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MEMORANDUM

TO: Carie Anne Ergo, Village Administrator
FROM: Michael Subers, Public Works Director
DATE: January 30, 2026
SUBJECT: Accepting a Proposal from M.E. Simpson Company Inc. for a Three-Year Water System Assessment Program at an Estimated Project Cost of \$165,456

RECOMMENDED MOTION: Move to approve Accepting a Proposal from M.E. Simpson Company Inc. for a Three-Year Water System Assessment Program at an Estimated Project Cost of \$165,456.

INTRODUCTION

Public Works is recommending acceptance of the proposal from M.E. Simpson for a Three-Year Water Assessment Program for an estimated amount of \$165,456. RFP 2006-02 was advertised on January 8, 2026, in the Daily Herald. There were four (4) plan holders for the project, however, M.E. Simpson and GHA were the only contractors to submit proposals. After scoring the contractors on the criteria outlined in the proposals, M.E. Simpson Company Inc. scored higher than Gewalt Hamilton Associates Inc. (GHA).

DISCUSSION

The Water System Assessment Program includes three aspects of maintenance and data collection throughout the water system, which include fire hydrant and flow testing, valve inspection and exercising, and the water distribution leak survey.

The fire hydrant assessment and flow test are performed to approximately 350 fire hydrants annually and provide watermain flow capacities for each fire hydrant tested. The Village uses testing data to identify problematic areas, along with design companies reviewing fire protection flow rates at commercial and industrial properties. Having the data is also an asset when the local fire districts serving Itasca undergo their ISO reviews, which affect insurance ratings/costs for all properties in Itasca.

The valve inspection and exercising program inspects and exercises approximately 234 valves each year. During the inspection, each valve is exercised a minimum of 2 times, fully closed and fully opened. The valve locations are verified using our GIS system, and any issues encountered are reported to the Village for resolution.

The water distribution system leak survey performs acoustic leak detection on approximately 68 miles of the water system annually. During the survey, each valve and fire hydrant are accessed and used as a listening

point to identify leaks on or near the asset. If noise or a leak is evident, crews will use a correlator to pinpoint the leak and provide an estimate of the leak size.

The Village has been using M.E. Simpson for the past several years, and they most recently completed our last four-year program. Overall, the new cost proposal has increased as shown below:

	2025	2026	% inc	2027	% inc	2028	% inc
Fire Hydrant Assessment	\$ 55.00	\$ 61.00	11%	\$ 61.00	0%	\$ 61.00	0%
Valve Inspection	\$ 55.00	\$ 63.00	15%	\$ 63.00	0%	\$ 63.00	0%
Leak Survey	\$ 250.00	\$ 285.00	14%	\$ 285.00	0%	\$ 285.00	0%

FISCAL IMPACT

Public Works budgeted \$52,075 in the FY25 budget 50-51-62080 and will increase the budget to meet the increase. M.E. Simpson’s proposed three-year costs were approximately 40% less than GHA’s proposed costs. The three-year cost is approximated based on the current asset count in each category and may change based upon post construction project asset counts.

STAFF RECOMMENDATION

Staff recommend the item be forwarded to the Village Board First Reading on February 3, 2026, for consideration and approval.

AFTER ACTION STEPS

1. Sign Contract with M.E. Simpson Company Inc.
2. Budget accordingly
3. Schedule Project with Contractor

ATTACHMENTS

RFP 20006-02
 Proposal from M.E. Simpson Company Inc.
 Water System Assessment Program Bid Tabulation



YOUR TEAM FOR SECURE + RELIABLE
Water System Solutions



PROPOSAL TO PROVIDE

Village of Itasca, IL

Water System Assessment Program

Due: January 26, 2026





January 26, 2026

Brandon Hansen
Public Works Utilities Superintendent
Village of Itasca
550 W. Irving Park Road
Itasca, IL 60143

RE: PROPOSAL FOR RFQ # 2026-02 WATER SYSTEM ASSESSMENT PROGRAM

Dear Mr. Hansen,

M.E. Simpson Co., Inc. is delighted to present the Village of Itasca our proposal for a Water System Assessment Program. We feel privileged to be considered for this vital project and are confident that our expertise and commitment will help achieve outstanding results.

As a trusted provider of professional services, we specialize in optimizing the performance of water distribution systems through programs and solutions recognized worldwide as Best Management Practices (BMPs). By combining cutting-edge technology, industry-leading methodologies, and a team of highly trained professionals, we are well-equipped to support the success of your project. Our dedicated engineers and technical experts are prepared to seamlessly integrate into your operations, reducing the burden on your staff while delivering exceptional outcomes.

Our services are designed to address the specific challenges utilities face today. Whether providing comprehensive turn-key solutions or empowering in-house teams, our mission is unwavering: to enhance public trust by safeguarding the quality and reliability of drinking water. This project will be staffed by full time employees of M.E. Simpson Co., Inc.; these employees garner wages over \$15.00 and hour and receive employee-covered health insurance.

Thank you for considering M.E. Simpson Co., Inc. for this important initiative. We look forward to the opportunity to partner with the Village of Itasca and deliver results that exceed expectations.

Sincerely,



Joe Nepras
Regional Manager

Joe Nepras
Regional Manager

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SECTION 2: PROJECT DESCRIPTION, APPROACH AND SCHEDULE

Fire Hydrant Assessment Program Scope

The Field Scope of Service for the Fire Hydrant Assessment Program is understood to be the following:

Inspection Process

Hydrants should be inspected on a regular basis, at least once a year. To maintain ISO certification, twice a year inspection needs to be performed. Dry-barrel hydrants require two inspections per year, summer and winter, to mitigate the possibility of water freezing in the barrel. This is especially important in areas with high ground water where proper drainage could be affected.

Insurance ratings and ISO certifications are based in part, on the condition of the hydrants, and how closely they meet the standards for operation. Public safety depends on the ability to identify malfunctioning hydrants and being able to repair them in a timely fashion.

General Hydrant Inspection

- ◆ **Appearance:** The color and condition of the paint, based on the Utilities color scheme, will be assessed. Hydrants that have been displaced due to ground-shifting or collision will be documented, and the Utility notified immediately. If necessary, bollards will be recommended to protect the hydrant from future collisions. Hydrants located very close to roadways and vehicle traffic will be documented, so they can be moved by the Utility.
- ◆ **Accessibility:** A recommendation will be made to raise or lower a hydrant when improper distance from the ground inhibits proper function. Pumper ports and nozzles that do not face the correct direction will be documented, so that the hydrant can be rotated.
- ◆ **Location:** If GPS option is chosen, the exact location will be determined using GPS and “x-y” coordinates, based on permanent local features.
- ◆ **Leakage:** An electronic listening device will be used to ensure that the fire hydrant is not leaking.
- ◆ **Functionality:** The condition of the pumper/nozzle threads and caps will be assessed for damage and proper function and will be lubricated for ease of operation. Dry-barrel hydrants will be checked for proper drainage. The condition of the operating nut will be determined, with regard to excessive wear or rounding. Hydrants that are difficult to operate will be exercised, by repeatedly opening and closing the main valve with the pumper/nozzle caps securely fastened. Hydrants that exhibit evidence of unauthorized operation will be documented so that security devices can be installed to protect against unauthorized usage in the future.

The above is a general description of the type of information gathered during an inspection to determine the condition of the hydrant and would be used to schedule any necessary repairs. Detailed procedures for inspecting fire hydrants are given below (based on AWWA M17 – ‘Installation, Field Testing, and Maintenance of Fire Hydrants’). Our technicians will use the following methodology when performing hydrant maintenance.

Dry-Barrel Hydrant Inspection & Maintenance Procedure

- ◆ Check and record static pressure.
- ◆ Check the hydrants appearance. Condition of paint and proper color-coding will be assessed.
- ◆ Hydrants that need to be raised or lowered will be documented, as well as accessibility issues.
- ◆ Remove one nozzle/pumper cap and, using a listening device, check for main valve leakage. Repair or schedule a repair, as necessary.
- ◆ Replace the nozzle/pumper cap, loose enough for air to escape. Open hydrant a few turns, allowing air to vent from loose cap. Tighten the cap.
- ◆ Open hydrant fully, checking for ease of operation. Repeatedly exercise the operating stem, as needed, to remove buildup and promote better operation. If lubrication or stem replacement is required, perform or schedule the necessary work.
- ◆ With the hydrant fully pressurized, check for leakage around the flanges, nozzles/pumpers, seals, and operating nut. Repair or schedule a repair, as necessary.
- ◆ Partially close the hydrant to open the drain outlets, with the caps in place to ensure static pressure against the weep holes.
- ◆ Completely close the hydrant, and then turn the operating nut $\frac{1}{4}$ turn to $\frac{1}{2}$ turn closed to relieve the pressure on the thrust bearing or packing.
- ◆ Remove a nozzle/pumper cap and attach a diffuser. Flush the hydrant to remove foreign material.
- ◆ Close the hydrant and remove the diffuser. Place your hand over the nozzle/pumper to check for suction as the water drains out of the barrel. For no-drain hydrants, the water must be pumped from the barrel.
- ◆ Check for main valve leakage with an amplified listening device.
- ◆ Remove all nozzle/pumper caps and inspect the threads. Clean and apply approved lubricant to caps and nozzles/pumpers.
- ◆ Inspect cap chains for binding and ease of movement. Unbind or replace, as necessary.
- ◆ Replace the caps and tighten them to the Utilities specification.
- ◆ Check operating nut lubrication and maintain as needed.
- ◆ Inspect breakaway device for damage.
- ◆ **Collect or verify the GPS location of hydrant and the “x-y” location to the same GPS requirements of the valve assessments (sub-foot accuracy).**
- ◆ Notify the Utility immediately of inoperable hydrants needing major repair.
- ◆ Lubrication based on manufacturer’s procedures and recommendations (On fully assembled hydrant)

ISO Requirements

Hydrant maintenance and upkeep is one of many steps leading to ISO certification. ISO certification, with respect to hydrants, requires that a Utility perform hydrant maintenance every six months, including:

- ◆ Location and number identification
- ◆ Identification of physical damage or defect
- ◆ Removing obstructions and debris on or around the hydrant
- ◆ Ensure hydrant outlets face the proper direction
- ◆ Make sure there is a minimum 15” clearance between lowest outlet and the ground and ensure traffic feature, if present, is visible and above grade to ensure that it works as intended
- ◆ Ensure the auxiliary valve is visible
- ◆ Determine the condition of paint and correct color code
- ◆ All outlets have been cleaned and lubricated
- ◆ Determine the status: Public, Private, or Non-Potable hydrant
- ◆ Obtain static pressure reading

- ◆ Operating stem has been exercised and lubricated per manufacturer’s recommendations and procedures
- ◆ Hydrant reflectors and markers have been installed and/or repaired
- ◆ An amplified listening device is used to check for leaks

M.E. Simpson Co., Inc.’s approach to hydrant maintenance comes directly from the AWWA M17 manual and meets or surpasses all ISO requirements.

Fire Hydrant Operation

M.E. Simpson Co., Inc. takes great care when operating the customer’s fire hydrants in their water distribution system. Even with our years of proven experience in water system operations problems occasionally occur. Any valves or fire hydrants that break or fail during the maintenance program will be repaired or replaced at the expense of the water Utility. M.E. Simpson Co., Inc. cannot be held responsible for possible valve or hydrant failures during their operation. M.E. Simpson Co., Inc. cannot be held responsible for damage done to the water system during the fire hydrant maintenance program, such as water leaks, discolored water and turbidity that can possibly occur during the maintenance process. M.E. Simpson Co., Inc. cannot be held responsible for possible damage to the water utilities’ individual water customer.

Utility Observations

The M.E. Simpson Co., Inc. Project Team will welcome having staff of the Utility observe field procedures while the maintenance program is in progress. They will be happy to explain and demonstrate the equipment and techniques that are employed by M.E. Simpson Co., Inc. for fire hydrant maintenance. This may be useful for the staff of the Utility in understanding the parameters of hydrant maintenance.

Final Reports, Documentation & Communications

M.E. Simpson Co., Inc. will perform the following:

- ◆ Project Team will **meet daily** with assigned Utility personnel to go over areas of hydrant maintenance for prior workdays and plan current day.
- ◆ At the end of each day, or as requested, a list of any broken or inoperable valves or hydrants will be turned in.
- ◆ Hydrant location will be documented from existing landmarks and will be a part of each Hydrant record.
- ◆ Information collected by M.E. Simpson Co., Inc. during the program and any other information provided by the Utility shall be regarded as CONFIDENTIAL and will not be shared without permission from the Utility or unless required by law.
- ◆ **Prepare the final report** at the completion of the project which will include all Fire Hydrant Maintenance Testing reports, other problems found in the system during the course of testing that need the attention of the Water Utility. **This final report shall be made available for submission to the Water Department within thirty (30) workdays of the completion of the fieldwork.**

Assumptions & Services Provided by the Utility

- ◆ The Utility will furnish, in an electronic format, all maps, atlases, (two copies) and records necessary to properly conduct the flow testing program.
- ◆ The Utility will make available, on a reasonable but periodic basis, certain personnel with a working knowledge of the water system who may be helpful with general information about the water system. *This person will not need to assist the Project Team on a full-time basis, but only on an “as needed” basis.*
- ◆ The Utility will supply information regarding pressure zone boundary valves, and any other information that may make the job of flow testing easier to perform.
- ◆ The Utility will assist, if needed, to help gain entry into sites that may be difficult to enter due to security issues or other concerns.

