ADS Environmental Services

Project: City of Greensboro Collections System Monitoring Services

1.0 SCOPE OF SERVICES

1.1 Understanding of Required Services - Summary

ADS Environmental Services will provide flow monitoring, data collection, and reporting for a period of three years for the City of Greensboro ("City"). ADS services will elevate the level of flow and rainfall monitoring from a short-term program with temporary installations of flow monitors, minimal instrumentation, and basic analysis into a long-term data driven program that can help drive decision-making. The flow monitoring data will be used for the purposes of calibrating the sewer hydraulic model, helping to locate and identify potential I/I sources, and verifying capacities for flow allocations.

The ADS scope will include the following: installing, operating, and maintaining approximately 25 sewer flow monitors, 10 level detectors, and 15 rain gauges; monitoring and reporting of flow monitor, level detector, and rain gauge data; providing an interactive web-based software application, PRISM, to track and monitor collected data; and will provide accessible APIs for consumption by Windows, web systems and components. ADS Environmental Services will be responsible for supplying the equipment, the installing and calibrating equipment, maintaining functional operation of the equipment, providing reliable data with an uptime of 97%, and producing data uploads/downloads.

The equipment used under this project scope will be Triton+ flow monitors with submerged area-velocity sensors, ECHO level monitors with ultrasonic and pressure depth technology to measure below and above the unit, and Rain Alert III rain gauge equipment that is built to NWS standards. ADS manufactures all three of these equipment items. ADS will provide and maintain all spare parts and equipment required during execution of this program.

ADS will handle the installation, replacement, and removal of all equipment during the entirety of the project. The equipment will be field-checked monthly and will be remotely inspected twice weekly to ensure proper operations. ADS will address malfunctions or miscommunications within 3 days of the discovery of the issue, and malfunctioning equipment shall be fixed or replaced within 7 days of the discovery of the issue. ADS has a written safety policy that abides by all OSHA rules, and all ADS personnel have been trained applying OSHA-approved confined space entry.

Data will be collected automatically in 15-minute intervals for flow data. Rainfall data will be collected as tips, with 5 minute interval rainfall totals recorded. ADS will submit monthly reports with all required data. Additionally, the data shall be provided in PRISM, web-based application, at a near real-time status. PRISM can serve as a data warehouse for all data storage, a map component, charting and graphing capabilities, data export capabilities, user configured reporting, system security through multiple users with different levels of permissions, and near-real time alarming features. PRISM will also track and log diagnostic events related to sensor malfunction, battery life, loss of communication, etc. and provide appropriate alarming. PRISM will allow for data exports in excel and CSV formats of the monitoring locations with any one export. PRISM will log and report on missing data, alarms, sensor related events, and other events reported by the hardware.

PRISM also allows the City to pull data through a web application programming interface (API). Data shall be stored for the entire length of the project and data history shall be readily accessible to the City.

Alarms will be user configured and will have the capability to email and text, as well as send multiple alarms to multiple users. The alarms include surcharge pipe, high depth, high-high depth, loss of flow, rain exceeding threshold, and wet and dry overflows. Alarm escalation and alarm reporting functions are included in this scope.

1.2 Description of Services to be Provided

1.2.1 Kick-Off Meeting

This project will begin with an in-person kick-off meeting between representatives of the City and ADS. The purpose of the kick-off meeting is to discuss the project scope, establish lines of communication, set milestones, and confirm the project schedule. ADS is an ISO 9001 certified company and has internal quality procedures for all project management activities.

