RESOLUTION 18 - 55

A RESOLUTION AUTHORIZING THE VILLAGE ADMINISTRATOR TO EXECUTE AN AGREEMENT WITH MIDWEST WATER GROUP, INC.

WHEREAS, the Village of Antioch, Lake County, Illinois (the "Village") is a duly organized and existing municipality created under the provisions of the laws of the State of Illinois, and

WHEREAS, the Village is in the process of assessing designated sanitary sewer lines; and

WHEREAS, due to the scope of this project, it cannot be done in-house, and must be contracted out with a company that specializes in sound technology; and

WHEREAS, the project includes the utilization of a digital manhole camera system, and includes a complete inspection, assessment and data collection of sanitary sewer manholes in order to help prioritize the repairs and maintenance in an effort to comply with federal, state and local requirements;

NOW, THEREFORE, BE IT HEREBY RESOLVED BY THE MAYOR AND VILLAGE BOARD OF TRUSTEES OF THE VILLAGE OF ANTIOCH, LAKE COUNTY, ILLINOIS, to authorize the Village Administrator to execute an agreement with Midwest Water Group, Inc. for a proposed amount of $50,000.00

ADOPTED by the Mayor and Village Board of Trustees of the Village of Antioch, Lake County, Illinois, and this 13th day of August 2018.

APPROVED this 13th day of August 2018.

AYES: 6: Jozwiak, Pierce, Poulos, Dominiak, Johnson and Macek.
NAYS: 0.
ABSENT: 0.

Lawrence M. Hanson, Mayor

ATTEST:

Lori K. Romine, Village Clerk

VILLAGE OF ANTIOCH INCORPORATED FEB. 29th 1892 LAKE COUNTY, ILL

Midwest Water Group, Inc.

Field Services By: UTILITY SERVICES

November 28, 2017

Mr. Dave Hanson
Village of Antioch
796 Holbeck Road
Antioch, IL 60002

RE: PROPOSAL FOR PROFESSIONAL SERVICES, FIELD SERVICES FOR INSPECTION AND ASSESSMENT OF MANHOLES AND PIPELINES IN ANTIOCH, IL

Dear Mr. Hanson

Midwest Water Group is pleased to submit this proposal to you for the project located in the Village of Antioch, IL and including a variety of services as described within this proposal for the project known as the 2018 SSES Program.

Midwest Water Group is a Professional Services Company performing asset inspection, assessment and data collection services. Our understanding is that the Utility intends to investigate and perform condition assessment on a significant number of sanitary sewer manholes in order to assess the condition of the manholes and help prioritize repairs and maintenance activities in an effort to comply with federal, state and local requirements and improve system performance during rain events.

This Proposal is being submitted based on interpretations made from study maps and information we have been provided and is presented as follows:

- Scope of Services
- Example Deliverables
- Technologies Used
- References and Similar Projects
- Proposal Fee

Thank you for your consideration and the opportunity to illustrate our services. Please do not hesitate to contact us with any questions regarding this proposal.

Respectfully submitted,

Michelle Harrod
NASSCO Inspector & President

Chad Smeltzer
Dukes Midwest - Account Manager

Midwest Water Group, Inc.

Field Services By: RMS UTILITY SERVICES

Reasoning

As an integral part of your CMOM program, inspection and condition assessment of your assets is imperative to prioritizing areas of your system that are prone to maintenance issues or can cause SSO's or other problems in violation of the Clean Water Act.

To enable informed management decisions to ensure the long-term desired level of service, a comprehensive evaluation of the collection system is essential. Typically, conventional Closed Circuit Televised (CCTV) methods are used to inspect collection systems and prioritize the segments/areas needing corrective action, i.e. debris removal, grease and/or root abatement, repair/rehabilitation, or replacement. However, approximately 60-70 percent of the collection system (depending upon age of the system) operates as intended and needs no corrective action. As a result, funds and valuable time/resources are wasted gathering data on those portions of the system that are functioning properly.

Our approach is to utilize technology to quickly and accurately triage your collection system in order to prioritize those areas in need of further inspection, immediate rehabilitation or preventative maintenance. Using high resolution digital 360 degree camera, digital pole camera technology, mapping grade GPS units with data correction services, smoke testing, private home inspection, sewer line televising and acoustic pipeline assessment technology; we will quickly and effectively assess/certify all accessible manholes, collect relative system information, and perform cursory pipeline inspections to eliminate the areas of the collection system working properly.