Equipment to be Used

The following equipment will be used for fire hydrant operation and maintenance work during the fire hydrant maintenance for the Utility. All materials listed will be on the job site at all times.

- ◆ 2.5” Port diffusers, Pollards with flow gauges
- ◆ Certified and field-tested flow gauges
- ◆ Food grade grease for lubricating the pumper and nozzle ports
- ◆ FCS S30 or Gutermann AquaScope listening device to ensure the hydrant isn’t leaking
- ◆ Grease to lubricate the hydrants operating nut and stem
- ◆ All necessary hand tools
- ◆ Truck mounted Arrow Board/Signage, and warning lights on trucks
- ◆ Traffic control equipment, including properly sized traffic cones with reflective stripes, when needed or required
- ◆ A “Schonstedt”/ “Chicago Tape” magnetic locator
- ◆ A “Radio Detection RD4000” series line locator

Water Main Capacity Testing Program Scope

The Field Scope of Service for the Water Main Capacity Testing Program is understood to be the following:

M.E. Simpson Co., Inc. will furnish all labor, material, transportation, tools, and equipment necessary to perform water main capacity testing in the water distribution system selected by the Utility. M.E. Simpson Co., Inc. shall be required to provide such skilled and trained personnel and equipment necessary to complete the work herein specified. **There will be a minimum of Two Persons per team working on the Fire Hydrant Flow/Watermain Capacity Testing program at all times.**

- ◆ Work in an orderly and safe manner to insure protection of the local residents, Utility employees, and the Field Staff so that no avoidable accidents occur.
- ◆ All Field Staff will have readily observable identification badges worn while in the field. All vehicles used in the field will have company signs attached.
- ◆ The flow testing equipment to be used will be that which was described in the “Equipment to be used” section.
- ◆ M.E. Simpson Co., Inc. Personnel will meet with the Utility to review the project guidelines and answer any questions on procedures.
- ◆ The initial layout of the project will need to involve distribution Utility staff to help identify the flow patterns in the distribution system, flow testing from larger mains into smaller mains, from the water sources (pump stations and water storage structures), out into the system loops and dead ends.
- ◆ Any pressure zones in the distribution system will be identified on the water atlas prior to developing the fire hydrant flow-testing program. This will need to be done with distribution personnel prior to the start of the program.
- ◆ As a part of the Fire Hydrant Flow/Watermain Capacity Testing program, mapping discrepancies found on the current water atlas will be noted and included as a part of the final report so the Utility can make needed corrections. This will be included as a part of the periodic reporting to the Utility, thus enabling the Utility to keep up with mapping corrections.
- ◆ A progression map shall be maintained for each section under study indicating hydrants assessed on the map. This will be especially helpful in quickly determining the work progress of the crews in the field.
- ◆ It may be necessary to conduct parts of the Fire Hydrant Flow/Watermain Capacity Testing during “off hours” such as at night. This may be required in areas of high traffic volume where traffic may affect the ability to conduct safe flow testing, and traffic volume may affect the ability of the Project Team to be able to safely access hydrants on busy streets. The Project Team will give 24-hour advanced notice of intent to flow test hydrants in a particular area that may require after hours work or nighttime work. This is so the Utility can plan for the area to be worked in, give notification to the Police department, as well as other Public Works Divisions as to the activity that will take place.
- ◆ M.E. Simpson Co., Inc. will use large flow testing signs in designated areas to notify areas to be tested and inspected.
- ◆ M.E. Simpson Co., Inc. can provide the Utility an informational letter briefly explaining the fire hydrant flow-testing program to include with the customer’s normal water bill. Frequently, special mailings are used for customer notification. If you choose a special mailing, the Village will be responsible for the postage and printing costs.

- ◆ M.E. Simpson Co., Inc. can issue a press release to briefly explain the fire hydrant flow-testing program and the areas affected. The press releases can be sent to; local newspapers, local radio stations and the Cable Company. This type of customer notification can greatly reduce the number of customer complaints about dirty water.
- ◆ All of the fire hydrants will be recorded on the water atlas and assigned numbers, using your existing numbering system or by creating a numbering system for you, prior to the development of the fire hydrant flow-testing program. This data is critical to establishing an effective and water conserving fire hydrant flow-testing program.
- ◆ All of the pertinent information for each fire hydrant that is flow-tested will be documented. This data is critical to establishing an ongoing flow-testing and maintenance program. The following is a list of the information gathered.
- ◆ If requested, all Fire Hydrant caps will be greased for ease of operation
- ◆ Fire Hydrant nozzle size used for each test will be recorded
- ◆ Residual Pressure will be recorded for each Fire Hydrant tested
- ◆ Static Pressure will be recorded for each Fire Hydrant
- ◆ Flow, GPM (Gallons Per Minute), will be recorded for each Fire Hydrant flowed
- ◆ The amount of time it takes to flush each Fire Hydrant will be recorded. An estimate will be made of the amount of water used during the operation of each Fire Hydrant test
- ◆ Fire Hydrants that are in need of repair, painting, color coding, or have operation defects will be noted with an estimate of repairs needed to make the hydrant operational.
- ◆ The date tested and technicians operating the Fire Hydrant will be recorded.
- ◆ The Fire Hydrant address or location will be recorded.
- ◆ The Project team will set up the flow testing program in such a way that hydrants are operated near the water source first, then the team will move away from the water source in an organized manner to keep water discoloration and distribution disturbances to a minimum. The “flow” hydrant shall be downstream of the “residual” hydrant, thus insuring proper residual readings for full potential fire flow (re: AWWA M-17 manual, page 41).
- ◆ Fire hose and deflection tubes will be utilized, as required, to direct flushing water away from traffic, pedestrians, underground Utility vaults, and private property.
- ◆ Pressure gauges are used to determine the residual pressure during the flow-testing process while insuring that the distribution system pressure remains above 20 psi. Any incidents of the distribution system being unable to supply a residual of 20 psi in the surrounding area will be brought to the immediate attention of the Utility Superintendent.
- ◆ After the Fire Hydrant has been flushed, M.E. Simpson Co., Inc. will verify that the hydrant is seated and is draining properly. We will also check the Fire Hydrant with a FCS S30 or Gutermann AquaScope electronic listening device to ensure that the hydrant is not leaking. A majority of fire hydrant leaks go un-noticed because they are small leaks draining out through the drain holes at the base of the hydrant. Using the S30 or Gutermann AquaScope will help eliminate this type of leakage.
- ◆ All pressure gauges used in the field will undergo **daily testing** against a “standard” gauge to insure the field gauges are accurate during the flow-testing project. Any gauges that are found to not be within acceptable limits will be replaced with gauges that are within accepted standards. This will insure the observed static and residual pressures are accurate and reliable.

Fire Hydrant Operation, Flow-Testing

M.E. Simpson Co., Inc. takes great care when operating, flow-testing the customer’s fire hydrants in their water distribution system. Even with our years of proven experience in water system operations problems occasionally occur.

Any valves or fire hydrants that break or fail during the flow-testing program will be repaired or replaced at the expense of the water Utility. M.E. Simpson Co., Inc. cannot be held responsible for possible valve or hydrant failures during their operation. M.E. Simpson Co., Inc. cannot be held responsible for damage done to the water system during fire hydrant flow testing, such as water leaks, discolored water and turbidity that can possibly occur during the flow testing process. M.E. Simpson Co., Inc. cannot be held responsible for possible damage to the water utilities’ individual water customer.

NFPA Color Coding Standards

Municipal, Private, and Non-Potable fire-hydrants should not be painted the same color (the body of the hydrant) according to the NFPA. Each of the three types should follow the color code listed below. The bonnet and nozzle/pumper caps are also to be color-coded according to the hydrants’ rated flow rate at 20 psi (see below).

The NFPA has published standards regarding the maintenance and color coding of fire hydrants (NFPA 291). The scheme is as follows:



<u>Supply</u>	<u>Body Color</u>
Municipal System:	Chrome Yellow
Private System:	Red
Non-Potable System:	Violet (Light Purple)

Hydrant ratings at 20 psi.

Class C	Less than 500 GPM	Red
Class B	500-999 GPM	Orange
Class A	1000-1499 GPM	Green
Class AA	1500 GPM & above	Light Blue

Utility Observations

The M.E. Simpson Co., Inc. Project Team will welcome having staff of the Utility observe field procedures while the flushing program is in progress. They will be happy to explain and demonstrate the equipment and techniques that are employed by M.E. Simpson Co., Inc. for calculations of fire flows. This may be useful for the staff of the Utility in understanding the parameters of hydrant flow testing, especially during an emergency such as a fire where proper flow is needed for the fire department.

Final Reports, Documentation & Communications

M.E. Simpson Co., Inc. will perform the following:

- ◆ Project Team will **meet daily** with assigned Utility personnel to go over areas of flow testing for prior workdays and plan current day and next two days' areas to flow test.
- ◆ At the end of each day, or as requested, a list of any broken or inoperable valves or hydrants will be turned in.
- ◆ Each step of the fire hydrant flow-testing program will be identified and the hydrants used for each flow-test will be documented in a fire hydrant flow-testing report.
- ◆ Maintain a progression map to be included with the final report of the project indicating areas flow tested and areas that have been tagged for flow testing.
- ◆ The Utility will be provided with flow information in **Pro-Maps™/Pro-Hydrant®** an electronic fire hydrant database. This documentation allows for the flow-testing program to be repeated at a later date. This electronic program is designed to be a complete system for your Utility to establish an effective fire hydrant flow testing, flushing and maintenance program. The electronic database provides an inventory record system, hydrant maintenance and scheduling. The database includes a complete hydrant flow-testing program for calculating flow test results. **Pro-Maps™/Pro-Hydrant®** is a hydrant record database (ODBC). This data will be available in an electronic format to the Utility with the appropriate access. The data will be maintained offsite at a secure location.
- ◆ M.E. Simpson Co., Inc. can also provide the **Pro-Maps™/Pro-Hydrant®**, electronic database, that has the abilities to access and reproduce and edit all aforementioned hydrant location and flow testing information. This program will have the capability to generate upon demand:
 - ◆ The individual Hydrant Flow Test reports that includes the flow test data, static pressure and residual pressure, and potential flow at 20psi.
 - ◆ A summary listing of all Hydrants with identified defects.
 - ◆ A complete listing of all Hydrants by numerical or indexed order.
 - ◆ A complete listing of all Hydrants by alphabetically reference to street and cross street names.
 - ◆ All pertinent information such as port size, number of ports, flow test results, general condition of the hydrant, and color coding for the **NFPA rating**.
 - ◆ Hydrant location will be documented from existing landmarks and will be a part of each Hydrant record.
 - ◆ Information collected by M.E. Simpson Co., Inc. during the program and any other information provided by the Utility shall be regarded as CONFIDENTIAL and will not be shared without permission from the Utility or unless required by law.

- ◆ Develop a Flow Testing log of activity to be included with the final report that will include the following:
 1. Type of problems observed
 2. Location of same for problems discovered
 3. Total estimated water used (to be included on each flow test result)
 4. Mapping errors on the water atlas
- ◆ **Prepare the final report** at the completion of the project which will include all Fire Hydrant Flow/Watermain Capacity Testing reports, other problems found in the system during the course of flow testing that need the attention of the Water Utility. **This final report shall be made available for submission to the Water Department within thirty (30) work days of the completion of the fieldwork.**

Assumptions & Services Provided by the Utility

- ◆ The Utility will furnish, in an electronic format, all maps, atlases, (two copies) and records necessary to properly conduct the flow testing program.
- ◆ The Utility will make available, on a reasonable but periodic basis, certain personnel with a working knowledge of the water system who may be helpful with general information about the water system. *This person will not need to assist the Project Team on a full-time basis, but only on an “as needed” basis.*
- ◆ The Utility will supply information regarding pressure zone boundary valves, and any other information that may make the job of flow testing easier to perform.
- ◆ The Utility will assist, if needed, to help gain entry into sites that may be difficult to enter due to security issues or other concerns.

Equipment to be Used

The following equipment will be used for fire hydrant operation and maintenance work during the unidirectional flushing program for the Utility. All materials listed will be on the job site at all times.