1.2.2 Initial Site Selection and Field Investigations

After the initial sites are provided by the City, the ADS project team will carefully inspect the monitoring sites identified to determine hydraulic suitability, physical parameters for monitoring, and traffic control procedures at each location. We will investigate upstream and downstream adjacent manholes in order to ensure the best possible monitoring locations are identified and to verify that maps and direction of flows are accurate such that we can ensure the expected flows are being correctly monitored. The ADS Field Manager will complete Site Sheets for each location and will submit to the City's designated representative for review and approval prior to installation of the monitors. Site Sheets will include, but not limited to the following:

1. Location map with address
2. GPS location coordinates
3. Manhole Depth
4. Pipe Diameter
5. GIS naming of Facility Identification manhole number
6. Manhole configuration and condition –
   Manhole lid type and condition; Number and location of connections; Evidence of surcharge; Evidence of overflow; Evidence of direct inflow; Debris presence and type (including rock, silt and roots)
7. Hydraulic Conditions
8. Access issues
9. Recommended City maintenance
10. Recommended sensor type and location
11. Location photographs

If alternate monitoring sites are suggested, ADS will review details with the City for approval prior to installation.

1.2.3 Flow Monitor and Level Monitor Site Installations

Installation of flow monitoring equipment will begin once the site reports and locations have been approved by the City. Procedures for the monitor installations will include:

- ADS Field Crews, with supervision from a Field Manager, will physically install all flow monitors in a manner promoting the best quality data collection. ADS will coordinate with the City if needed for any traffic management, while following our published standard traffic control procedures. Pending review of site location maps, it will be determined if additional traffic control will be necessary.
- ADS will update the Site Reports upon completion of the installation to include the monitor model, serial number, sensor type and location, traffic control requirements and site photographs showing the meter installation.
- Once installed, the flow monitors will be activated and set to take readings at 15-minute intervals. ADS Field Technicians will take three sets of manual depth readings with a ruler, and velocity readings (for flow monitors) with a portable, instantaneous velocity meter, in order to confirm the monitor is collecting accurate data based on the actual existing hydraulic conditions at each location.

1.2.4 Rain Gauge Site Installations

ADS will install ADS wireless RainAlert III rain gauges in secure facilities as identified by the City's representative. The City will provide and coordinate access to all facilities as needed for installation and servicing after the installation with proper notification.

1.3 Proposed Equipment

1.3.1 ADS Triton+ Area Velocity Wireless Flow Monitor

ADS will use the **ADS *Triton+*** Intrinsically Safe (IS) Wireless Flow Meter. ADS will use continuous wave Doppler velocity sensor technology for this project. Three primary reasons dictate this approach:

1. The continuous wave technology has the broadest operating window, with robust ability to sense low flows, surcharge flows, backwater conditions.

2. One of the reasons ADS technology is selected to conduct 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 monitors are able to automatically calibrate the pressure sensor to the zero-drift ultrasonic depth sensor, and this calibration is automatically performed on a daily basis. This minimizes the frequency for field confirmations over time.

3. The ADS continuous wave Doppler velocity sensor measures the peak velocity in each installed location. Using field measurements of the velocity, the peak to average ratio of velocity then is determined. This peak to average ratio can vary from site to site, so these initial and periodic manual measurements are very valuable in dialing in the correct average velocity reported by the meter. This adjustment results in a more accurate and repeatable output. Other flow meter vendors perform the calibration through imbedded "black box" software that makes the false assumption that the peak to average relationship is constant through all flow regimes and conditions. Adjustable peak to average relationships are critical to the quality measurement of velocity. ADS places great emphasis on open and transparent calculations of velocity since this is such a critical component of the flow calculation.

Collected data can be "pulled" wirelessly to the ADS Prism "Cloud" or pushed to any third party or customer site (SCADA) via FTP or API. The ***TRITON+*** flow monitor is programmable for automatic data collection frequency and for alarm points that will trigger a response. In addition, since the standard SIM card used in the ***TRITON+*** flow monitor has a static IP address, the flow monitor can be contacted on-demand for data collection, maintenance, and troubleshooting.

ADS proposes using the ***ADS Peak Combo Sensor*** (model CS4) installed at the pipe invert. This will serve as the **"submerged"** sensor. The Peak Combo Sensor includes three types of sensor technologies:

1. *Continuous Wave Peak Doppler Velocity:* Uses ultrasound waves reflected off particles to measure Doppler frequency shift which correlates to peak velocity.