History of Midwest Water Group / RMS Utility Services

Midwest Water Group (MWG) and RMS Utility Services (RMS) were both formed in 2007 as a manufacturer representative company and service department, focusing on products and services to extend the useful life of municipal water and wastewater assets. Specifically, MWG/RMS believes in inspection, assessment, prioritization and rehabilitation of collection system assets which is why MWG/RMS is a believer in utilizing technologies such as the SL-RAT (Sewer Line Rapid Assessment Tool), Trimble GPS Receivers, and the RapidView Panoramo 360 SI Digital Camera system to deliver comprehensive visual and data deliverables to our clients. We integrate all data into GIS and our deliverables include friendly database formats for integration into existing ERP and Asset Management Programs. Our goal is to deliver data that can immediately be analyzed and used to correct any issues before they cause backups or system collapses.

MWG/RMS is owned by Michelle Harrod, who graduated with a B.S. in Computer Science from North Central College with a concentration on database systems management. Gary Hallaert, is the Superintendent for RMS Utility Services. Gary brings over 24 years experience with collections systems management; with 22 years holding various levels of management responsibility for the Village of Algonquin, IL with his final position as Collection Systems Foreman. Gary is a licensed Water & Wastewater Operator. Michelle, Gary and the majority of

our service team are NASSCO certified for Pipelines, Manholes and Laterals and a number of our service techs are also licensed water and wastewater operators with prior municipal experience. As a result, our team has the ability to understand the needs of the utility, communicate appropriately with residents and work within GIS to deliver useful data to our clients. Resumes for Michelle Harrod and Gary Hallaert are attached to this proposal.

Overview

Kick Off and Pre-project Needs:

Services will commence with the Utility providing any current maps, GIS database or coordinates for any known assets in the area to be inspected and assessed. Priority to working in wet conditions during the project will be made with every effort to give us the best opportunity to assess the impact of Inflow and Infiltration during typical rain events.

If a GIS compatible map is not available, or if asset ID numbers need to be created, there will need to be discussion and a number schema created.

A project superintendent will be assigned to your project and will be present at kick off meeting, organizing crew(s), reviewing field data, reporting missing structures or access problems, coordinating special traffic control needs, and overall communications between Utility and Midwest Water Group / RMS Utility Services personnel.

Safety Procedures

We take safety very seriously. We feel it is a reflection of our commitment to our employees, a reflection of your selection in a service provider and the right thing to do for the general public. As a result, we will adhere to the following protocols:

- Utilize vehicles with emergency lighting at all times
- Use traffic safety cones around manholes
- Use arrow boards or flaggers when needed (at additional cost to be determined in collaboration with customer)
- Train personnel in confined space entry & self-rescue, work place first aid and traffic control including documentation of all required confined space entries.
- Require a minimum of a two-person crew at all times for safety assurance
- Wear proper PPE (personal protection equipment) including a class III reflective safety vest for all work.
- Perform safety audits of our crews, perform monthly safety training meetings and regular review of safety practices
- Adhere to Utility's specific safety requirements (to be determined) including wearing proper identification badges

Midwest Water Group, Inc.

Field Services By: RMS UTILITY SERVICES

NASSCO Certifications

NASSCO (National Association of Sanitary Service Companies) has designed and implemented a certification course for the purposes of creating symmetry in language between consultants, contractors and the Utility as it relates to inspection and assessment of the sanitary sewer pipelines, manholes and laterals. MWG/RMS believes very strongly in the principles leading this program and as such, require that at least one current, certified NASSCO inspector is onsite for every evaluation program that we perform.

Technologies & Tools Deployed in the Field

We have various state of the art technologies that we deploy in the field to collect the highest quality data for your project. These technologies include:

CAMERA TECHNOLOGY:

Rapid View Panoramo 360 SI digital camera. Offers 360 degree digital scanning of manhole structures. Provides four deliverable outputs: 360 degree perspective, unfolded view, geometric view and CAD output with Northing (optional to be determined by you and requested prior to start of project). All files are delivered on external hard drive.

We also use digital zoom cameras (pole camera) to allow us to survey off-road or hard to reach locations and to shoot up and down pipe inverts to supplement our Storm Water Investigation Services and Acoustic Monitoring Services and

GPS TECHNOLOGY:

We utilize the leading provider's equipment in the industry for mapping grade GPS coordinates using the most current data correction services to insure GPS accuracy. The unit we use is the Trimble R2 GNSS receiver and Trimble's unity software which allows us to deliver the system map to you in several formats including shape (.shp) file, .csv and ESRI Personal Geodatabase (.gdb)

GIS SYSTEM MAP BUILDER:

We utilize a Cloud Based GIS management system. Our program includes building the initial map, loading data from your existing system and the data collected in our inspection and assessment, storage and backup of data and video files, technical support and upgrades. We also use this as a means of collaboration with our clients throughout the project to check our progress, communicate issues in the field and plan out the program. All field data is recorded and identified via GIS immediately so our clients can start reviewing their data in real time.