- ◆ Pumper Port Diffuser, Hose Monster
- ◆ 2.5” Port diffusers, Hose Monster / Pollards
- ◆ Certified and field tested flow gauges
- ◆ Valve keys
- ◆ FCS S30 or Gutermann AquaScope listening device to ensure the hydrant isn’t leaking
- ◆ All necessary hand tools
- ◆ Truck mounted Arrow Board/Signage, and warning lights on trucks
- ◆ Traffic control equipment, including properly sized traffic cones with reflective stripes, when needed or required
- ◆ A “Schonstedt”/“Chicago Tape”/“Fisher” magnetic locators
- ◆ A Radio Detection line locators

Water Distribution System Leak Survey

The Field Scope of Service for the Leak Survey is understood to be the following:

M.E. Simpson Co., Inc. will be responsible for supplying all the essential resources, including labor, materials, transportation, tools, and equipment, required for the survey of the designated water distribution system areas as determined by the Utility. M.E. Simpson Co., Inc. must ensure the availability of proficient and trained personnel, as well as the necessary equipment, to successfully execute the tasks outlined in this scope of work.

There will be a minimum of Two Persons per team working on the survey at all times. The project team will:

- ◆ Work in an orderly and **safe** manner to ensure protection of the local residents, Utility employees, and the Field Staff, preventing **avoidable** accidents.
- ◆ All Field Staff will wear readily observable identification badges while in the field.
- ◆ Use leak detection equipment specified in the “Equipment to be used” section.
- ◆ Initially, conduct physical contact listening on **all fire hydrants, all accessible main line valves**, and, when necessary, selected service connections across the entire distribution system. Inaccessible listening points will be reported to the Utility for resolution.
- ◆ Listening points of contact will be valves, hydrants, service valves or meter settings. The preferred order of listening points is as follows: direct contact with the pipe, main line valves, hydrant valves, hydrants, then service valves or meter settings.
- ◆ Determine specific listening distances based on pipe material: Metallic pipes - no greater than 500 feet between listening points; Non-Metallic AC/Concrete pipes - no greater than 300 feet between listening points; Non-Metallic PVC/HDPE pipes - no greater than 150 feet between listening points.
- ◆ Maintain a Suspected Leak log indicating all areas where suspected leak noise was detected. This log will be reviewed during the verification of suspected leak areas, regardless of whether an actual leak is found, with an explanation of the noise source. It will be included in the periodic reports submitted to the Utility.
- ◆ Upon identifying or suspecting potential leak noise, conduct a secondary verification of the suspected area. A minimum of four hours will elapse between the initial assessment and the follow-up confirmation.
- ◆ The Project Team will perform **line locating** for both the water main and service lines in the nearby vicinity. Accurate pipe distance input into the leak correlator and providing the Water Utility with preliminary knowledge of the water main's approximate location are vital outcomes of this step. In the case of non-metallic pipes, their locations will be estimated, considering the line location of metallic services, Utility's area knowledge, or other pertinent information.
- ◆ Employ state-of-the-art **Electronic Leak Correlators** to detect and pinpoint leaks.
- ◆ *For PVC water mains only the Echologics LeakFinder-ST w/hydrophones leak correlator or Fluid Conservation Systems (FCS) Touch Pro leak correlator, will be used for correlations due to their ability to analyze the particular sound frequencies associated with PVC pipe.*
- ◆ Field marking of leak locations will be done using environmentally formulated Precautionary Blue paint.
- ◆ The Project Team will document all leak locations with diagrams indicating the leak's precise position, along with related correlation information such as filters used, line locations, sensor distances, and more.
- ◆ Leaks requiring **immediate attention (immediate threat to life, injury or traffic)** will be reported as swiftly as possible to expedite the repair process.
- ◆ Daily reporting to the Utility's assigned Professional will occur, covering progress from the previous day and survey plans for the current day.
- ◆ Components of the Leak Survey may need to be conducted during "off hours," such as at night. Advanced 24-hour notice will be given when surveying an area that requires after-hours or nighttime surveying to enable proper planning by the Utility, notification to the Police department, and other relevant Public Works Divisions.

- ◆ As part of the leak program, mapping discrepancies and distribution assets found in disrepair will be noted and reported to the Utility.
- ◆ Leaks confirmed on the customer’s side of a service shut-off will not be located beyond the shut-off. The Utility will be informed first, followed by customer notification and permission before any water shut-off, even for short periods, occurs, allowing for customer response.
- ◆ If the Utility requests leak locations beyond the service shut-off on the customer’s side of the service line, an additional charge will be applied to the leak survey based on an hourly rate. Such service must be agreed upon between the Utility and M.E. Simpson Co., Inc. before the survey’s commencement.
- ◆ Only operate valves and hydrants with permission from the Utility. Valves and hydrants breaking during this operation are the sole responsibility of the Utility. M.E. Simpson Co., Inc. cannot be held liable for breakage due to pre-existing conditions.
- ◆ Encourage the Utility to expedite the repair of located leaks so that the area can be re-surveyed while the Project Team is still working in that geographical vicinity to ensure no other leaks are present.

Equipment List

- ◆ FCS **S30** Gutermann **AquaScope** electronically enhanced listening device
- ◆ Echologics **LeakFinder-ST w/hydrophones**
- ◆ FCS **Touch Pro**
- ◆ Vivax-Metrotech **HL6000X** leak correlator systems
- ◆ **RADIO Detection** Line Locators
- ◆ **Chicago Tape, Fisher M-Scope** or **Schonstedt** magnetic locators
- ◆ **All necessary listening rods, valve keys, hydrant wrenches and hand tools**
- ◆ Truck mounted arrow board/signage and warning lights
- ◆ Traffic control equipment, including properly sized traffic cones with reflective stripes

Quality Control and Accuracy of Leak Locations

The level of accuracy in leak detection is contingent on a thorough consideration of all the factors mentioned above, and the application of these considerations to each potential leak location as it undergoes evaluation. Any statement regarding the accuracy of leak locations must be understood in the context of the specific conditions surrounding each leak.

Detecting and pinpointing leaks within a distribution system is inherently challenging. It is not a perfect science. Pipes and fittings may develop leaks for a variety of reasons, including factors such as age, poor installation, material deficiencies, or adverse soil conditions. By adhering to a strict methodology in the field during the leak survey, these variables can be accounted for and mitigated. The depth of experience possessed by the Project Team is pivotal in maintaining the ability to achieve accurate leak locations. Furthermore, field crews work in Two-Person Teams, providing an additional layer of oversight and quality control as the survey progresses.

Utility Observations

The M.E. Simpson Co., Inc. Project Team will welcome having staff of the Utility observe field procedures while the Leak Survey is in progress. They will be happy to explain and demonstrate the equipment and techniques that are employed by M.E. Simpson Co., Inc. for detecting and locating leaks on the Water System.

Final Reports, Documentations & Communications

M.E. Simpson Co, Inc. will perform the following:

- ◆ Project Team will **meet daily** with assigned Utility personnel to go over areas of survey for prior workday and plan current day and area to survey.
- ◆ The field technicians will be readily available by phone. This will facilitate communications between the Utility and the field technicians. A **24-hour toll-free 800 number** is available for direct contact with M.E. Simpson Co., Inc. for emergencies.
- ◆ **Diagram all leak locations**, date of location, and classify according to severity and an estimate of loss.
- ◆ **The Project Manager will** meet with the Utility regularly for a progress report.
- ◆ **Prepare a progress report** at monthly intervals for the Utility if requested.
- ◆ Develop a **Leak Survey log** of activity which will also have confirmed leaks listed and this list will be turned in weekly (in the Utility preferred format). The list will also be included with the final report that will include the following:
 1. Mechanical deficiencies discovered
 2. Mapping errors on the water atlas
 3. Type of monitored appurtenances
 4. Location of same for leaks discovered
 5. Total estimated loss
- ◆ Provide a paper map with numbered location IDs and ArcGIS files showing a point location for each leak. The ArcGIS shapefile/geodatabase shall include the following attribute fields:
 1. Location per sub-foot GPS
 2. Date of leak test
 3. Estimated severity in GPM
 4. Notes (as applicable)
- ◆ **Prepare the final report** at the completion of the project which will include all leak location reports with drawings, total of estimated water loss, total pipe distance investigated, a description of the area surveyed, and other problems found in the system during the course of the survey that need the attention of the Water Utility. The leak summary will list leak types such as main leaks, service line leaks, valve leaks, or hydrant leaks.

A cost benefit analysis of the survey based on the “cost to produce” water will also be included that describes the financial impact to the Utility for water loss. Recommendations for system maintenance will be a part of this report based on field observations made during the survey. **This final report shall be made available for submission to the Utility within thirty (30) working days of the completion of the fieldwork.**

Assumptions & Services Provided by the Utility

- ◆ Utility will provide access to documents, records, electronic and paper maps, and data sources. These detailed items are necessary to properly conduct the system leak survey. These will include:
 1. ArcGIS Online internet mapping application, which allows on-screen distance measurements.
 2. Exported copy of the Utility’s water GIS database in shapefile or another ESRI-compatible format.
 3. Electronic version of the Village-wide map in PDF format.
 4. PDF versions or paper copies of detailed engineering drawings only as needed and available.
- ◆ The Utility will assist as necessary to clean out service valves, meter pits and valve-boxes needed for listening.
- ◆ The Utility will provide a Primary Contact Person and/or secondary contact person for the Field Staff to report to on a periodic basis. This person shall act as the official liaison for the duration of the Leak Survey. This person shall have a working knowledge of the water system and will be helpful in attempting to locate

particularly hard-to-find water valves for listening and for general information about the water system. *This person will not need to assist the Project Team on a full-time basis*, but only on an “as needed” basis.

- ◆ The Utility will assist, if needed, to help gain entry into sites that may be difficult to get into due to security issues or other concerns.
- ◆ The Utility will assist, if needed, to locate all nonmetallic pipe within the service area. This would include all Concrete Cylinder pipe, Asbestos Cement Pipe, PVC pipe and HDPE pipe.
- ◆ We will encourage the immediate digging of major leaks (main breaks) so that if there are problems with the leak location, the problems can be corrected while the Project Team is close by and can verify the site.

Valve Assessment Services

The Field Scope of Service for the Valve Assessment Services is understood to be the following:

M.E. Simpson Co., Inc. will furnish all labor, material, transportation, tools, and equipment necessary to perform valve assessments on the water distribution system. M.E. Simpson Co., Inc. shall be required to provide such skilled and trained personnel and equipment necessary to complete the work herein specified. **There will be a minimum of Two Persons per team always performing the valve assessments.**

- ◆ Work in an orderly and **safe** manner to ensure protection of the local residents, Utility employees, and the Field Staff so that no **avoidable** accidents occur.
- ◆ All Field Staff will have readily observable identification badges worn while in the field. All vehicles used in the field will have company signs attached.
- ◆ The valve equipment to be used will be that which is described in the “Equipment to be used” section.
- ◆ Project Team Personnel will **meet with the Utility to review the project** guidelines and answer any questions on procedures.
- ◆ Any **pressure zones** in the distribution system will be identified on the water atlas prior to developing the valve assessment program. This will need to be done with distribution personnel prior to the start of the program to avoid having pressure zone problems due to valves opened when they need to be closed.
- ◆ As a part of the valve program, mapping discrepancies found on the current water atlas will be noted and included as a part of the final report so the Utility can make needed corrections. This will be included as a part of the periodic reporting to the Utility, thus enabling the Utility to keep up with mapping corrections.
- ◆ A progression map shall be maintained for each section under study indicating valves assessed on the map. This will be especially helpful in quickly determining the work progress of the crews in the field.
- ◆ It may be necessary to conduct parts of the valve assessment during “off hours” such as at night. This may be required in areas of high traffic volume where traffic may affect the ability to conduct safe valve assessment, and traffic volume may affect the ability of the Project Team to be able to safely access valves on busy streets. The Project Team will give 24-hour advanced notice of intent to operate valves in a particular area that may require after hours work or nighttime work. This is so the Utility can plan for the area to be worked in, give notification to the Police department, as well as other Public Works Divisions as to the activity that will take place.

Valve Location

The Project Team will:

- ◆ **Examine the water maps** to determine the anticipated location of each water valve.
- ◆ **Attempt to verify** the existence of all water valves shown on the water maps by visual inspection.
- ◆ **Search for water valves** shown, but not identified by visual inspection, using a magnetic locator, probing rods and other tools.
- ◆ **Employ a combination** of recorded information, manual and technical testing techniques as needed to establish the location of remaining water valves.
- ◆ **Identify locations where a water valve is expected**, but not shown on the water map, and proceed through verification and search process.
- ◆ **Two attempts shall be made to locate “lost” valves** before these are turned into the Utility for location. The Project Team will ask permission to trace existing water mains by means of line locating equipment

to establish the configuration of existing water mains and probable location of water valves should search by magnetic locator fail. If the Utility cannot locate the valve within five working days, The Project Team shall be paid for the attempted locate.