2. *Up-Looking Ultrasonic Depth:* Uses ultrasound waves from two independent transceivers to measure the distance from the sensor upward toward the flow surface; applying the speed of sound in the water and the temperature measured by the sensor to calculate depth.

3. *Pressure Depth:* Uses a piezo-resistive crystal to determine the difference between hydrostatic and atmospheric pressure. The pressure sensor is temperature compensated and vented to the atmosphere through a desiccant filled breather tube.

To obtain *peak velocity*, the sensor sends an ultrasonic signal at an angle upward through the widest cross-section of the oncoming flow. The signal is reflected by suspended particles, air bubbles, or organic matter with a frequency shift proportional to the velocity of the reflecting objects. The reflected signal is received by the sensor and processed using digital spectrum analysis to determine the peak flow velocity.

The Triton+ 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. 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.

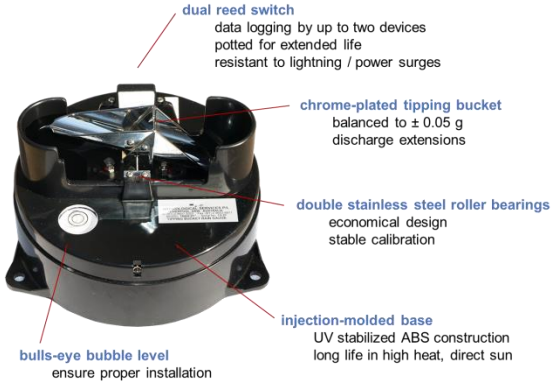
1.3.2 RAIN ALERT III-Rain Gauge Monitor

The ADS RainAlert III is a low-cost wireless rain gauge that alerts operators via text or email messages when rainfall intensity exceeds a critical threshold. Priced for deployment as a stand-alone unit or part of a comprehensive monitoring network, the enclosure is suitable for ground-level, pole-mount or rooftop installation.

The RainAlert III connects to an ADS tipping bucket. Rainfall totals are time stamped and stored at one minute intervals, or greater, based on customer supplied specifications. It is easily configured and managed using ADS PRISM software and allows instant access for retrieval of logged rain and alarm data.

Rainfall measurement is a critical, but often overlooked, factor needed to successfully track and evaluate sewer system performance. The standard tipping bucket is the most common rainfall measurement technology available and operates by funneling rainfall to a bucket assembly that is divided into two equal compartments. When one compartment has collected a known amount of rainfall, the bucket tips and drains its contents. As the first compartment tips, the second compartment is positioned under the funnel, and the time that the tip occurs is recorded. Each tip of the bucket generates an electronic signal that is recorded by a rainfall monitor.

The ADS tipping bucket includes two important design features (1) a finger filter located at the base of the funnel and (2) integrated insect screens located on all openings. Both features enhance performance reliability and improve data quality. Integrated insect screens keep out spiders, insects, and other small animals that can disrupt proper operation of the tipping bucket mechanism during rain events.



ADS proposes to install ADS RainAlert III™ rainfall monitors to record and communicate rainfall measurements obtained from the tipping buckets. The ADS RainAlert III is a low-cost, 3G/4G/LTE-M wireless rainfall monitor that can be configured to alert the City via text, or email messages, or through the ADS PRISM web application when rainfall intensity exceeds a critical threshold. If rainfall alarming is enabled, the RainAlert III generates an immediate cry-out anytime a preset rainfall intensity is exceeded. RainAlert III technology is designed for ultra-low power consumption, yielding up to a 24-month life when configured at a 5-minute sample rate and hourly data delivery. The RainAlert III provides 100% compatibility with PRISM for accessing and managing all alarm events, alarm history, and stored rainfall data via the Internet, and maintains alarm system readiness via daily check-in and low battery notifications.