ACOUSTIC SOUND TECHNOLOGY:

Utilizing the SL-RAT (Sewer Line Rapid Assessment Tool) manufactured by Info-Sense. The winner of multiple innovative technology awards from WEF, AWWA and other water and wastewater associations, the SL-RAT is a quick preliminary assessment tool used to prioritize problem areas of your collection system and is used as a precursor to pipeline televising. This technology is based on measuring the signal received from an acoustic transmission within a sewer line segment. From the received

SMOKE TESTING TECHNOLOGY:

We use HURCO powered smoke testing equipment and have the ability to use either liquid or candles to generate smoke for the smoke testing program. For public notification, we put door tags explaining the smoke testing program, provide 24/7 voicemail and resident question line and provide information on smoke testing on our website.

SOFTWARE TECHNOLOGY:

With a project of this scope, it will be imperative that data is collected and organized in such a manner that it is intuitive and simple to navigate for CMT. Our firm utilizes the RapidView Panoramo 360 SI camera system in conjunction with Pipelogix Manhole software to present the inspection data in a software format that has the ability to print reports. Pipelogix is a MACP certified software and fulfills the requirements of Access DB exportable information standard. This will be supplied for all inspections

DIGITAL FILM FILES:

All data is provided in digital format and delivered via FTP and/or hard drive. Paper copies of reports available upon request. Typical file extensions include .MDB (MS Access), .XLS (MS Excel), .PDF (Adobe), .IPF (Panoramo Film File), .IPS (Panoramo Film/Report program file), .SHP (GIS), .KML(Google Earth).

Midwest Water Group, Inc.

Field Services By: RMS UTILITY SERVICES

MH Inspection Level 1 & Level 2 – Scope of Services

1.) Complete NASSCO MaCP Level 1 surface level inspections utilizing digital manhole camera system as outlined in manhole scope of services

2.) Provide all equipment and personnel as required to complete inspections

3.) Provide at least (1) one NASSCO certified inspector onsite during inspection per camera truck

4.) **MACP Level 1 Specifics:** Complete inspection using Panoramo 360 SI digital scanning camera equipment to perform full Level 1 MACP inspections including "non-entry" observations such as Cover, Frame, Chimney, Wall, Bench & Invert condition (Pass/Fail), confirmation of location, type of structure and evidence of surcharge and all other Level 1 MACP fields. Any additional fields not listed on the MACP Level 1 can be added as required by the Utility with advanced notice prior to start of project.

5.) **MACP Level 2 Specifics:** Complete inspection using Panoramo 360 SI digital scanning camera equipment to perform full Level 2 MACP inspections including "remote entry" observations including all Level 1 MACP fields as well as all Cover dimensions (diameter, surface bearing, condition, lid type); Frame dimensions (all measurements, condition, inflow); Cover Insert (yes/no, condition); Frame Adj Ring (yes/no, height, condition); Chimney (yes/no, material, condition, depth); Cone (yes/no, type, material, condition, depth); Wall/Barrel (type, material, condition, depth); Bench (yes/no, type, material, condition, lining); Channel/Invert (yes/no, type, material, condition, lining); Pipe (All Rim-to-Invert dimensions for each pipe, pipe size/shape, condition, and material).

6.) Provide all data in Access, Excel and Pipelogix (read-only) format, all digital .IPF scan files, software required to view IPF video files all backup and PDF reports including attribute information and defect picture reports in an external hard drive and online FTP format.

7.) **Optional Repair Recommendations Scope:** When included in proposal, repair recommendations for each manhole will be provided. The means in which this data will be delivered will be via Excel spreadsheet and will include the Asset ID#, Severity Rating (0 = good condition – no I/I and/or no structural defect or repair that should be

considered as preventative or made within 7-10 years; 1 = fair condition – light I/I and/or structural defect that should be repaired within 5-7 years; 2 = moderate severity – regular flowing I/I and/or structural repair that should be made within 1-3 years; 3 = severe condition – heavy I/I and/or severe structural defect that should be repaired immediate to 1 year), Type of Repair by category (e.g. grout, curtain grout, chimney seal, lining, inside drop, bench rehab or replacement, etc), estimated budget price for repair and notes on condition or repair

8.) **Optional GPS Coordinate:** See GPS project scope. When included in proposal, contractor to shoot each asset using Trimble GNSS R2 receiver with sub-foot accuracy with data correction services. Exceptions to sub-foot accuracy might occur based on tree cover or other satellite obstruction. Contractor will make every possible effort to ensure sub-foot accuracy is achieved for each asset.