- ◆ **Valve enclosures will be vacuumed and cleaned** to expose the operating nut.
- ◆ **Corrections to the Utility maps** shall be drawn on the paper maps provided by the Utility and returned to the Utility after the project is completed.
- ◆ **Located valve boxes or valve vault covers** shall be painted with an environmentally formulated **precautionary blue paint** for future identification.

Valve Exercising

The Project Team will:

- ◆ Operate selected valves in accordance with the AWWA manual M-44, “Distribution Valves: Selection, Installation, Field Testing and Maintenance”
- ◆ Attempt to operate each of the valves manually.
- ◆ Valves requiring an operating torque greater than one hundred (100) foot-pounds shall be operated by a portable and/or truck mounted hydraulic valve machine. The valve operators used by the Project Team have torque-limiting capabilities that allow incremental settings from fifty (50) to twenty-five hundred (2500) foot-pounds of torque.
- ◆ The machine shall be solely and completely dependent upon the operator for continuous control of direction and torque, otherwise known as “non-locking” or “torque limiter” capability.
- ◆ All valves will be operated with the minimum torque required preventing valve damage.
- ◆ Maximum torques shall be as follows:
 - 4” gate valves – 300 ft. lbs.
 - 6” and larger gate valves – 600 ft. lbs.
 - Butterfly valves – 200ft. lbs.
- ◆ During initial valve closure, the valve will be turned no more than five (5) turns before turn direction is reversed to two (2) turns, thus allowing the threads of the stem and gate to free themselves. This closure and partial reversal process shall be repeated until the valve has achieved full closure.
- ◆ The valves will then be operated from full open to full closure until such time as this can be done without further turn range improvement or no further reduction in the required operating torque is noted, through **a minimum of two (2) consecutive ranges of operations and a maximum of seven (7) operations.**
- ◆ **The Project Team shall notify the *Water Superintendent*, of intent to operate a certain group of water valves. The Team shall obtain permission to perform the work, at least twenty-four (24) hours or one (1) working day in advance of the intended start of that work.**
- ◆ **Valves found in the closed position** shall be reported to the Utility immediately so verification can be made for operating or not.
- ◆ **Valve vaults and boxes shall be cleaned or pumped out** to gain access to the valve and for inspection of the operating nut.
- ◆ **If there is reasonable evidence that a valve might break during the operating process**, the Utility will be notified immediately, and a decision will be made by the Utility to attempt or not to attempt the process. **Any valves that fail or break during operation will be repaired or replaced by the Utility.** The Project Team cannot be held responsible for possible valve failures during the operating procedure.

Documentation of Valve Operating

- ◆ All of the pertinent information for each valve that is exercised will be documented in the Utility’s GIS system supplied by the Village of Itasca, IL. The following is a list of the information gathered.

- Facility ID, Inspection Company, Ground Surface, Depth to Nut (Ft), Operating Position Found, Diameter, Valve Type, # of Turns, Name of Operator, Valve Leaking?, Stem OK?, Packaging OK?, Lube Req'd, Other Maint Req'd, Notes, Cleaning Required, Location Description, Valve Condition, Date Exercised, Box Type, Current Operating Position, Designator, Operator (Other), Operating Nut OK?, Exercise Completed, Reason Could Not Complete, Reason Could Not Complete Details.

Valve Operations

Our Project Team takes great care when operating and operating valves in the water distribution system. Even with our years of proven experience in water system operations problems occasionally occur. Any valves that break or fail during the assessment program will be repaired or replaced at the expense of the water Utility. The Project Team cannot be held responsible for possible valve failures during their operation due to pre-existing conditions. The Project Team cannot be held responsible for damage done to the water system during valve operating, such as water leaks, discolored water and turbidity that can possibly occur during the process.

Final Reports, Documentations & Communications

M.E. Simpson Co, Inc. will perform the following:

- ◆ Project Team will **meet daily** with assigned Utility personnel to go over progress for prior workday and plan current day and area of valves to be operated.
- ◆ **Document all valve operating and locating** as indicated in the “**Scope of Work**”.
- ◆ **Maintain a progression valve report** of the project indicating valves operated.
- ◆ **Valves found with problems** shall be documented and turned into the assigned Utility personnel daily so the Utility can make the necessary corrections so the valve can be turned.
- ◆ **Prepare the final report** at the completion of the project which will include all valve documentation per “**Scope of Work**” for the Utility, for the total number of valves operated, valves requiring maintenance, as well as other problems found in the system during the course of the program that need the attention of the Water Utility. This report shall be made available for submission to the Utility within thirty (30) days of the completion of the fieldwork.
- ◆ **The equipment used** will be that which is described in the “Equipment to be used” section.

Assumptions and Services Provided by the Utility

- ◆ The *Utility* will furnish all maps, atlases, (two copies) and records necessary to properly conduct the valve-operating program.
- ◆ The *Utility* will provide records such as old valve cards or any additional information that would make the valve location and operating easier to perform. This information shall be regarded as **CONFIDENTIAL** by the Project Team and will not be shared with anyone outside of the Water Utility without consent of the Water Utility.
- ◆ The *Utility* will notify other departments in the Utility, town, or Utility as to the activity of valve operating so that various departments are aware that a program is in progress. This is to ensure that if there should be a problem with part of the distribution system, notification can be made promptly.
- ◆ The *Utility* will also make available, on a reasonable but periodic basis, certain personnel with a working knowledge of the water system who may be helpful in attempting to locate particularly hard-to-find valves and for general information about the water system. This person will not need to assist the Project Team on a full-time basis, but only on an “as needed” basis.
- ◆ The Utility will assist, if needed, to help gain entry into sites that may be difficult to get into due to security issues or other concerns. This may be required of areas where distribution mains run in easements on private property.

- ◆ The Utility will provide all Valve ID numbers, type of valve (if known), Map page numbers or grid number, and any other additional information that can aid in helping the overall success of the program.

Valves to be Assessed

Reports, Documentation & Communications

- ◆ Project Team will **meet daily** with assigned Utility personnel to go over areas of valve assessments for prior workdays and plan current day and next two days' areas to flow test.
- ◆ At the end of each day, or as requested, a list of any broken or inoperable valves will be turned in.
- ◆ Each step of the valve assessment program will be identified in a valve report.
- ◆ Maintain a progression map to be included with the final report of the project indicating areas where valve assessments have been performed
- ◆ The Utility will be provided with valve assessment information
- ◆ Information collected by the Project Team during the program and any other information provided by the Utility shall be regarded as CONFIDENTIAL and will not be shared without permission from the Utility or unless required by law.
- ◆ Develop a log of activity to be included with the final report that will include the following;
 5. Type of problems observed
 6. Location of same for problems discovered
 7. Mapping errors on the water atlas
- ◆ **Prepare the final report** at the completion of the project which will include all valve assessment reports, other problems found in the system during the course of flow testing that need the attention of the Water Utility. **This final report shall be made available for submission to the Water Department within thirty (30) workdays of the completion of the fieldwork.**

Equipment to be Used

The following equipment will be used for valve operation and maintenance work during the Valve Exercising and Assessment program for the Utility. All materials listed will be always on the job site.

- ◆ All necessary hand tools
- ◆ Truck mounted Arrow Board/Signage, and warning lights on trucks
- ◆ Traffic control equipment, including properly sized traffic cones with reflective stripes, when needed or required
- ◆ A "Schonstedt"/"Chicago Tape" magnetic locator
- ◆ Truck mounted or trailer mounted hydraulic valve operator with adjustable torque control
- ◆ Portable hydraulic valve operator adjustable torque control
- ◆ Truck mounted or trailer mounted Vacuum capable of 300 CFM
- ◆ Trucks are equipped with either a Honda 6.5 horsepower pump capable of discharging 150 GPM or a Stanley Hydraulic pump capable of discharging 450 GPM
- ◆ Extendable valve keys for manual operation

GPS Scope of Services

Fire Hydrant GPS Locations

M.E. Simpson Company’s Project Team will furnish all labor, material, transportation, tools, and equipment necessary to perform GPS locations on specified appurtenances in the distribution system, then take these GPS locations and import them into a GPS database, showing all the important locational details needed and desired by the Utility. The Project Team shall be required to provide such skilled and trained personnel and equipment necessary to complete the work herein specified. There will be a minimum of Two Persons per team performing the asset assessments at all times.

- ◆ Work in an orderly and safe manner to ensure protection of the local residents, Utility employees, and the Field Staff so that no avoidable accidents occur.
- ◆ All Field Staff will have readily observable identification badges worn while in the field. All vehicles used in the field will have company signs attached.
- ◆ Project Team Personnel will meet with the Utility to review the project guidelines and answer any questions on procedures.
- ◆ As a part of the program, mapping discrepancies found on the current atlases will be noted and included as a part of the final report so the Utility will have a listing of needed corrections. This will be included as a part of the periodic reporting to the Utility, thus enabling the Utility to keep up with mapping corrections made by the Project Team.
- ◆ A progression map shall be maintained for each section under study indicating all assets located on the map. This will be especially helpful in quickly determining the work progress of the crews in the field.
- ◆ It may be necessary to conduct parts of the asset assessment during “off hours” such as at night. This may be required in areas of high traffic volume where traffic may affect the ability to conduct safe collection of GPS points, and traffic volume may affect the ability of the Project Team to be able to safely GPS valves on busy streets. The Project Team will give 24-hour advanced notice of intent to GPS valves in a particular area that may require after hours work or nighttime work. This is so the Utility can plan for the area to be worked in, give notification to the Police department, as well as other Public Works Divisions as to the activity that will take place.
- ◆ Examine the water maps to determine the anticipated location of each asset/appurtenance chosen.
- ◆ Attempt to verify the existence of all selected assets shown on the atlases by visual inspection.
- ◆ Search for assets shown, but not identified by visual inspection, using a magnetic locator.
- ◆ Employ a combination of recorded information, manual and technical testing techniques as needed to establish the location of remaining assets.
- ◆ Identify locations where a main line valve or water main is expected, but not shown on the current maps, and proceed through verification and search process.

GPS Asset Location

- ◆ Once the assets have been physically located, the Project Team will perform the following:
- ◆ The Project Team will collect GPS Coordinates of all assets assessed using the above “Scope of Work”

- ◆ The Project Team will work with the Utility to develop a “data dictionary” which will define the information to be collected for each attribute. The data dictionary shall have the following but not limited to:
 - Date and time the information was gathered.
 - The unique identifying number for each attribute consistent and compatible with system presently employed by the *Utility*.
 - Location for each attribute referenced by Northing and Easting coordinates generated from the GPS location in the Utility’s local State Plane Coordinate system.
 - Type of Attribute (Example: mainline valve, hydrant, tee, elbow, four-way cross, major service line, etc.).
 - Offset information if the attribute needs to have the location determined by an offset coordinate due to blocked signals from the GPS satellites.
 - Any other data required to be collected as part of the attribute data set as defined by the data Dictionary. This data dictionary will be assembled by the Project Team and the Utility.
- ◆ The accuracy of each GPS location will be sub-foot.
- ◆ GPS locations will need to have readings from at least four satellites in position and a reading from a local GPS beacon, or five satellites for the position to be considered accurate as a differentially corrected GPS location.
- ◆ “PDOP” readings need to be less than 5. “PDOP” readings greater than 5 will not be considered as accurate locations.
- ◆ A minimum of 30 readings for each position shall be taken.
- ◆ Position of the GPS satellites shall be given primary consideration. The position of the satellites shall be recorded as part of the data. If the satellites are low on the horizon (below 15 degrees), it is expected that the project team will wait until the position is better before attempting to gather the GPS position.
- ◆ The information collected will be differentially corrected using Pathfinder software database with the ability to export the information into a format acceptable to the Utility such as Microsoft Access, Microsoft Excel, .DXF file, or .SHP file for use in the Utility’s GIS system or CAD mapping program, and also included in the Polcon Pro Valve® database if a valve program is part of the work.
- ◆ All locations will be differentially corrected for accuracy. A stationary beacon or mobile beacon can be set up to allow differential correction. All data will be “Post-Processed”, so that a comparison can be made to a Local stationary GPS receiver. The locations of the stationary GPS stations will be obtained from the Internet. This will allow for a greater accuracy of the GPS locations.