1.3.3 ECHO- Level Monitor

The ECHO level monitor from ADS provides utilities with an economical level monitoring solution providing early warning of preventable blockages; such as fats, oils, and greases (FOGs); root intrusion; silt/sediment; and debris. It is a self-contained, wireless sewer level monitoring solution that alerts operators via text or email messages when flow levels exceed critical thresholds. The monitor features ultrasonic sensing technology providing high-accuracy focused level measurement from the top of the manhole into the pipe invert at distances up to 20 feet. Additionally, the ECHO has a pressure sensor capable of measuring 8-feet above the monitor. ECHO is designed for ultra-low power consumption and integrates with PRISM software for data collection and analysis.

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The ECHO level monitor used in conjunction with PRISM software applies machine-learning technology in an application called Blockage PREDICT. This application gives advance warning of future blockages based on ADS' giga-bytes of data and level data algorithms. It is used to assist field teams to take proactive measures to prevent overflows.

1.4 Equipment Maintenance Plan

The ADS Comprehensive Field Service plan means that ADS will take care of every aspect of maintaining the high performance of the flow monitoring network. We will accomplish this by using our ISO certified methodology. These processes have been proven nationwide to achieve greater than 97.5% percent uptime and maximizes the accuracy of each monitoring point.

All field technicians will be equipped with notebook computers (i.e., iPads) loaded with "Comet Tracker" software by Actsoft expedite efficient and cost-effective communication between the field personnel and office staff.

ADS technology and procedures ensure that the data will be accurate and reliable. This includes multiple steps in the process, including:

- Using redundant depth sensors (ultrasonic and pressure) as specified
- Evaluating repeatable depth-velocity relationships over time to identify long term relationships and outliers (i.e., scattergraphs)
- Ensuring the data is consistent with manual confirmations
- Ensuring the data is consistent with upstream and downstream sites (balancing)
- Confirming the data is consistent with design curves, and
- Confirming data is consistent with available model expectations

Once the monitors and rain gauges are installed and verified to be in working order, ADS will monitor the flows for a period of thirty-six (36) months ("monitoring period").

1. All monitors will be field-checked monthly. ADS field crews evaluate the condition of the monitoring sites, including:
    a. Visually inspecting the flow monitor data logger, level monitor, or rain gauge
    b. Verify that hardware sensors are operating correctly and with no interference with debris by results of the twice weekly remote diagnostic inspections. Based on the diagnostic inspections, sites with irregularities will result in ADS crew descending the manhole and physically inspecting sensors or removing debris.
    c. Inspect all hardware connections
    d. Battery level check
2. With any discrepancies discovered via data review and remote diagnostics, field crews will return to the locations as determined by the data review to perform site maintenance and obtain additional site confirmations as necessary. Services that are to be performed will include cleaning depth and velocity sensors, hydraulic confirmations, and checking an installation to make sure that the ring is secure in the pipe. Confirmations will be conducted per the following scenarios:
    a. Upon installation.

b. If a sensor is replaced.
c. If a sensor is temporarily removed and then replaced in the same location.
d. If there is a hydraulic shift (depth and velocity relationship shifts).

Confirmation data is reported to a Data Analyst who will then examine for bias. If the confirmation falls outside tolerance, a repeat confirmation will be ordered. If two consecutive confirmations (taken on different days) indicate a similar magnitude of bias, additional service and maintenance activities will be ordered to maintain data accuracy. All confirmation documentation will be uploaded to PRISM.

If data review identifies an equipment issue, ADS crews will respond within three (3) business days to repair or replace the equipment. In addition to regular maintenance, ADS will respond to requests from the City within three (3) days for additional maintenance, new installations, relocations, additional calibrations, temporary installations, or removals.

1.5 Delivery Services and Collection

The Triton+ is fitted with a GPRS intrinsically safe wireless modem to reduce the need to visit the locations for the purpose of collecting data, minimizing traffic disruptions and confined space entries.

Data will be sampled at 15-minute intervals and transmitted to PRISM every 24-hours. If hydraulic conditions change significantly, the Triton+ will "cry out" to both ADS project staff as well as designated City staff with an alarm for immediate review and action.