Responsibilities of Contractor:

1. Provide all necessary, crew and equipment to complete the project. Ensure that all equipment and tools are in operational condition and free from defects that would inhibit accurate and quality data.
2. Make every reasonable effort to access each manhole with Panoramo camera either via direct approach with camera truck or via tripod system for front and back yard manholes or in areas where driving on turf or surface would cause damage or resident inconvenience. In such instances where televising with Panoramo is not possible, contractor to televise structure with Digital Pole Camera (.mpeg file format).
3. Verify all field measurements with survey stick, pipe diameter verification tool and tape measurer.
4. Update GIS system daily (if provided to contractor) and indicate which structures have been completed, are surcharged, require tripod, require pole camera, Cannot be accessed or located or have other severe issues that require the client's immediate attention.
5. Act in a polite, professional manner at all times

Exclusions of Contractor:

1. Will not disassemble or otherwise modify any residential property to complete inspection
2. Will not endanger crew by entering back yard or resident property structures (e.g. dog, angry resident, etc). All such instances will be immediately identified to utility to address.

Responsibilities of Engineer:

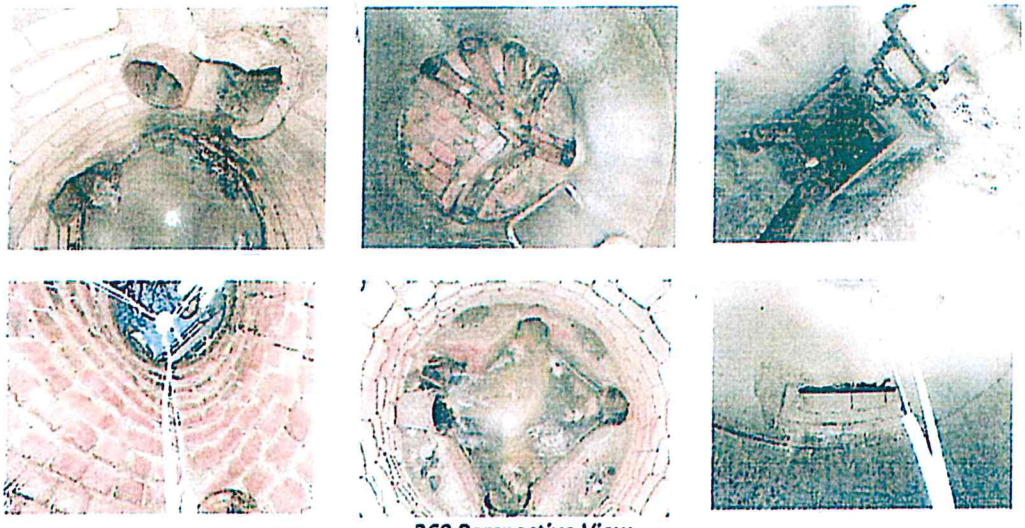
1. Provide contractor with any available maps, GIS (.SHP) files and structure information necessary to identify, locate and access survey manholes
2. Assist contractor with resident issues or concerns
3. Complete social media, public outreach of the program.
4. Post signs in neighborhoods advising them of the program if so desired. Contractor can set out day before.
5. Provide contractor with signed letter on the program to pass out to residents with questions or concerns.
6. Assist contractor in locating and access "Cannot Locate" or "Cannot Access" manholes. Advise contractor on how to address structures that are surcharged
7. Provide point of contact for project.
8. Make every possible effort to ensure that the survey map is current and accurate so that project can be completed in designated time frame.

Midwest Water Group, Inc.