Documentation of GPS Locations

- ◆ The Project Team will provide a location report for each asset located, included in a database or excel spreadsheet on a USB in a format agreed upon between the Utility and the Project Team.
- ◆ The GPS data collected shall include but is not limited to the following information:
 - *Identifying number consistent and compatible with system presently employed by the Utility.*
 - *Location referenced by coordinates using the Illinois State Plane Coordinate System.*
 - *Type of structure.*

- *Date and time data was collected*

GPS Valve Location

Once the valves have been located, the Project Team will perform the following for valves that do not already have GPS coordinates:

- ◆ **The Project Team will collect GPS Coordinates** of all valves assessed using the above “Scope of Work”
- ◆ The Project Team will work with the Utility to develop a “data dictionary” which will define the information to be collected for each attribute. The Data dictionary shall have the following but not limited to:
 - Date and time the information was gathered.
 - The unique identifying number for each attribute consistent and compatible with system presently employed by the *Utility*.
 - Location for each attribute referenced by Northing and Easting coordinates generated from the GPS location in the Utility’s local State Plane Coordinate system.
 - Type of Attribute (mainline valve).
 - Offset information if the attribute needs to have the location determined by an offset coordinate due to blocked signals from the GPS satellites.
 - Any other data required to be collected as part of the attribute data set as defined by the Data Dictionary. This Data Dictionary will be assembled by the Project Team and the Utility.
- ◆ **The accuracy of each GPS location** will be sub-foot.
- ◆ **GPS locations will need to have readings** from at least four satellites in position and a reading from a local GPS beacon, or five satellites for the position to be considered accurate as a differentially corrected GPS location.
- ◆ **Position of the GPS satellites shall be given primary consideration.** The position of the satellites shall be recorded as part of the data. If the satellites are low on the horizon, it is expected that the project team will wait until the position is better before attempting to gather the GPS position.
- ◆ **The information collected** will be compiled into the **Utility** preferred software database with the ability to export the information into a format acceptable to the Utility such as Microsoft Access, Microsoft Excel, .DXF file, or .SHP file for use in the Utility’s GIS system or CAD mapping program, and also included in the Polcon Pro Valve® database. We can export our data into any database that supports open data connectivity.
- ◆ **All locations will be differentially corrected** for accuracy in real-time. A data transformation will be done on the GPS points taken to ensure they are in the correct coordinate system requested by the utility. Our field teams utilize Trimble® R1 units for sub-foot accuracy and Trimble® R2 units for sub-foot accuracy. The level of accuracy taken will be based upon the above scope of work.



Documentation of GPS Valve Locations

M.E. Simpson will provide a location report for each documented valve located, and/or a database, in a cloud-based electronic format agreed upon between the Utility and M.E. Simpson Co., Inc.

- ◆ The GPS location data collected will be exported into a database for Utility use
- ◆ The GPS data collected shall include but is not limited to the following information:
 - a. *Identifying number consistent and compatible with system presently employed by the Utility.*

- b. *Location referenced by coordinates using the Village of Itasca **Coordinate System**.*
- c. *Location by street and cross-street names.*
- d. *Type of structure.*
- e. *Date and time data was collected.*

GPS Leak Location

Once the leaks have been located, the Project Team will perform the following for leaks that do not already have GPS coordinates:

- ◆ **The Project Team will collect GPS Coordinates** of all valves assessed using the above “Scope of Work”
- ◆ The Project Team will work with the Utility to develop a “data dictionary” which will define the information to be collected for each attribute. The Data dictionary shall have the following but not limited to:
 - Date and time the information was gathered.
 - The unique identifying number for each attribute consistent and compatible with system presently employed by the *Utility*.
 - Location for each attribute referenced by Northing and Easting coordinates generated from the GPS location in the Utility’s local State Plane Coordinate system.
 - Type of Attribute (mainline valve).
 - Offset information if the attribute needs to have the location determined by an offset coordinate due to blocked signals from the GPS satellites.
 - Any other data required to be collected as part of the attribute data set as defined by the Data Dictionary. This Data Dictionary will be assembled by the Project Team and the Utility.
- ◆ **The accuracy of each GPS** location will be sub-foot.
- ◆ **GPS locations will need to have readings** from at least four satellites in position and a reading from a local GPS beacon, or five satellites for the position to be considered accurate as a differentially corrected GPS location.
- ◆ **Position of the GPS satellites shall be given primary consideration**. The position of the satellites shall be recorded as part of the data. If the satellites are low on the horizon, it is expected that the project team will wait until the position is better before attempting to gather the GPS position.
- ◆ **The information collected** will be compiled into the **Utility** preferred software database with the ability to export the information into a format acceptable to the Utility such as Microsoft Access, Microsoft Excel, .DXF file, or .SHP file for use in the Utility’s GIS system or CAD mapping program, and also included in the Polcon Pro Valve® database. We can export our data into any database that supports open data connectivity.
- ◆ **All locations will be differentially corrected** for accuracy in real-time. A data transformation will be done on the GPS points taken to ensure they are in the correct coordinate system requested by the utility. Our field teams utilize Trimble® R1 units for sub-foot accuracy and Trimble® R2 units for sub-foot accuracy. The level of accuracy taken will be based upon the above scope of work.
- ◆ GPS leak location is considered an **optional** service and is not to be assumed as included in the line item for leak detection services found on the investment page of this proposal unless otherwise specified. If the Utility decides to include GPS collection, it will be listed under a separate line item on the investment page unless otherwise specified. If GPS collection is included in the line item for leak location services found on the investment page, only one (1) accurate GPS point will be included per leak in the Utility’s distribution system. Re-GPS’d leaks requested by the Utility that have already been GPS’d by M.E. Simpson Co., Inc. with a verified accuracy level will be an additional charge.

PROJECT SAFETY PLAN

M.E. Simpson Co., Inc.'s Safety Programs cover all aspects of the work performed by M.E. Simpson Co., Inc. We take great pride in our safety plan/policy/program and that is evident in our EMR scores over the last five years. The safety of our employees, the utilities employees and that of the general public is our #1 priority.

Our Safety Plan/Policy/Program, with all its parts, is 140 pages in length. In an effort to be more efficient and less wasteful we do not print copies of the safety program for RFPs. There is nothing secretive or proprietary contained within our plan/policy/program and we are happy to share its contents. If you would like a PDF copy of our plan/policy/program please contact Terrence Williams, Operations Manager, at 800.255.1521 and a copy of our program will be sent via email to you.

Below is an overview of our plan/policy/program:



Safety is a major part of any project. M.E. Simpson Co., Inc. always provides a safe work environment for its employees. **Our staff is trained in General Industry OSHA rules, Confined Space Entry & Self-Rescue, First Responder First Aid, CPR, and Traffic Control.**

While in the field on your project, M.E. Simpson Co., Inc., and its employees will follow all the necessary safety procedures to protect themselves, your staff, and the general public.

M.E. Simpson Co., Inc. uses Two-Man Teams for Safety and Quality Assurance.

The use of a "one-person" leak detection team is dangerous and impractical where water mains run under roadways. It would be a dangerous precedent to allow a "one-person" team to access main line hydrant located in the roadway, attempt to listen to the valve with headphones on, and at the same time try to control traffic flow at that person's location in the street.

Therefore M.E. Simpson Co., Inc. adheres to the following:

- ◆ The Project Manager and the Field Manager will be trained in accordance with OSHA Standard 1910 (General Industry) and be in possession of an OSHA 10 Hour or 30 Hour Card.
- ◆ Any listening points located in a "confined space" such as pit and vault installations that **require entry** will be treated in accordance with the safety rules regarding **Confined Space Entry, designated by the Utility, The Department of Labor and OSHA.**
- ◆ All personnel are **trained and certified** in Confined Space Entry & Self-Rescue.
- ◆ We will follow all safety rules regarding **First Responder First Aid & CPR, designated by the Utility, The Department of Labor and OSHA.**
- ◆ All personnel are **trained and certified** in First Responder First Aid & CPR.
- ◆ We will follow all **traffic safety rules, designated by the Utility, The Department of Labor, OSHA, and the State/Local Department of Transportation (per MUTCD).**
- ◆ All personnel are **trained and certified**, by the **AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA)** in Traffic Control and Safety.

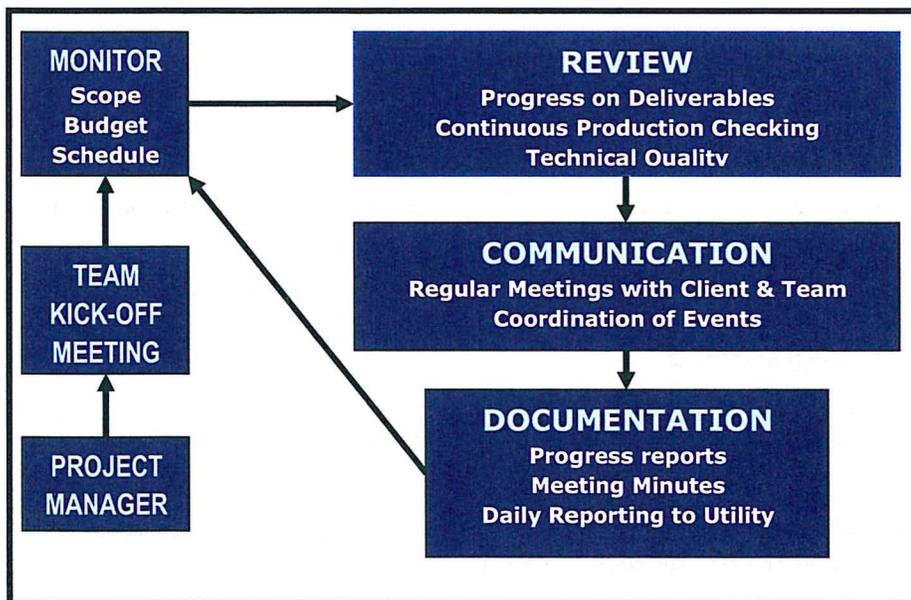
Current documentations of safety training and certifications can be provided for all project personnel for the Utility. These certifications are current and up to date (for 2026) for all project personnel.

PROJECT MANAGEMENT APPROACH

M.E. Simpson Co., Inc.'s project management approach is what leads to our proven track record to complete projects on time and within the budget established. Based on our past experience, we have developed project management practices that will ensure The Village of Itasca of effective communication and project tracking throughout this project. We will follow the Project Management Institute (PMI) standards, including the Project Management Body of Knowledge (PMBOK). These globally accepted standards will assure this project is planned, executed, monitored and controlled in accordance with world class procedures. M.E. Simpson Co., Inc. has seasoned and experienced managers, project leaders and technicians that will have continuous input, ensuring the results of the Fire Hydrant Assessment and Flow Testing Program for The Village of Itasca.

Our project management system establishes - the single project manager – who has the responsibility and authority to act on behalf of M.E. Simpson Co., Inc. This project manager will stay with the project from beginning to the successful completion. The project manager's specific responsibilities include:

- ◆ Coordination of all activities in this project
- ◆ Establishing key decisions and review milestones during this project
- ◆ Preparing an initial project development plan identifying the schedule of work tasks and key personnel to perform the work in the field to meet the milestones and objectives
- ◆ Coordinate communications and meetings with the Utility as needed or required to review technical concepts and alternatives, soliciting staff input and coordinating activities with the project team
- ◆ Prepare periodic reports as needed and meet with the Utility on a regular basis summarizing project scheduling, progress and maintaining the project within the budget stipulated
- ◆ Oversee the execution and development of the project deliverables



Project management remains an important activity during the course of the project and does not stop with the Project Manager. For the Fire Hydrant Assessment and Flow Testing program, each member of the project team is dedicated to providing the best Fire Hydrant Assessment and Flow Testing Program that can be attained using the state-of-the-art technology and equipment, field experience and engineering knowledge.

Our team will be made up of experienced water professionals that are highly skilled and trained professionals in water distribution system hydraulics, fire hydrant assessment/flow testing. These technicians will also have knowledge and experience with water loss control programs such as water meter evaluation/testing (residential, commercial, wholesale, and production meters), leak surveys and pinpointing, as well as asset management programs such as valve assessment and exercising. It is this combination of experience and knowledge that has helped shape our approach to fire hydrant assessment and flow testing in distribution systems because the team members have the capacity to make on the spot decisions regarding any fine tuning of the program.



For the Fire Hydrant Assessment and Flow Testing Program, each Project Team member assigned to specific tasks is dedicated to providing the best Fire Hydrant Assessment and Flow Testing Program knowledge that can be attained. Each team member is highly experienced in the implementation of fire hydrant testing as well as other asset management and water loss control programs. It is our team’s combination of field experience and engineering knowledge that has shape our approach to asset management programs in distribution systems. The individual team members have the capacity to make sound decisions regarding any fine tuning of the hydrant testing program. They will maintain constant communication with The Village of Itasca and the Project Manager regarding the fire hydrant testing program.

MESCO is sure that the selection of our team to perform this work will provide The Village of Itasca with exceptional experience, sound decision making, and a level of service providing the following advantages:

- ◆ A professional team with a specialized expertise in fire hydrant evaluation, assessment, testing, documentation and asset management.
- ◆ One of the finest and highly experienced technical and engineering team with the capacity to provide the highest quality work for The Village of Itasca.
- ◆ A project approach that incorporates interim reporting and continuous input opportunities by The Village of Itasca.
- ◆ Innovative proven analysis techniques developed from the completion of several similar projects that sought the same scope and results as this project.

