

RFP-RH-25-031
 Rochester Hills Pipeline Condition Assessment
 Due: Thursday, May 22, 2025 at 3:00 PM

NAME	RIC-MAN Construction, Inc.	Superior Excavating, Inc.
ADDRESS	41500 Mound Road Sterling Heights, MI 48314	2420 Auburn Road Auburn Hills, MI 48326-3104
Firm Established	1965	1966
Years in Business	59	58
Type of Organization	Corporation	Corporation
Provide a brief history and organization of the company, including office location and name of city contact for the project.	50 yrs of experience in underground construction including tunneling and underground projects nationwide. They are an emergency repair contractor for the Great Lakes Water Authority (GLWA), with expertise in pipe inspection, repair, and technical solutions across various materials and sizes. The main office location is located in Sterling Heights. A general company contact, Gino D'Agostini is provided.	SEI was established by Frank E. Baiardi, and currently remains family owned and operated. Sei has experience in scheduled and emergency repairs and/or replacement of municipal water, sewer, and storm systems. SEI is diversified in public and private underground work and above ground construction. They have knowledge of new construction sanitary sewer, storm sewer drainage systems, water transmission systems, footings, demolition and grading. the main office is in Auburn Hills.
Provide a narrative of your company's prior work experience and qualifications pertaining to the Scope of Work and provide a list of projects with similar scopes. This should include other pipeline condition assessment projects within the past five (5) years.	RIC-MAN Construction, Inc. (RCI) states its proficiency extends to all pipe materials, including PCCP. They have capability in detailed pipe inspections and using various methods to diagnose issues and provide technical recommendations. RCI also uses innovative repair techniques, such as slip lining and Carbon Fiber repair. Prior work experience includes: Addressing a critical failure in a 120-inch water transmission main, involving the repair of damaged PCCP. Included the removal of 48 lineal feet of PCCP and the installation of welded joint steel pipe. A project involving the inspection and repair of 36-inch PCCP along 24 Mile Road. Included conducting an in-pipe inspection of the 36-inch PCCP and evaluating renewal and replacement strategies. A selected renewal scenario utilized Carbon Fiber Reinforced Polymer (CFRP) for pipe segments.	SEI performs all installation of water services, storm sewer, sanitary sewer, sanitary sewer services, excavation and site work, sewer cleaning and televising (CCTV Inspection), pipe lining or well point, deep well dewatering, sewer and water main taps. Methods of installation include open cut, directional drill, jack and bore, and pipe bursting.
Attachment C Comparable Projects/Reference	3 comparable project references were attached: all were various projects from GLWA	3 comparable project references were attached: City of Warren, City of Sterling Heights, Plymouth Twp.
Provide a list of the project team members that you propose to use and identify each team member's responsibilities. Include a brief description of the experience and qualifications of the proposed staff member(s) who will be performing the services. List their role on the team and office location.	RCI Team (Sterling Heights): Leaders in heavy civil construction specializing in pipe inspection, repair (slip lining, CIPP), and technical solutions for pipes ranging from 2" to 120", including PCCP. Key personnel include: Gino D'Agostini, Vice President: Extensive experience in heavy civil pipe construction, inspection, and technical solutions. Ryan Stalmack, Director of Operations Management: Since 2001, manages complex mechanical and heavy civil projects, including underground utilities and diverse pipe materials. Geoff Stieler, Project Manager: Over 30 years of project leadership in civil underground municipal infrastructure, focusing on design, planning, and execution. Damien Pung, General Superintendent: Since 1998, coordinates and supervises production operations for sewer, water, tunnel, and road projects, ensuring strategic alignment and quality. SGH Team (Waltham, MA): Experts in structural engineering mechanics and infrastructure engineering, providing oversight for condition assessment and failure risk analysis. Dr. Rasko Ojdrovic, Ph.D., P.E., Senior Principal: Over 30 years of experience; AWWA Committee Chair for PCCP design (C301, C304) and Vice Chair for CFRP renewal (C305). Engineer of record for over 100 PCCP assessment and repair projects. Piyush Garg, PE, Senior Consulting Engineer: Over 9 years at SGH, specializing in buried infrastructure condition assessment and structural evaluations. Designed CFRP repairs for over 50 pipelines and inspected over 50 miles. OINSIGHT Team: Specializes in non-destructive condition assessment technologies for large diameter pressurized pipes and pipe deterioration evaluation. Edward A. Padewski, PE, Chief Operating Officer (NJ): Over 30 years of experience in water/wastewater transmission, with expertise in pipe deterioration, evaluation, and repair, including over 500 condition assessment projects for 1,000 miles of pipelines. Xiangle Kong, MEng, Chief Technology Officer (Toronto): Over 25 years of experience designing and implementing non-destructive condition assessment technologies using	Superior Team: Frank Baiardi - President - 30 yrs experience - Frank will provide general project oversight. Scott Prell - Project Manager - 33 Years experience - Scott will create and maintain the project schedule, order materials, work with subcontractor and process contract documents. Michael Fritche - Superintendent - 44 years experience - Mike will oversee all field aspects of this project and provide assistance to the site foreman. Scott Houck - Site Foreman - 31 years experience - Scott will manage the site crew, supervise each site and maintain a safe worksite. VCS Engineering-NDT Division Team: Keith Holster & Benson Armitage: Both have over 25 years experience testing all types of infrastructure. Roles in designing, maintaining, improving IE/PV equipment, including updates to proprietary software used to analyze the velocity and frequency data. NDT Division intends to mobilize 1 Sr Technician to the project site. William Horne, PE: NDT Division's vice president since 2017 will be managing the project. He has over 30 years of experience managing all types of infrastructure inspection and construction projects. NDT will develop a pre job hazard analysis and site safety plan and will participate in daily safety meetings on site.