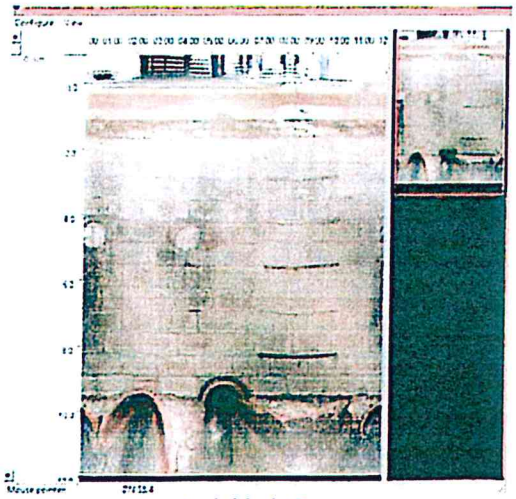
Field Services By: RMS UTILITY SERVICES

Deliverable Samples: Manhole Inspection

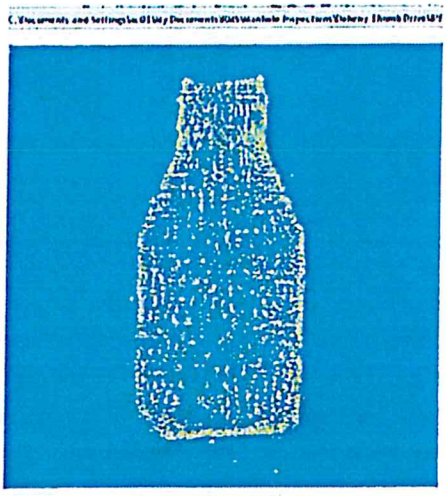
Sample Panoramo 360 SI Imaging (Level 1 & Level 2)
There are 3 views within the Panoramo camera scan files – the 360 perspective view (pan/tilt, up/down); Unfolded view and Point Cloud View. Collectively, these 3 perspectives portray the condition, size and defects within the structure



360 Perspective View



Unfolded View



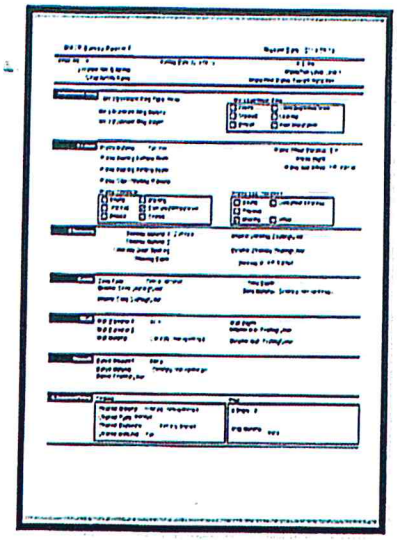
Point Cloud View

Midwest Water Group, Inc.

Field Services By: RMS UTILITY SERVICES

Reports:

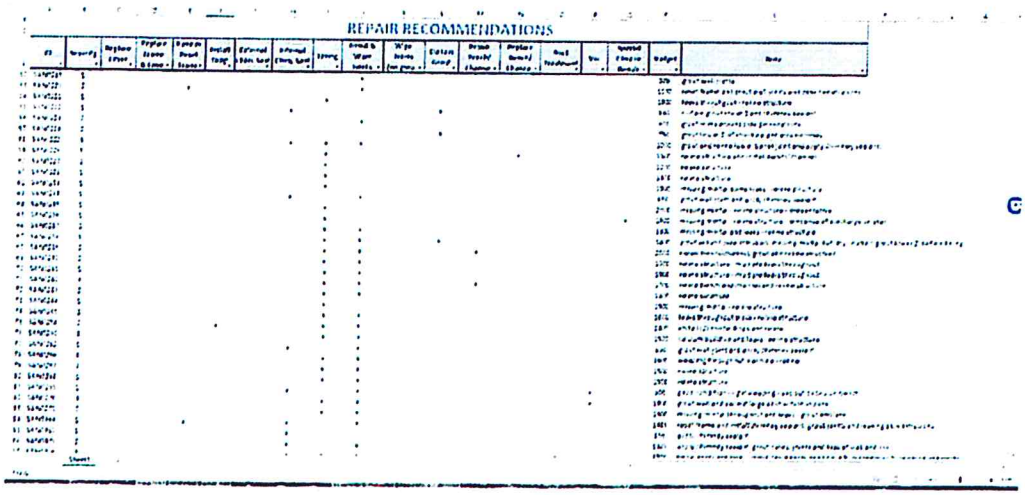
Customer will receive reports delivered in PDF format from a NASSCO certified software (Pipelogix). Based on the level of inspection (Level 1 or Level 2), fields within the report will be entered according to the required fields for the survey. For a level 2 survey, customer will receive a picture defect report, in addition to the standard MACP report pictured below. In addition to PDF format, all data is also delivered in a NASSCO MACP 7.0 compliant MS Access Database (.MDB) and MS Excel (.XLS) format for easy integration into most software platforms. Please reach out to us if you have specific data integration needs.



MACP Detail Report

MACP Defect Picture Report

Customers may also receive a Repair Recommendations / Severity ratings report which summarizes the structures by severity and repair type and includes budget estimates for repair:



Midwest Water Group, Inc.