Project Quality Assurance/Quality Control

Quality is of the utmost importance to MESCO Team – not merely because of The Village of Itasca and other client’s requirements, but because it is vital to our continued success and viability. Quality management and services bring to all of us the rewards of jobs well done, satisfied Utility staff, and successful projects.

Our QA/QC program is built around several key elements of each participating firm’s mission and values which consist of:

- ◆ Maintaining a reputation for the highest quality performance
- ◆ Client satisfaction
- ◆ Continuous process improvement
- ◆ Open communication with the field staff and the Utility
- ◆ Team Work

The QA/QC plan for this project is very simple. No work will leave MESCO Team until it has been verified that all the requirements and objectives of the project as well as the requirements of the project QA/QC managers have been met.

During the course of the project, the Project Manager and/or the QA/QC manager will meet with The Village of Itasca to ensure that the work product is technically correct, but also meets the needs and expectations of The Village of Itasca. Every step will be well documented for progress reports.

MESCO Team’s professional services are grounded in sound principles that meet the tests of time from past successes of hundreds of fire hydrant maintenance projects will satisfy the quality requirements of the Scope of Service. Each member of the project team has a thorough understanding of the project objectives. Every member of the team will apply sound methodology and principles, and are expected to produce quality, accurate and complete documents. The QA/QC procedure has been developed and implemented based on tried and proven methodologies. The prevention of poor-quality service is based on four sound principles:

- ◆ Quality management of the project by using experienced personnel committed to excellence.
- ◆ Conformance to requirements by being knowledgeable of all local conditions in the field and keeping abreast of new cutting-edge hydrant technology and asset management remediation methods.
- ◆ Prevention of rework and errors by using teamwork, cross checking the hydrant program procedures every step of the way, and having staff knowledgeable in all aspects of the hydrant assessment and flow testing program.
- ◆ Quality is built in - not added on. The project management and staff have shown that a quality service is produced when the project tasks are properly sequenced and carried out to the final termination of the program using the built-in system of checks and balances.

SCHEDULE OF WORK

Kick Off Meeting and Commencement of work: M.E. Simpson Co., Inc. proposes a Kick Off Meeting for the Water System Assessment program to be held on **August 1, 2026**. Field work will begin the same day or agreed upon by the Utility and M.E. Simpson Co., Inc.

Fieldwork to be completed and documented: Field work will be started as agreed upon by the Utility and M.E. Simpson Co., Inc. Assume one field team (2 persons each), are in the field for completion of field work for the Water System Assessment Program. Work on the hydrant, valve, leak detection, and GPS tasks for this project will occur simultaneously.

Daily Work Hours: Normal “on site” daily work hours will be 7:00 AM to 4:30 PM. Any work that needs to be performed outside the normal work hours will be discussed with the Water Superintendent at least 24 hours in advance.

Daily Reporting: The Field staff will meet with assigned Utility staff daily or as needed and determined by the assigned Utility Manager. Hydrant issues that need immediate attention will be documented and submitted immediately for the Utility’s attention. Minor issues will be reported daily for scheduling of repair.

Periodic Reports: Weekly summary reports will be available 10 work days after field work has been validated for the program for each week, for the Hydrant Testing work. These reports will have all the hydrant assessment and testing information compiled during the course of the project for the week.

Final Reports: Final summary reports will be available 30 work days after field work has been completed for the program. These reports will have all the hydrant assessment and testing data compiled during the course of the project.

SECTION 3: EXPERIENCE OF KEY PERSONNEL

Our team brings the necessary experience for a project of this magnitude, as well as the personal attributes needed to serve the Village of Itasca with distinction. We offer our clients the highest quality technical and professional services, using state-of-the-art technologies and highly skilled and trained professionals. The M.E. Simpson Co., Inc. team members selected to serve the Village of Itasca bring significant experience and a proven track record of delivering timely, cost-effective and sound hydrant program solutions.

They share a passionate commitment to client service and attention to detail required for a successful project. The Organizational Chart at right illustrates the Project Team for the Utility’s Fire Hydrant Flow Testing and Maintenance. One of the two Project Leaders listed will lead the Project Team in the field. **Two-Man Project Teams will be used at all times during the course of the project for reasons of safety and quality assurance.**

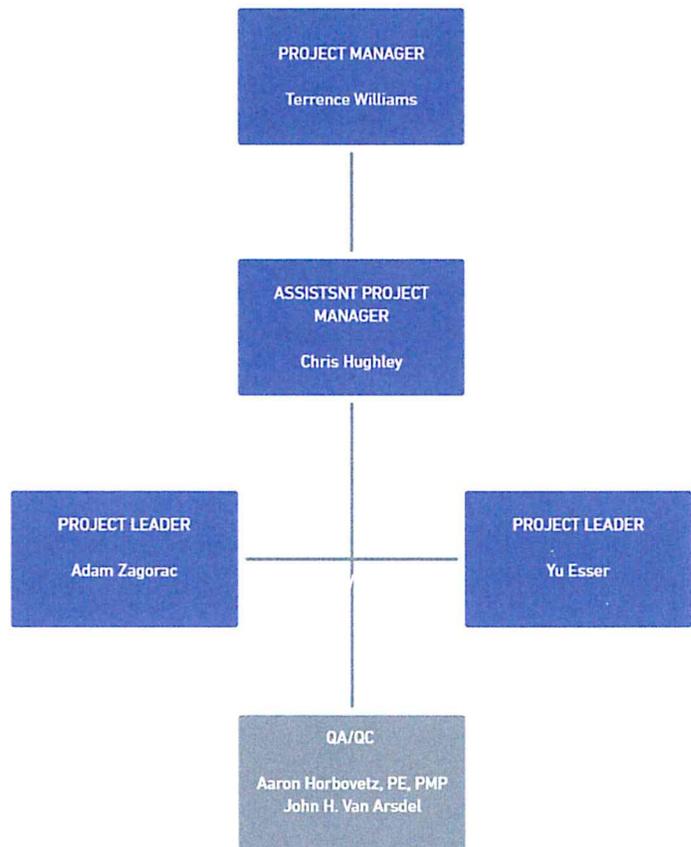
Project Manager: Terrence Williams

Terrence Williams has been with M.E. Simpson Company since September 2014. Terrence previously worked in retail management. Terrence is a graduate of Purdue University with a Bachelor of Science in Accounting. Terrence also completed his MBA at Keller Graduate School of Management.

Terrence is currently involved in the preparation of client reports, data quality control, and drafting new paperless database programs. He also has experience in valve location, exercising and mapping, and the use of the state-of-the-art leak detection equipment. Terrence also has experience in fire hydrant and main capacity flow testing, and the operation of our Polcon® Flow Testing equipment.

Professional Certifications:

- ◆ 30 Hour OSHA Certified for General Industry
- ◆ American Red Cross First Aid and CPR with AED Certified
- ◆ American Traffic Safety Services Association Flagging Certified
- ◆ Extensive traffic control training
- ◆ Extensive confined space training



Assistant Project Manager: Chris Hughley

Chris Hughley has been with the Company since November 2006. He previously worked in the retail industry before becoming a project leader with M.E. Simpson Company. Chris has traveled all over the country and world completing various projects including jobs in California, New Jersey, Minnesota, Arizona, Georgia and Turkey.

Chris has attended numerous classes and lectures on the operation and maintenance of water meters. He has experience in the maintenance and installation of water meters; in valve location, exercising and mapping; and in the use of state-of-the-art leak detection equipment. Chris is experienced in water meter, fire hydrant and water main capacity flow testing, and the operation of our Polcon® Flow Testing equipment.

Professional Certifications:

- ◆ 10 Hour OSHA Certified for General Industry
- ◆ American Red Cross First Aid and CPR with AED Certified
- ◆ American Traffic Safety Services Association Flagging Certified
- ◆ Extensive traffic control training
- ◆ Extensive confined space training
- ◆ Licensed Water Operator - Maryland

Project Leader: Adam Zagorac

Adam Zagorac has been with the Company since December of 2007. Adam has attended numerous classes and lectures related to the operation, maintenance, and installation of water meters, and completed classes in plumbing.

Adam has experience in the following: maintenance and installation of water meters; valve location, exercising and mapping; fire hydrant and main capacity flow testing; and the use of state-of-the-art leak detection equipment. He is also experienced in the use of all of our Polcon® Flow Testing equipment.

Professional Certifications:

- ◆ 10 Hour OSHA Certified for General Industry
- ◆ American Red Cross First Aid and CPR with AED Certified
- ◆ American Traffic Safety Services Association Flagging Certified
- ◆ Extensive traffic control training
- ◆ Extensive confined space training

Project Leader: Yu Esser

Yu Esser has been with the Company since 2022. Prior to working for M.E. Simpson Company, Inc., Yu worked as a field technician conducting inspections and maintenance for sewers and manholes. He was trained on the NASCO Level II inspection process and has over 5 years of experience with collection systems.

Yu has additional experience in the maintenance and installation of water meters; valve location, exercising and mapping; fire hydrant and main capacity flow testing; and the use of state-of-the-art leak detection equipment.

Professional Certifications:

- ◆ 10 Hour OSHA Certified for General Industry
- ◆ American Red Cross First Aid and CPR with AED Certified
- ◆ American Traffic Safety Services Association Flagging Certified
- ◆ Extensive traffic control training
- ◆ Extensive confined space training

QA/QC: Aaron M. Horbovetz, P.E., PMP

Aaron Horbovetz has been with the Company since September of 1999. In 2004-2005 he was on hiatus to pursue his engineering degree. He returned to M.E. Simpson Co., Inc. in 2006. He earned his degree in Mechanical Engineering from Purdue University, and is a licensed Professional Engineer in the State of Indiana, since 2016. Aaron is also a certified Project Management Professional (PMP®), since 2013. He is a regular presenter at AWWA conferences, since 2012, both at section meetings and at the ACE conferences, and participates in multiple AWWA committees at both the local and national levels.

Aaron has attended numerous classes and lectures related to the operation, maintenance and installation of water meters, and completed classes in plumbing. He has experience in the following: maintenance and installation of water meters; valve location, exercising and mapping, fire hydrant and main capacity flow testing, and the use of state-of-the-art leak detection equipment. Aaron also manages the company's hydraulics services division, including all Pitot testing, pump curve analysis, and C-Factor testing.

Mr. Horbovetz is responsible for the Engineering Division of M.E. Simpson Co., Inc. overseeing many of the more complex programs associated with hydraulic studies and Master Metering services.

Professional Certifications:

- ◆ Licensed Professional Engineer, Indiana
- ◆ Certified Project Management Professional (PMP)
 - Member of Project Management's Institute Calumet Chapter
- ◆ 10 Hour OSHA Certified for General Industry
- ◆ American Red Cross First Aid and CPR with AED Certified
- ◆ American Traffic Safety Services Association Flagging Certified
- ◆ Extensive traffic control training
- ◆ Extensive confined space training

QA/QC: John H. Van Arsdel

John H. Van Arsdel has been with the Company since May 1989. He graduated from Valparaiso University with a B.A. in Geography with an emphasis in Locational Evaluation and Research Design. Additional classes include water operator's classes and seminars on Water Filtration and Distribution, Vulnerability Assessment Class for the Sandia Labs RAM-W method and the RAM-W "modified" for small to medium systems (*licensed for the Sandia Labs RAM-W Method, and the RAM-W "modified" for small to medium water systems*), along with classes related to the operation and maintenance of water meters, and system hydraulics specifically related to the Polcon® Flow Testing equipment.

John has over 37 years of experience directing projects for water utilities including water audits, loss prevention, leak detection programs, meter evaluation and maintenance, flow testing using the Polcon® Flow Testing method (large flow meter assessments, C-factors, pump curves, zone flow measurements), mainline valve assessments (location, exercising and mapping programs), and fire hydrant and main capacity flow testing programs. He has presented numerous classes for continuing education credits for water operators for over 24 years to several local and state water works organizations on Water Loss Reduction including Water Audits, Leak Detection, Meter Testing and Flow Testing. He has presented water loss papers at the AWWA ACE in 2007, 2008, 2009, 2012, 2015, 2016, 2018, and the former DSS (now the WIC), 2010, 2011, 2012, 2014, the NAWL 2015, 2017, and 2019. In 2003, he conducted classes on Vulnerability Assessments and Emergency Response Planning for water utilities and conducted several VA and ERP projects. He served from 2010 to 2014 as Chair of the AWWA Water Loss Control Committee. For the Illinois Section in 2014-2015 he set up the Train the Trainer classes for Water Auditing and trained several sets of trainers and was the lead trainer for the Indiana Section AWWA Water Auditing and

Validation training for 2019-20 that is being handled by the Indiana Finance Authority. John is a Certified Water Audit Level 1 Validator for California and Indiana.