Valid raw data uptime is maximized through frequent data review by trained data analysts, swift response to work orders by the field crew, and QA/QC project oversight by the project manager. The process used by ADS to maximize raw data uptime begins with the automated daily collection of the depth and velocity entities via wireless communication. Data entities available from the monitors and rain gauges include:

- Raw ultrasonic level, pressure depth level and Doppler velocity
- Rainfall depth and intensity

1.6 Data Analysis and Finalization

The Data Analysis process begins as soon as the first data is collected and continues through the life of the project. During this phase, data is audited and reviewed for accuracy and consistency. ADS Analysts use a number of internal software tools and techniques to identify and investigate data anomalies. One key tool is the scattergraph; a plot of depth versus velocity. ADS pioneered and developed the "Scattergraph Principals and Practice" poster that is on the walls of the majority of flow monitoring engineers' offices throughout the USA. Using this tool, the analyst can verify monitor accuracy from both a precision and a bias viewpoint. Scattergraphs also allow the analyst to identify unusual hydraulic conditions and explain inconsistencies between existing site hydraulics and the ideal of free-flow conditions. The Data Analyst will calculate flow using the continuity equation and will verify that the flow balance between adjacent sites is consistent and reasonable.

Data Finalization is the process by which the final tier of QA/QC is applied to the data set. While ADS maintains that very high raw data quality is possible using the approach detailed above, there will always be a number of anomalous readings recorded due to the adverse site conditions found in most sanitary sewers. The process of data finalization, like all other field and analysis processes, is managed under the strict quality programs certified under ISO 9001. Data finalization includes the following key activities:

- Final editing; identification of spurious data points
- Establishing the relationship between monitored raw velocity and true average velocity in the wetted area.
- Final quantity calculation
- Final flow balancing

The primary data analyst will review the depth and velocity hydrographs and scattergraphs in order to identify any changes in hydraulic trends which may indicate illegitimate flow patterns or faulty equipment. It is from these observations that work orders are generated.

1.7 Data Delivery and Reporting

Pertinent project documentation will be uploaded to PRISM for data sharing; the City may also upload files here. A variety of data exports and reports can be generated in PRISM including Hydrograph, Scattergraph and Tabular data.

ADS will deliver a report to the City at the end of each month when work is performed to include the following:

1. Uptime report
2. Average daily flow
3. Average base flow
4. Non-rainfall groundwater infiltration
5. Rainfall total amounts
6. Peak amounts and intensities
7. Peak hourly flows
8. Peak 15-minute flows
9. Total monthly flows
10. Commentary on monthly events or monthly maintenance
11. Manhole max and average depths for level monitoring

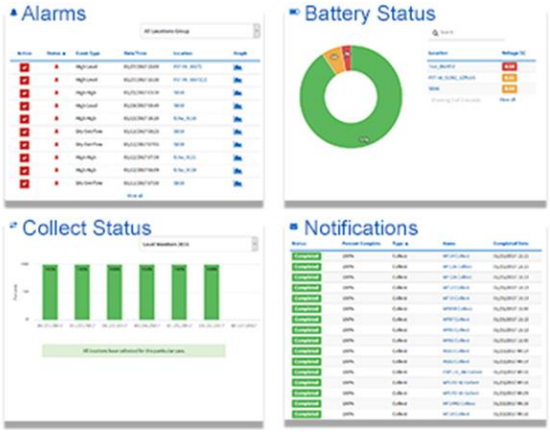
The specific content and format of these reports will be discussed and reviewed by the City and can be adjusted during the course of the project.

1.8 Data uptime and loss avoidance

Data will be collected and transmitted to the PRISM web portal daily. PRISM performs an Auto Review Routine of the data as a first check to data integrity. The ADS project manager, or data analyst, will also review the automated reports form PRISM every day to ensure that:

- Batteries are at an acceptable level
- Monitors are communicating
- Data is being transmitted and the data sets are being populated as expected and required

Any meters not passing this evaluation will be accessed through PRISM and a diagnostic process undertaken to identify any system anomalies. Any identified anomalies will be reviewed and addressed immediately to ensure that no data is lost, and that the highest data uptime can be achieved.