Field Services By: RMS UTILITY SERVICES

Pipeline Acoustic Monitoring (SL-RAT) – Scope of Services

1.) Provide equipment and personnel as required for service
2.) Provide coordination with Utility for areas to be inspected using SL-RAT
3.) Walk collection system and put transmitter and receiver between each pipe segment in the adjoining manhole structures.
4.) Collect pipeline assessment data in online data organizer software
5.) Upload data to server and make GIS access portal for Utility
6.) Provide .CSV and .SHP exportable data files for all pipeline segments
7.) Issue separate layer files for only "GOOD," only "FAIR," only "POOR," and only "BLOCKED" segments.
8.) Adjoin line segments to manhole assets if provided from Utility or if part of MWG service scope.
9.) Provide prioritized listing of pipeline segments in need of further inspection (via CCTV or pole camera) and coordinate location identification with selected televising contractor and Utility
10.) Provide recommendations for maintenance or repair as required and evidenced from SL-RAT data collection including coordination of preventative maintenance programs or rehabilitation methods.

Data Delivery:

Work completed will be uploaded on a minimum weekly basis to hosted GIS system with the Utility and regular progress meetings via phone, email or in person will take place throughout the project to address any concerns, challenges or other major defects observed. Final data will be delivered according to Utility preference, or by external hard drive.

Responsibilities of Contractor:

1. Provide all necessary, crew and equipment to complete the project
2. Provide contact list of key personnel including project manager and field crew leader
3. Wear proper identification and PPE including hi-vis vests with Company Name. Wear booties when entering home to protect resident property. All vehicles will have company identification, truck number and flashing lights and cones when appropriate.

4. Act in a polite, professional manner at all times

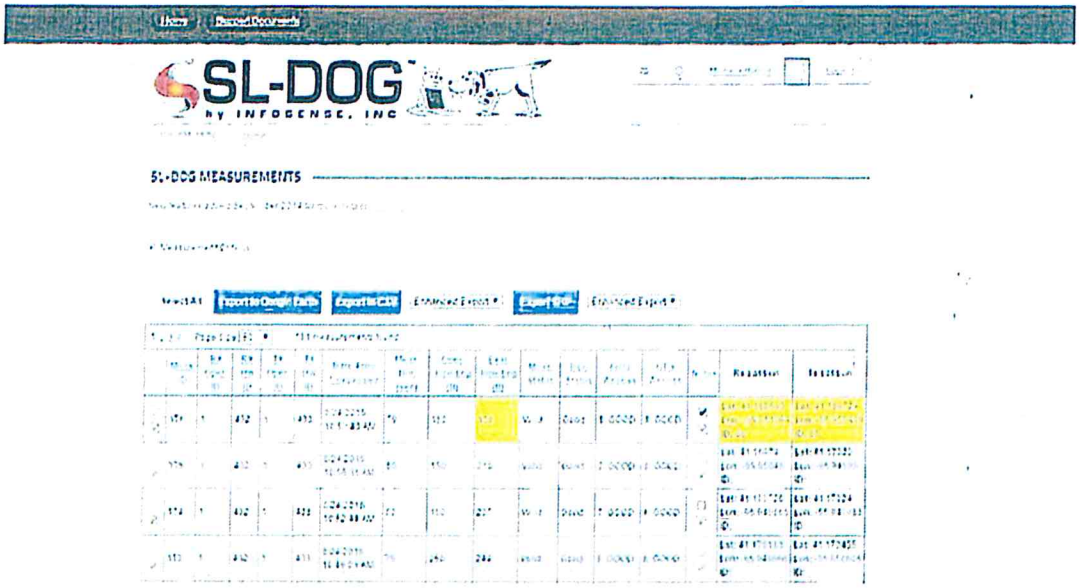
Responsibilities of Utility:

1. Any current collection system maps available in electronic GIS geodatabase or paper format (as applicable)
2. Notification through media or other appropriate medium, as required by Utility as well as providing proper identification credentials and/or letter on Utility letterhead authorizing Midwest Water Group as onsite Consultant for Utility for the duration of project
3. Provide traffic control as agreed on in advance of starting project unless arrangements are made for Midwest Water Group to use outside contracting services for traffic control
4. Asset ID numbers (if available) for each manhole structure. If no asset ID's have been assigned, collectively create naming schema for asset identification numbers.
5. If structures or segments cannot be located, the Utility will provide personnel to help identify structures or mark them with paint or flags. Lists of unfound structures will be submitted to the Utility on a weekly basis (or as appropriate) for locating.

