF SERVICES

1. Background

The City of Ann Arbor currently has a flow monitoring network deployed throughout the sanitary sewer collection system that is comprised of the following:

- 15 ADS Triton+ area velocity flow monitors (12 city owned, 3 leased)
- 10 ECHO level monitors (leased)
- ADS web-based Prism software

Twelve Triton+ meters are owned by the city and maintained by the current contractor, ADS. The ECHO level monitors are leased by the city and maintained by ADS. The city utilizes the flow monitoring network to evaluate system performance, evaluate rehab effectiveness in collection system, prioritize areas with I/I problems or inadequate hydraulic capacity, calibration of hydraulic model, and reduce SSO's. The current locations of the flow monitors are shown in Attachment A.

2. Objective

The purpose of this RFP is to secure services of a contractor to operate and maintain the 15 ADS Triton+ flow meters and up to 10 level monitors at locations throughout the City's sanitary sewer collection system for a period of 3 years. In addition, the proposals shall include pricing for the ability for city to rent additional meters and level monitors if requested by the City during the contract period. Note, 3 currently installed ADS Triton+ flow meters are being rented. Respondents shall include pricing options for the city to either purchase or lease 10 level monitors.

3. MINIMUM services provided shall include the following:
   a. Operate and maintain 15 ADS Triton+ flow meters in locations shown in Attachment A
   b. Furnish, install, operate, and maintain up to 10 level monitors of equal or superior technology specification of the currently installed equipment
      - Coordinate removal of the existing level monitors meters with current contractor
   c. Permanent power is not available at any of the flow monitoring sites. All of the sites transmit data wirelessly through cellular modems. The Contractor shall supply all hardware and wireless communication plans for each monitoring location.
   d. Web-based data management system for alarming and web hosting of near real time and historic data.
      - The web-based system must have ability to pull in and display rain gauge data currently hosted by city.
   e. Provide all necessary traffic control and confined space entry personnel and equipment, hand tools, personal protective equipment, safety gear, and

manhole entry equipment necessary for installation and maintenance of flow monitoring devices.

f. The Contractor shall have the ability to furnish, install, operate, and maintain additional flow meters at the request of the city during the duration of the contract (rental pricing).
g. Provide an installation schedule and installation details for the 10 level sensor locations.
h. Operation of all flow monitor devices shall occur within 30 days from the city's authorization to proceed notice.
i. Contractor will investigate perceived malfunction or monitor or communication equipment within three (3) business days of discovery of the malfunction. Contractor will repair or replace any malfunctioning equipment within five (5) business days of the initial field investigation.
j. Provide procedures for installation and provide documentation of installation (pictures, diagrams, etc.).
k. Provide equipment that has an internal power source.
l. Provide sensors that are able to accurately measure gravity flow in pipes with diameters ranging from 8" to 78".
m. Provide intrinsically safe equipment that communicates via a wireless network for the duration of the contract.
n. Provide flow data at 5-minute intervals, uploaded at a minimum once daily, and available on a secure website accessible to city personnel at all times.
o. The Contractor must provide a plan to verify the quality of the data on a regular basis and make the data available for download in a .csv file or Microsoft Excel compatible file type on the website.
p. The Contractor must describe the approach to quality assurance, anticipated up-time, and eliminating invalid data.
q. Provide a plan for regular maintenance to ensure that batteries do not fall below 10% of capacity and all sensors are able to collect the required data.
r. Provide real time high level alarm capability for all flow monitoring devices. This shall have capability to sent text messages of the high alarm notice to up to 5 city personnel.
s. The City intends to include a $15,000 annual allowance for miscellaneous services, equipment, and material including, but not limited to, flow monitor relocation, level monitor relocation, level monitor purchase, and additional temporary monitors. The City requests unit prices be included in fee proposal to relocate flow monitors, relocate level monitors, level monitors, and provide temporary monitoring.