Attachment D Subcontractor Information	Subcontractors will be utilized: Simpson Gumpertz & Heger Inc. and Insight Water Technologies for Field condition assessment, failure margin analysis, lab testing on samples 10-15%; Hutch Paving for Asphalt paving services 2%. See attachment D for specifics.	Subcontractors that will be utilized: VCS Engineering, Inc. - NDT Division for Pipeline condition testing services and reporting 20% See attachment D for specifics.

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Provide a brief history and organization of the company, including office location and name of city contact for the project.	<p>SGH: Founded in 1956, SGH is an engineering firm with experience in hundreds of Prestressed Concrete Cylinder Pipe (PCCP) projects.</p> <p>Insight Water Technologies (IWT): IWT owns and operates an electromagnetic technology for external PCCP inspection. The firm specializes in water main condition assessment, executing projects across North America and globally. Its team possesses extensive experience in PCCP asset planning, inspection, and assessment, contributing to industry guidelines and best practices.</p>	<p>VCS Engineering - NDT Division: A non-destructive testing company specializing in water distribution system assessment. They design and build proprietary energy generating equipment, customized sensor arrays, and signal interpretation software. With over 25 years of experience, the company utilizes various ground penetrating radar equipment (low and high-frequency) to test all types and sizes of water distribution infrastructure. The division's office is located in Sterling, MA, and William Horne serves as Vice President. Originally founded as NDT Corporation in 1994, it was acquired by VCS Engineering Inc. in 2016 and rebranded in 2024.</p>
Provide a narrative of your company's prior work experience and qualifications pertaining to the Scope of Work and provide a list of projects with similar scopes. This should include other pipeline condition assessment projects within the past five (5) years.	<p>SGH's Prior Experience: experience in the full lifecycle of Prestressed Concrete Cylinder Pipe (PCCP). Standards Development: Contributions to AWWA Standard C304 (PCCP Design) and Manual M9 (Thrust Restraint). Assessment & Analysis: Patented failure risk analysis, wire continuity testing, finite element modeling of failed PCCP, and field inspections. Rehabilitation Design: Design of post-tensioning and Carbon Fiber Reinforced Polymer (CFRP) repairs.</p> <p>Representative Projects: Great Lakes Water Authority (GLWA), MI (120-inch and 36-inch WTM): Performed structural evaluation, laboratory testing of failed PCCP, developed risk curves, and prioritized repairs. For the 36-inch main, identified deterioration mechanisms, evaluated mortar coating properties, and designed internal CFRP repairs. Ak-Chin Indian Reservation, Pinal County, AZ (78-inch and 84-inch PCCP): Conducted condition assessment, failure risk analysis, and repair prioritization.</p> <p>Middlesex Water Company, NJ: Provided internal visual and sounding inspections, identified leak causes, and designed CFRP repairs with field support. Insight's Prior Experience: Experience with similar scopes of work for various PCCP asset owners, specializing in out-of-service tools and associated health and safety protocols. Representative Projects: Great Lakes Water Authority (GLWA), 24 Mile Road WTM, MI: Performed electromagnetic calibrations on PCCP sections (120, 48, and 36-inch) and inspected 11.5 miles of a 36-inch diameter PCCP main to detect and quantify broken wire wrap zones. This work was conducted in collaboration with HDR. Richland Creek Transmission Main: Calibrated electromagnetic inspection technology on 72-inch PCCP and inspected a 90-inch diameter PCCP main, identifying and quantifying broken wire wrap damage. Allen-McCulloch Pipeline: Conducted a near-field electromagnetic inspection on a 66-inch PCCP to detect and quantify broken wire wraps, serving as a pilot demonstration of the Insight electromagnetic cart.