1.9 Software

ADS is proposing our newest data delivery service, PRISM, our revolutionary new Cloud-based software product that provides critical insight for managing your collection system.

PRISM is a web application that puts flow monitor, level monitor, and rainfall monitor 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 the wastewater collection system. This state-of-the-art system provides knowledge and early detection of potential problems. It offers dynamic analytical functions for fueling discoveries that will lead to enhanced management of the sewer collection system. PRISM's Location Inset Window provides a wealth of monitor-related information directly from the map, including location and installation information and the last monitor data.

PRISM allows for the use of Application Programming Interface (API) so that different software can communicate with each other. This customer-facing API allows the City to automate data exchange between various ADS and its own software and hardware. This allows the City to use data measured by ADS monitors in other software applications. The old method of exporting data out of one database and importing it into another is slow and frustrating. Through the use of APIs and webhooks, you have the capability to exchange data with 3rd party applications in both directions. The exchange requires no human intervention, can happen in near-real-time, and is error free. The City can create new ways to put your data to use in a way that suits its needs. All data is exchanged in the lightweight JSON format that makes it easy to consume and fast to transfer. The ADS RESTful APIs integrate with nearly any modern system or programming language, giving you unattended data transfer with perfect accuracy.

PRISM will enable City staff to identify and resolve emerging concerns before serious problems arise and provides easy-to-use dashboards and graphical tools to track system performance and detect emerging threats.

PRISM's alarm management is designed to inform clients about the occurrence of rain events, flow performance abnormalities, and data anomalies at flow, level, or rainfall monitoring locations. Monitors and rain gauges send alerts into the hosted PRISM system, which identifies rain, flow, and depth patterns that are outside each location's preconfigured thresholds, and registers these anomalies as alarms.

PRISM then initiates a client-customized alarm notification sequence. It combines rain data with high depth indicators to initiate wet- and dry-weather-induced overflow alarm notification as needed. To provide acknowledgement and sorting of recent alarms by status, event type, date and time, or location and the ability to further understand sewer conditions prior to and during each alarm through a hydrograph display of monitor data.

PRISM allows clients the flexibility to customize the way in which they share data with others. Permission-based security allows clients to specify which users have authorization to acknowledge alarms, access data, and access other system settings. PRISM provides functionality to customize exactly what kind of data each user can access. Individual documents can be available to all users or restricted, allowing selective sharing of information.

PRISM has numerous built-in ad-hoc reports available to you and your staff that are developed specifically for flow monitoring applications. ADS is anticipating the City using PRISM for all your reporting needs.

All data stored in the PRISM warehouse can be exported to software programs such as Microsoft® Excel®, utilized for modeling/engineering/analysis tools, and interfaced with other IT systems. PRISM can connect to the City's software systems by posting data to an FTP site or API at a prescribed schedule. ADS will upload all field documentation to the PRISM document storage application, the PRISM "Vault," for easy access to all.

1.9.1 Training

While the ADS Field crews are investigating and installing the monitors, the ADS Hosted Systems group will begin setting up PRISM to receive monitor data from the field. System checks will be continuously run during the initial startup period. On-site training will be held at the City's facility to train operators on the use of PRISM.

1.9.2 Level 1 - Introductory Training

All City employees who are to be granted access to PRISM should complete this training that will be provided at no additional cost. This training will provide an overview of the PRISM system and an introduction to all PRISM features. This training covers the following topics: PRISM system overview; PRISM desktop and laptop operating system requirements; How to navigate in the PRISM user interface; How to access and utilize the PRISM features; and How to obtain customer support.

The session will include exercises in each of the feature areas to verify participant understanding. It typically lasts four hours with up to 10 attendees at each session and is performed at a training center provided by the City or remotely via WebEx Internet services.