Professional Certifications:

- ◆ 30 Hour OSHA Certified for General Industry
- ◆ American Red Cross First Aid and CPR with AED Certified
- ◆ American Traffic Safety Services Association Flagging Certified
- ◆ Certified Water Audit Validator

SECTION 4: CORPORATE PROFILE

M.E. Simpson Co., Inc. was founded in 1979 by Marvin E. Simpson. We are based out of Valparaiso, Indiana, near Chicago, Illinois. Our firm has become the industry leader in developing and providing water loss assessment and distribution system asset management programs and services, aiding our clients in maximizing their peak performance for their water distribution systems. We offer the highest quality Technical and Professional Services, using state-of-the art technologies and highly skilled and trained professionals. Our staff has developed a host of high-tech programs that will ensure that your Utility will be proactive in dealing with your water distribution systems. “Crumbling infrastructure, inaccurate records, conservation, sustainability, water quality, water loss, economic conditions, revenue shortfalls, being green, having enough water”; these are all statements and buzz words in today’s society. Currently in the water industry, these words are our reality, thus making them our responsibility.

We have maximized distribution system performance and optimized distribution system data, records, and mapping for all our clients. To date, we have provided Water Loss Control programs that have included over 85,000 Large Water Meters serviced, 125,000 miles of Leak Detection services and numerous water audit programs. Our Asset Management services have documented over 500,000 valves located and exercised. Our Fire Hydrant Flow testing program has recorded 95,000 fire hydrants inspected, flow tested, and water main capacity information developed.

Fire Hydrant Assessment and Main Capacity Assessment Services History and Understanding

M.E. Simpson Co., Inc. developed its Fire Hydrant Main Capacity Assessment program in 1995 and expanded it to include Fire Hydrant Maintenance. Over time, we have improved the program so now it is a fundamental asset management and condition assessment program for our clients.

Our crews have been deployed to many locations throughout the United States including Minnesota and overseas. Our crews have the unique ability to be able to respond to individual Utility requests because of the cross training they have received performing all the services M.E. Simpson Co. Inc. provides. We are proud of the work we have performed using the latest technology and meeting the needs of "our customer" the Water Works Industry. We have played an important role in educating utilities about the need for and efficiency of annual maintenance and testing programs.

M.E. Simpson Co., Inc. (MESCO) has been providing Fire Hydrant Flow Testing/Water Main Capacity Testing programs for over thirty years.

MESCO has been producing successful Fire Hydrant Assessment and Flow Testing programs in the Chicago metropolitan area, as well as the greater Midwest since 1995 and understands the complexity of implementing long range water distribution system asset management programs. MESCO believes that through this work we have established a proven history of delivery, responsiveness, ingenuity, and environmental stewardship. We share the same mission as The Village of Itasca and are encouraged by the leadership role that The Village of Itasca is assuming towards a holistic approach to address water system challenges.

Leak Detection History and Understanding

In 1987, M.E. Simpson Co., Inc. introduced its Water Transmission and Distribution Leak Survey services. Since then, we have consistently improved and expanded the program, establishing it as a central initiative for water loss control among our clients.

Over the years, our Water Transmission and Distribution Leak Survey services have been widely adopted by municipalities throughout the Chicago Metro Area, the Midwest, and beyond. Our skilled crews have been deployed to various locations across the United States, including Georgia and California, as well as overseas, to assist utilities in addressing transmission and distribution system leakage challenges. Thanks to their comprehensive cross-training in all the services provided by M.E. Simpson Co., Inc., our crews possess the unique ability to respond to specific utility requests.

Equipped with state-of-the-art technology and staffed by capable project managers and personnel, we are fully prepared to undertake your leak survey and meet all your utility requirements. We take great pride in our work, which consistently leverages the latest advancements in technology while prioritizing the needs of our customers.

MESCO has been providing leak detection programs for nearly forty years.

Valve Assessment History and Understanding

Since its inception in 1986, M.E. Simpson Co., Inc. has continually refined its Valve Assessment program, adapting to the evolving needs of utilities. Originally established as a fundamental asset management tool, the program has grown into a cornerstone of efficient water distribution system maintenance. A notable milestone in our journey was the development of Polcon Pro-Valve®, a pioneering Microsoft Access database that revolutionized valve data management. This database has since transitioned into a cutting-edge cloud-based mapping and asset management system, offering clients seamless integration with their GIS systems and streamlining operational workflows.

Over the years, our services have expanded beyond the confines of the Chicago Metro Area, reaching municipalities and utilities across the Midwest and beyond. From small-scale systems with just a hundred valves to large-scale networks boasting several thousand, our Valve Assessment Programs have left an indelible mark on the water works industry. Our experienced crews, trained in diverse environments and equipped with the latest technologies, have not only served clients domestically but have also lent their expertise to international projects, demonstrating our commitment to excellence on a global scale.

MESCO has been providing valve assessment programs for over forty years.

Having evaluated more than 500,000 valves since 1986, our firm brings unparalleled depth of knowledge and proficiency to the table. Our commitment to excellence is further underscored by our engagement with industry standards and best practices, as evidenced by our active participation in AWWA committees and adherence to Water Audit methodology. By aligning with the objectives of the Village of Itasca, we stand ready to support their vision for a robust and sustainable water distribution system.

Company Qualifications

M.E. Simpson Co., Inc. is a professional services company that specializes in water distribution asset management and water loss control services. Due to our niche company placement in the water industry, we do not qualify for the title of “contractor”, therefore we cannot be licensed as such. M.E. Simpson Co., Inc. has been performing valve exercising programs for 45 years. We have complete confidence that our knowledge and experience exceed the expectations of the The Village of Itasca Water System Asset Management Program.

SECTION 5: REFERENCES

Fire Hydrant Assessment and Flow Testing Projects

[Village of Downers Grove, Illinois](#)

M.E. Simpson Co., Inc. has performed a Fire Hydrant Flow Testing Program for the Village of Downers Grove for several years as well as a Fire Hydrant Maintenance program. Most recently 608 hydrants were located and tested. Of these hydrants, 596 were found to be in good working condition, 4 were found to be usable but with minor problems and 8 were found to be unusable. The total number of problem hydrants has decreased greatly with annual fire hydrant flow testing and inspections.

David Moody
Water Manager
Village of Downers Grove
5101 Walnut Avenue
Downers Grove, IL 60515-4074
(630) 434-5495
dmoody@downers.us

Dates of service: 2009 - Current

[Village of Lansing, IL](#)

M.E. Simpson Co., Inc. has been working with the Village of Lansing, IL for many years. The hydrant program most recently completed was a success, reporting the hydrants which are in good working condition, usable, or unusable. These flow testing programs are very important to the Village, thanks to this program the Village can now correct the problems with those hydrants found to be unusable so that, should the need ever arise, they can be used in an emergency.

Mr. Jim Nickias
Superintendent
Village of Lansing
3300 171st St.
Lansing, IL 60438
(708) 895-7190
jnickias@gmail.com

Dates of Service: 1997 - Current

[Village of Hazel Crest, IL](#)

M.E. Simpson Co., Inc. has performed Fire Hydrant Maintenance for the Village of Hazel Crest for several years. Most recently 225 hydrants were located and classified. The total number of problem hydrants has decreased greatly with annual fire hydrant flow testing and inspections.

Dante Sawyer
Director of Public Works
Village of Hazel Crest
3000 W 170th Place
Hazel Crest, Illinois 60429
(708) 335-9600 x202
dsawyer@villageofhazelcrest.com

Dates of Service: 2015 - Current

Leak Survey Projects

[City of Joliet, Illinois \(2008 – Current\)](#)

M.E. Simpson Co., Inc. has been performing water loss assessments for the City of Joliet since 2008, including leak detection surveys and “on call” emergency leak detection services as a way to reduce water loss in the distribution system. The program for 2024 surveyed approximately 700 miles of water main and located 171 leaks. These leaks were estimated to be costing the utility in excess of \$508.03 per day or \$185,431.68 annually. The survey paid for itself in water loss recovery in 13 months based on the Variable Cost (production cost) of water. This project cost a total of \$189,000.00 and was completed in 109 days.

Ms. Allison Swisher, P.E.
Director of Public Utilities
City of Joliet
921 East Washington Street, Joliet, Illinois 60433
815.724.4230
aswisher@jolietcity.org

[Village of Downers Grove, IL \(2011 – Current\)](#)

M.E. Simpson Co., Inc. conducts a Leak Survey on approximately 233 miles per year as a way for the Village to reduce water losses occurring in the distribution system. The completed Leak Survey Program in 2023 resulted in the location of 13 leaks totaling 364,320 gallons of water per day. The leaks were estimated to be costing the utility in excess of \$449,782.20 annually using the cost of water sold per 1,000 gallons. The survey paid for itself within three months. This project cost a total of \$39,600.00 and was completed in 49 days.

Mr. David Moody
Director of Public Utilities
Village of Downers Grove
5101 Walnut Avenue, Downers Grove, IL 60515-4074
630-434-5462
dmoody@downers.us

[Village of Shorewood, IL \(2014 – Current\)](#)

M.E. Simpson Co., Inc. conducted its most recent Leak Survey in Shorewood on approximately 99 miles in 2023 as a way for the Village to reduce water losses occurring in the distribution system. This Leak Survey Program resulted in the location of 23 leaks totaling 59,040 gallons of water per day. Using a sale price of \$4.22 per thousand gallons these leaks were estimated to be costing the utility in excess of \$139.77 per day or \$51,014.74 annually. The 2023 leak survey paid for itself within 5 months. This project cost a total of \$21,285.00 and was completed in 25 days.

Mr. Noriel Noriega
Superintendent of Public Works
Village of Shorewood
1 Towne Center Boulevard, Shorewood, Illinois 60404
815.725.2150
nnoriega@vil.shorewood.il.us

Valve Assessment Projects

[Village of Schaumburg, Illinois \(2016 - Current\)](#)

M.E. Simpson Co., Inc. has provided annual mainline valve assessments for the Village of Schaumburg, Illinois. The assessments include locating each valve and operating each valve through the full cycle of turns, three times. 25 % of the system (approximately 1,000 valves) are operated each year to insure full operability of the system valves. GPS coordinates are taken for each location and all data is put into the valve database for the utility.

Mr. Brian Wagner
Superintendent of Utilities
Village of Schaumburg
(847) 895-7100
bwagner@schaumburg.com

[Village of Downers Grove, Illinois \(2008 - Current\)](#)

We have been providing valve assessment services for the Village of Downers Grove since 2008. M.E. Simpson Co., Inc. was contracted to perform valve exercising, locating, and documenting services for the city. Each year $\frac{1}{2}$ of the valves are assessed to ensure full operability of the system valves as part of a regular maintenance program.

Mr. David Moody
Asst. Director of Public Works
Village of Downers Grove
(630) 434-5462
dmoody@downers.us

[Village of Tinley Park, Illinois \(2015 - Current\)](#)

M.E. Simpson Co., Inc. has been providing valve assessment services for the Village of Tinley Park for several years. This is a distribution system that has over 3000 valves. The system is divided into areas of 1125 valves each year to be assessed. The work has helped the utility maintain the distribution system so that it can meet the demands and challenges of the area growth.

Joe Fitzpatrick
Water Superintendent
Village of Tinley Park
(708) 444-5500
jfitzpatrick@tinleypark.org

SECTION 6: COST PROPOSAL

A commitment to improving and maximizing the Village of Itasca water distribution system for future generations.

M.E. Simpson Co., Inc. is pleased to present our proposal for a Water System Asset Management Program for the Village of Itasca. M.E. Simpson Co., Inc. will perform our leak detection services on approximately 68 miles of watermain within the Village of Itasca water distribution system, perform hydrant maintenance and valve assessments on 1/3 of the Village’s hydrants and valves per year, while performing GPS location on system assets. The survey and asset assessments will be completed with all necessary equipment furnished by M.E. Simpson Co., Inc. as described within this document. The project will also include complete reporting of all issues found, with a final comprehensive report.

2026 Water System Asset Management Services

Fire Hydrant Assessment and Flow Tests 343 hydrants @ \$61.00/hydrant	\$20,923.00
Valve Inspection and Exercising 234 valves @ \$63.00/valve	\$14,724.00
Water Distribution System Leak Survey Program Fee 68 miles @ \$285/mile	\$19,380.00
GPS Location Services	<i>Included</i>
Total	\$55,027.00

2027 Water System Asset Management Services

Fire Hydrant Assessment and Flow Tests 397 hydrants @ \$61.00/hydrant	\$24,217.00
Valve Inspection and Exercising 234 valves @ \$63.00/valve	\$14,724.00
Water Distribution System Leak Survey Program Fee 68 miles @ \$285/mile	\$19,380.00
GPS Location Services	<i>Included</i>
Total	\$58,321.00

2028 Water System Asset Management Services

Fire Hydrant Assessment and Flow Tests 343 hydrants @ \$61.00/hydrant	\$20,923.00
Valve Inspection and Exercising 235 valves @ \$63.00/valve	\$14,805.00
Water Distribution System Leak Survey Program Fee 68 miles @ \$285/mile	\$19,380.00
GPS Location Services	<i>Included</i>
Total	\$55,108.00

We thank you for this opportunity to acquaint you with our Water System Assessment services and offer this proposal. If you have further inquiries or you wish to discuss our service in more detail, do not hesitate to call us.