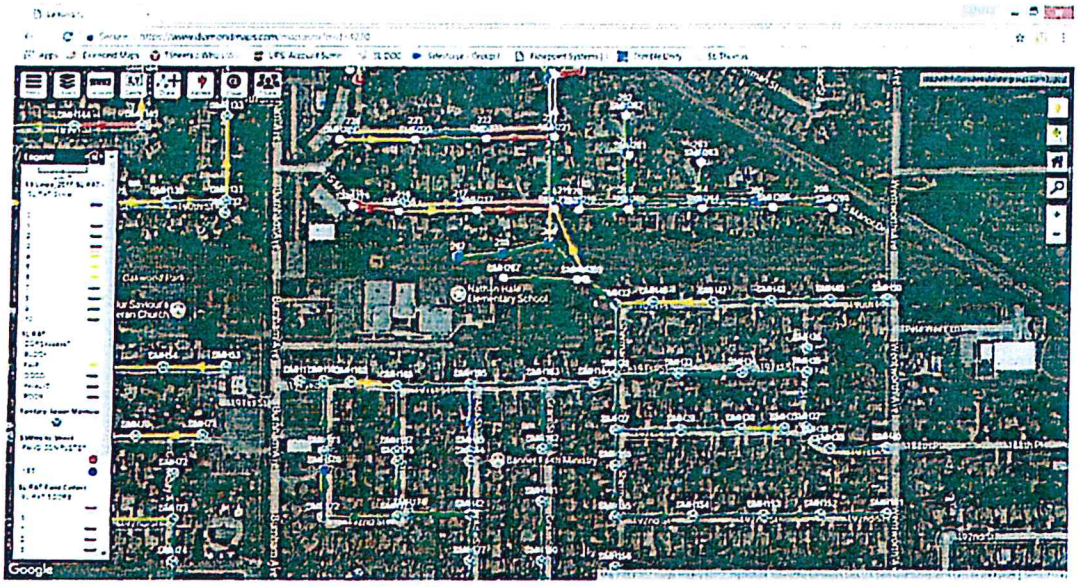
Example Deliverables:

Example Screen Shots SL-RAT / SL-DOG

SL-RAT Sample Results Map (Google Earth - .KML)



SL-DOG (Data Organizer Tool) Online User Portal



GIS Hosted Service Tool for collaboration with client (.SHP file import/export)

Midwest Water Group, Inc.

Field Services By: RMS UTILITY SERVICES

Deliverable Samples: SL RAT

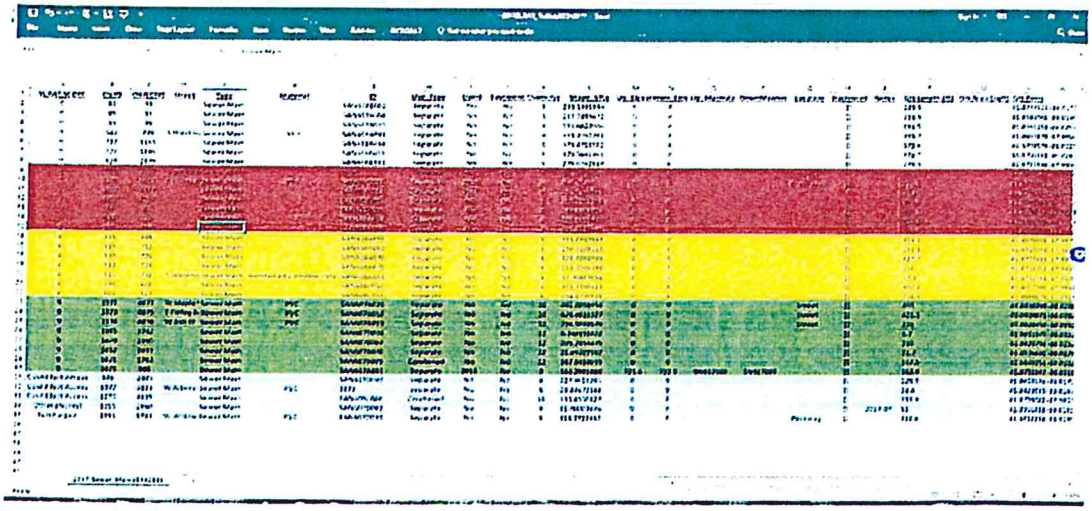
SL-RAT / GIS Data:

Utility will receive individual log in to our hosted GIS platform for the duration of the project which will display results of field work on a daily or bi-daily basis. The data from the SL-RAT work will be available in 3 formats: .CSV (EXCEL), .SHP (GIS) and .KML (Google Earth).