Level 2 - Alarm Acknowledgment Training

All City employees who will be responsible for acknowledging PRISM alarms should complete this training. Participants in this training should have attended the introductory training. The alarm acknowledgment training covers the following topics: ADS flow monitor and sensor basics; PRISM Event and Alarm overview; Alarm states; Alarm escalation chain assignment; Flow loss and depth alarm acknowledgment; and Using scattergraphs to interpret data/alarms.

The session requires 4 hours, based on the familiarity of the participants with flow monitoring data and ENS systems. Up to 10 attendees can attend each session and is performed at a training center provided by the City.

1.9.3 Level 3 - Individual Training

This training is offered on an individualized basis to any PRISM user who requires assistance using a particular feature or applying PRISM features to a specific process or work assignment. This training is performed using a web conferencing/training system provided by ADS.

1.9.4 Technical Support

ADS Hosted Systems Group and Customer Support will be available to provide toll-free and online support from 8:00 – 4:00 Central time, Monday thru Friday throughout the entire contract term. Our support staff is the most experienced in the flow monitoring industry, many with more than 20 years of ADS experience. In addition, the ADS Project Manager, Data Manager and engineering staff are available to provide the City support on an as needed basis.

1.10 MWBE Participation

TAYLOR ENGINEERING & CONSULTING

As part of this City of Greensboro Collections System Monitoring Services proposal, ADS will perform the project scope with Taylor Engineering and Consulting. Taylor Engineering and Consulting, PLLC was established in 2019 as an NC HUB Certified Women Business Enterprise (WBE) firm.

Taylor Engineering will perform approximately **9.7% of the project** during the three-year scope of this collections system project. As a portion of the partnering effort with ADS, Taylor Engineering will perform the following scope:

- Participation with Initial Site Investigation as part of the initial monitor and rain gauge installation
- Attendance at meetings with the City of Greensboro, including but not limited to kickoff, project updates, and annual meetings
- Maintenance and service for the fifteen (15) rain gauges as part of the required project scope

Taylor will provide support to ADS based upon their knowledge of the City's collection system. This value will be demonstrated during Taylor's participation in the Kickoff meeting, and subsequent meetings, allowing them to relay the intricacies of the City's collections network based upon past experiences and knowledge. Additionally, Taylor's background will be invaluable as part of their participation during the initial site investigation with their knowledge of the City's system. Finally, Taylor with their location within the city limits, will provide quick and cost-effective measures to ensure accurate rainfall data with the service and maintenance of the fifteen rain gauges. Their proximity allows for the most cost-efficient means to maintain these gauges.

As the prime on the Collections System project, ADS will spearhead the execution of this project. ADS will provide leadership and management of the program directing Taylor Engineering in their efforts during the duration of the monitoring period. This experience over the three-year period of the contract will further Taylor Engineering's knowledge of flow monitoring and allow them to conduct future projects of similar scope and services.

1.11 Pricing Proposal

	Item Description	Qty	Units	Price

Base Bids				
1	Provide and maintain 25 submerged AV flow monitors	300	Per monitor per month	$177,145.00
2	Provide and maintain 10 manhole level detectors	120	Per Monitor per month	$17,377.00
3	Provide and maintain 15 rain gauges	180	Per gauge per month	$28,000.00
4	Web based alarming and data reporting for flow monitors (25) and level detectors (10)	420	Per Monitor per month	$4,575.00
5	Web based alarming and data reporting for rain gauges (15)	180	Per gauge per month	$1,961.00
6	Controlled allowance for relocation of monitors	1	Lump Sum	$15,000.00
		Proposed Total		$244,058.00
Quantities are based on 1-year period of services.				

This pricing listed above represents the first year of a three-year contract. For the subsequent years (Years 2 and 3 of the contrac), a 2% escalation will be applied to the given pricing options at the written request of ADS Environmental Services.

	Cost of Services
Year 1	$244,058.00
Year 2	$248,939.16
Year 3	$253,917.94