**VILLAGE OF ITASCA
CONTRACTOR'S CERTIFICATION**

Pursuant to P.A. 85-1295 (111. Rev. Stat. ch. 38 paragraph 33 E-1 eq seq.). The undersigned contractor hereby certifies to the Village of Itasca that the contractor is not barred from bidding on the contract as a result of a violation of either Section 33 E-3 or 33 E-4 of that Act.

Date: 1/15/2026

M.E. Simpson Co., Inc.

(Contractor)

3406 Enterprise Ave.

Valparaiso, IN 46383

(Mailing Address)

800-255-1521

(Phone Number)

Cara Lance-Emerick, CFO

(Primary Contact/Title)

**VILLAGE OF ITASCA
FAIR EMPLOYMENT PRACTICES
AFFIDAVIT OF COMPLIANCE**

NOTE: THIS AFFIDAVIT MUST BE EXECUTED AND SUBMITTED WITH THE SIGNED BID FORM. NO BIDS WILL BE ACCEPTED BY THE BOARD OF TRUSTEES OF THE VILLAGE OF ITASCA UNLESS SAID AFFIDAVIT IS SUBMITTED CONCURRENTLY WITH THE BID.

Cara Lance-Emerick

(Name)

being first duly sworn, deposes and says that they are the Chief Financial Officer

(Title or Office)

of M.E. Simpson Co., Inc. and that, they have authority to make the following

(Name of Company)

affidavit that they have knowledge of the Village of Itasca ordinance relating to Fair Employment Practices and knows and understands the contents thereof; that they certify hereby that it is the policy of

M.E. Simpson Co., Inc. to recruit, hire, train, upgrade, promote and

(Name of Company)

discipline its employees without regard to race, creed, color, religion, age, sex or physical or mental handicap; and that the company has and enforces policies which prohibit sexual harassment in the workplace.

[Redacted Signature]

(Signature)

SUBSCRIBED and sworn to before me this 15th day of January 20 26

[Redacted Notary Signature]

(Notary Public)

TIM CRISP
Notary Public
Porter County - State of Indiana
Commission Number NP0764428
My Commission Expires Jul 2, 2033

**VILLAGE OF ITASCA
ANTI-COLLUSION AFFIDAVIT OF COMPLIANCE**

_____ Cara Lance-Emerick _____, being first duly sworn,

(Bidder's Name)

deposes and says:

That she is _____ CFO _____ of _____ M.E. Simpson Co., Inc. _____

(Partner, Officer, Owner, etc.)

(Company name)

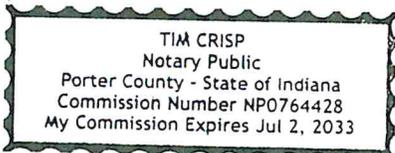
(Contractor)

The party making the foregoing proposal or bid, that such bid is genuine and not collusive, or a sham; that said bidder has not colluded, conspired, connived or agreed, directly or indirectly, with any bidder or person, to put in a sham bid or to refrain from bidding, and has not in any manner, directly or indirectly sought by agreement or collusion, or communication or conference with any person; to fix the bid price element of said bid, or of that of any other bidder, or to secure any advantages against any other bidder or any person interested in the proposed contract.

(Signature of Bidder if Bidder is an Individual)
(Signature of Partner if Bidder is a Partnership)
(Signature of Officer if Bidder is a Corporation)

The above statements must be subscribed and sworn to before a notary public.

Subscribed and sworn to before me this 15th day of January, 20 26



By. _____

**VILLAGE OF ITASCA
INDEMNITY HOLD HARMLESS PROVISION**

To the fullest extent permitted by law, the Contractor hereby agrees to defend, indemnify and hold harmless the Village of Itasca, its officials, agents and employees against all injuries, deaths, loss, damages, claims, patent claims, suits, liabilities, judgments, cost and expenses, which may accrue against the Village of Itasca, its officials, agents, and employees, arising in whole or in part from the performance of this work by the Contractor, its employees, or subcontractors, except to the extent arising out of the acts or omissions of the Village of Itasca, its agents or employees. The Contractor shall, at its own expense, appear, defend and pay all charges of attorneys and all cost and other expenses arising therefore or incurred in connections therewith.

Contractor expressly understands and agrees that any performance bond or insurance policies required by this contract, or otherwise provided by the Contractor, shall in no way limit the responsibility to indemnify, keep, and save harmless and defend the Village of Itasca, its officials, agents and employees as herein provided.

The Contractor further agrees that to the extent that money is due the Contractor by virtue of this contract as shall be considered necessary in the judgment of the Village of Itasca amounts may be retained by the Village of Itasca to protect itself against said loss until such claims, suits, or judgments shall have been settled or discharged and/or evidence to that effect shall have been furnished to the satisfaction of the Village of Itasca.

CONTRACTOR: M.E. Simpson Co., Inc.

By: _____

(Signature)

ATTEST: _____

(Signature)

CORPORATE SEAL



**VILLAGE OF ITASCA
CONTRACTOR'S DRUG-FREE WORKPLACE CERTIFICATION**

Pursuant to 111. Rev. Stat. ch. 127, par. 132.311 et seq. ("Drug Free Workplace Act"), the undersigned contractor hereby certifies to the Village of Itasca that it will provide a drug-free workplace by

- A. Publishing a statement:
 - a. Notifying employees that the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance, including cannabis, is prohibited in the contractor's workplace.
 - b. Specifying the actions that will be taken against employees for violations of such prohibition.
 - c. Notifying the employee that, as a condition of employment on such contract or grant, the employee will abide by the terms of the statement; and
- B. Notify the Village of Itasca of any criminal drug statute conviction for a violation occurring in the workplace no later than 5 days after such conviction.
 - a. Establishing a drug-free awareness program to inform employees about:
 - i. the dangers of drug abuse in the workplace;
 - ii. the contractor's policy of maintaining a drug-free workplace;
 - iii. any available drug counseling, rehabilitation, and employee assistance program; and
 - iv. the penalties that may be imposed upon employees for drug violations.
 - b. Making it a requirement to give a copy of the statement required by subsection (A-3) to each employee engaged in the performance of the contract and to post the statement in a prominent place in the workplace.
 - c. Notifying the Village of Itasca within 10 days after receiving notice under paragraph B from an employee or otherwise receiving actual notice of such conviction.
 - d. Imposing a sanction on, or requiring the satisfactory participation in a drug abuse assistance or rehabilitation program by any employee who is so convicted, as required by 111. Rev. Stat. ch. 127 par. 132.315.
 - e. Assisting employees in selecting a course of action in the event drug counseling treatment and rehabilitation is required and indicating that a trained referral team is in place.
 - f. Making a good faith effort to continue to maintain a drug-free workplace through implementation of this Section.

Failure to abide by this certification shall subject the contractor to the penalties provided in 111. Rev. Stat. ch. 127, par. 132.316.



Cara Lance-Emerick, CFO, M.E. Simpson Co., Inc.
(Contractor)

ATTEST:  _____

DATE: 1/15/2026 _____

CONTRACT BETWEEN THE VILLAGE OF ITASCA
AND THE CONTRACTOR

This contract is made and entered into this _____ day of _____, _____, by and between the Village of Itasca, DuPage County, Illinois (the “Village”) and M.E. Simpson Co., Inc. (hereinafter “Contractor”). For and in consideration of the Contract Sum, and other goods and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, it is agreed by and between the parties as follows:

1. CONTRACT DOCUMENTS

The “Contract Documents” shall consist of the following documents which are either attached hereto as exhibits or are incorporated into this Contract by this reference, with the same force and effects as if set forth at length herein:

- A. This Contract, including all Exhibits and attachments.
- B. Project Plans and Technical Specifications, including General Conditions and any Special Conditions;
- C. Bidder’s Proposal;
- D. Bidding Form; and
- E. Bidding Addenda Nos. 1 (if any)
- F. General Terms and Conditions

2. SCOPE OF WORK

Within the time for completion set forth in the Contract Documents and for the stated Contract Price, the Contractor shall perform and provide all necessary labor, services, supervision, materials, tools, equipment, apparatus, facilities supplies, permits, utilities and transportation necessary to complete the Work in strict conformity with the contract Documents.

3. CONTRACT SUM

In consideration of the Contractor's full, complete, timely, faithful performance of the Work required by the Contract Documents, the Village shall pay Contractor in accordance with the unit prices payable as set forth in the Contract Documents ("Contract Price")

4. COMPLETION DATE

THE Contract Work shall be completed on or before _____, 20____.

IN WITNESS WHEREOF, the parties have caused this contract to be executed the date and year first above written.

[Contractor]

By: _____

An Authorized Signatory

Date: 1/15/2026

VILLAGE OF ITASCA

By: _____

Mayor

Date: _____



AMENDMENT NUMBER 1 TO THE BID DOCUMENTS

Amendment Date: January 15, 2026

RFQ # 2026-02

Water System Assessment Program

A. This Amendment shall be considered part of the bid documents for the above-mentioned project as though it had been issued at the same time and shall be incorporated integrally therewith. Where provisions of the following supplementary data differ from those of the original bid documents, this Amendment shall govern and take precedence. **BIDDERS MUST SIGN THE AMENDMENT AND SUBMIT IT WITH THEIR BIDS.**

B. Bidders are hereby notified that they shall make any necessary adjustments in their estimates as a result of this Amendment. It will be construed that each bidder's proposal is submitted with full knowledge of all modifications and supplemental data specified herein.

Except as described below, the original bid document remains unchanged. The bid documents are modified and/or clarified, as follows:

Special Provisions Addendum

Fire Hydrant Inspection and Operation Procedure

- Check the fire hydrants appearance. Condition of paint and proper color-coding should be assessed.
- Does the fire hydrant need raised? Is it accessible and facing the correct direction? ~~Repair or schedule a repair, as necessary.~~
- Remove one nozzle/pumper cap and, using a listening device, check for main valve leakage. ~~Repair or schedule a repair, as necessary.~~
- Replace the nozzle/pumper cap, loose enough for air to escape. Open fire hydrant a few turns, allowing air to vent from loose cap. Tighten cap.
- Open fire hydrant fully, checking for ease of operation. Repeatedly exercise the operating stem, as needed, to remove buildup and promote better operation. If lubrication ~~or stem replacement~~ is required, perform or schedule the necessary work.
- With the fire hydrant fully pressurized, check for leakage around the flanges, nozzles/pumpers, seals, and operating nut. Report to Village for repairs and maintenance.
- Partially close the fire hydrant to open the drain outlets, and flush for 10 to 15 seconds.
- Completely close the fire hydrant, and then open it a ¼ to ½ to relieve the pressure on the thrust bearing or packing.
- Remove a nozzle/pumper cap, and attach a diffuser. Flush the fire hydrant to remove foreign material.
- Close the fire hydrant and remove the diffuser. Place your hand over the nozzle/pumper to check for suction as the water drains out of the barrel. For no-drain fire hydrants, the water must be pumped from the barrel.
- Check for fire hydrant leakage with a listening device.
- Remove all nozzle/pumper caps and inspect the threads. Clean and apply approved lubricant to caps and nozzles/pumpers.
- Inspect cap chains for binding and ease of movement. ~~Unbind or replace, as necessary.~~
- Replace the caps and tighten them to the Utilities specification.
- Check operating nut lubrication and maintain as needed.

- Inspect breakaway device for damage.
- Collect or verify GPS location of fire hydrant.
- Notify the Village immediately of inoperable fire hydrants needing major repair.
- Due to the potential condition or deterioration of fire hydrants that may or may not have been operated in the past, the service provider will not be held liable for any assets that fail or break, or the consequences of such failures during the operating procedures due to pre-existing conditions. Any assets that fail or break during operation will be repaired or replaced by the Village.
- The professional services firm shall notify the Utilities Director of their intent to operate a certain group of water fire hydrants. Permission shall be obtained to perform the work, at least twenty-four (24) hours or one (1) working day in advance of the intended start of that work.



Village of Itasca

Bid Tabulation



Bid Number: 2026-02

Project Name: Water System Assessment Program

Bid Openng Date: January 23, 2026

ME Simpson	Pts	Score
Project Approach	20	17
Experience (Personnel)	20	16
Experience (Firm)	20	18
Overall evaluation of Firms Ability to complete the project	15	14
Pricing	15	15
Client List and References	10	8
Total Score		88

GHA	Pts	Score
Project Approach	20	16
Experience (Personnel)	20	16
Experience (Firm)	20	16
Overall evaluation of Firms Ability to complete the project	15	12
Pricing	15	11
Client List and References	10	5
Total Score		76