Example Screen Shots SL-RAT / SL-DOG

Excel:

Utility will receive sortable table of attribute data collected and categorized by severity level:



Field Services By: UTILITY SERVICES

Client References

Here is what our clients have to say about Midwest Water Group & RMS Utility Services!

Brian Jack
Utilities Superintendent
Village of Lombard
jackb@villageoflombard.org
Office: 630-620-5709

Services Performed:
GPS / GIS, SL RAT, Smoke Testing, Manhole Inspection (multiple years)

"Contracting with Midwest/RMS has the real potential of saving Lombard hundreds of thousands of dollars over alternative methods of sewer inspection/assessment, all the while increasing sewer flow, preventing sanitary sewer overflows and basement backups, and finding I/I sources more quickly. We look forward in continuing to work with Midwest/RMS for years to come."

Ron Hocker
Collection System Superintendent
City of Davenport, IA
rkh@ci.davenport.ia.us
Office: 563-327-5169

Services Performed:
Manhole Inspection

"The Panoramo 360 MH survey performed by Midwest/RMS meshes well with our Cartegraph work order management system to provide detailed analysis of the inspected manholes for both our in-house staff and consulting engineers. The camera system identified at least one manhole where failure was imminent and where the defect could not be observed from a topside inspection… This allowed us to have the manhole replaced before the street could collapse…The quality of data we received from this service was comparable to what one would expect from a confined space entry inspection, but is safer, quicker and considerably less expensive."

Ziad Kary, PE
Project Manager
Environmental Partners Group
1900 Crown Colony Drive, Suite 402
Quincy, MA 02169
zfk@envpartners.com
Office: 617-657-0283

CLIENT: Town of Plymouth, Mass.

Project Description: Completed 3rd year of inspections using Panoramo 360 SI camera. The first phase primarily consisted of manholes located in the busy downtown and coastal areas.

Eric Murauskas, PE
Project Manager
Baxter & Woodman
8578 Ridgefield Rd.
Crystal Lake, IL 60012
emurauskas@baxwood.com
Office: 815-459-1260

CLIENT: Roselle, IL

Midwest Water Group, Inc.

Field Services By: RMS UTILITY SERVICES

Project Description: Smoke Testing program for the Village of Roselle, IL. Handled the entire project including coordination with Police/Fire, hanging and removal of door tags, call center for resident questions and issues, field staff for collection, GPS sub-foot capture of all defects, picture reports, Geodatabase deliverables

Epiphany Ramos
Utilities Superintendent
City of Bellevue, NE
8902 Cedar Island Road
Bellevue, NE 68147

Epiphany.ramos@bellevue.net
Office: 402-293-3136

Project Description: In progress of multi-year program to identify all manholes, GPS each structure and assign asset ID#'s, inspecte each structure using Panoramo Camera and Level 2 MACP score, Perform repair recommendations and bid docs, SL RAT each pipe and identify pipe diameters, rim-to-invert dimensions, pipe types and flow directions. Present all deliverables in GIS format for integration into their new system. Over 5,000 MHs and 1.8M LF of pipe will be evaluated upon project completion.

More references gladly provided upon request

Midwest Water Group, Inc

Field Services By: RMS UTILITY SERVICES

Project Proposal Fee Schedule

Task	Unit Price	Unit	# Units (Approx)	Total Cost
Level 2 MACP Survey w/Panoramo, Defect coding, Measurements	$100.00	EA	200	$20,000
Repair Recommendations, Severity Ratings and Analysis Reports	$10.00	EA	200	$2,000
GPS Coordinates, Geodatabase Deliverables	$15.00	EA	200	$3,000
SL – RAT Inspection (over 50,000 LF)	$0.25	LF	100,000	$25,000
Total (Not to Exceed)				***$50,000***

‡Note that mobilization to job is for 1 trip to complete project. If structures are missing, buried or the project scope changes and another trip to the job is required to no fault of the contractor, additional mobilization charges will apply.

Insurance

Midwest Water Group/RMS Utility Services maintains a GL and WC policy with $2,000,000 aggregate. A current Certificate of Insurance can be provided upon request.

Acceptance of Proposal

To commence within 30 days of awarding this contract, or upon an agreed start date.

Signed (client) _____

PRINT/TITLE VILLAGE ADMINISTRATOR

DATE 8-15-18

Signed (Contractor) _____

Michelle Harrod / President

DATE _____