</p>	<p>VCS-NDT Division pipe condition assessment experience over the past 5 years: Johnson, Mirmiran & Thompson Inc: Condition assessment IE/PV testing of 78" PCCP, Christina River force main Wilmington DE. Multiple test pits exposed 25 ft. of PCCP sections, data collection 9 to 3 o'clock. Hazen and Sawyer: Condition assessment and IE/PV and GPR testing of 30", 36", 43", 54" PCCP and RCP, multiple pipe systems in Eastern Virginia. Multiple test pits exposed 25-30 ft. of PCCP/RCP sections, data collection from 9-3 o'clock positions. Burns and Macdonald: Condition assessment and IE/PV testing of 60" PCCP, multiple pipe systems in Skokie-des Plaines, Illinois for the Northwest Water Commission Lake Michigan Water Supply. Multiple test pits exposed 20 ft. of PCCP sections, data collection from 9-3 o'clock positions. CDM Smith: Condition assessment and IE/PV testing of 48" PCCP, multiple pipe systems in New Bedford, MA, 24-WW-2 Coggeshall Sewer Separation upgrade phase 3. Multiple test pits exposed 15 ft. of PCCP sections, data collection from 9-3 o'clock positions. Finch Paper Company LLC: Condition assessment and IE/PV testing of 48" RCP, long term monitoring of effluent pipe system mandated by NYS Department of Conservation for permitted operation of multiple pipe systems in Glens Falls NY. Exposed 20 ft. of pipe 9-3 o'clock and designed riser sleeves that were backfilled and allowed for testing 12 o'clock every 5 years for service life.</p>
Subcontractor Comparable Projects/Referenc	See attached.	See attached.

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<p>Provide a detailed description of the services, means and methods by which the work identified in the Scope of Services will be performed. Include your organizations understanding of the services to be provided, methodology and technical approach to be used in conducting each phase of the pipeline condition assessment.</p>	<p>Insight Water Technologies (IWT) - External Inspection & Diagnostics: Over 25 years of experience in assessing large diameter Prestressed Concrete Cylinder Pipe (PCCP) water mains. Near-field electromagnetic testing, maneuverable inspection cart that projects a magnetic field to the prestressing wire and measures the response. This proprietary technology, co-authored by their CTO Xiangjie Kong in the AWWA Research Foundation guide, is proven to detect and quantify broken wire wrap damage. Process: The external inspection is performed on the exposed pipe, scanning from the 4 to 8 o'clock positions. The electromagnetic cart identifies anomalous areas indicating broken wire wraps and potential steel cylinder defects. Integrated Assessment: This is combined with visual inspections to document mortar coating deterioration (cracking, discoloration, joint defects) using measurements, photographs, and notes. Visual inspection is crucial for detecting issues like overloading, settlement, or shear failures that electromagnetic inspection might miss. Data Analysis & Transparency: Insight's solution aims to quantify broken wire wraps and visually inspect for other failure modes. Raw electromagnetic data and graphical representations of anomalous regions are shared with stakeholders to ensure transparency and enhance understanding of pipe condition. SGH - Internal Assessment, Failure Risk Analysis & Laboratory Testing: SGH performs external visual and sounding inspections of the exposed PCCP surface, documenting mortar coating condition, including cracks, hollow areas, and spalls. Detailed Investigation: Depending on pipeline pressure and observed conditions, SGH may request mortar coating removal to expose prestressing wires and the steel cylinder for underlying steel element evaluation. They will also collect samples of mortar coating (if spalled/allowed) or broken prestressing wires for laboratory analysis. Failure Risk Analysis: SGH conducts failure risk analyses to evaluate the impact of broken prestressing wires on pipe performance, determine the margin to failure using calibrated models, and identify high-risk pipes. This includes creating failure risk curves, calculating effective broken wires based on NDT results and progression, determining risk for maximum working/transient pressure, prioritizing repairs, and evaluating repair strategies. Laboratory Analysis: Collected samples undergo in-house laboratory testing at SGH's Waltham, MA facility. Mortar Samples: Petrographic analysis (ASTM C856), chloride content testing (ASTM C1152), and unit weight, absorption, and permeable void space testing (ASTM C642). Prestressing Wire Samples: Uniaxial tensile and torsional tests (ASTM A648).</p>	<p>NDT Division employs non-destructive (IE/PV) measurements to evaluate concrete pipe performance and condition. Process: Stress Wave Measurements: Utilizing stress wave measurements in the sonic/ultrasonic frequency range. Pulse Velocity (ASTM C597): Measures transmission velocities of compressional and shear waves in the longitudinal direction to assess concrete strength and cracking severity. These velocities also evaluate for cracking, delaminations, and potential prestressing loss. Impact Echo (ASTM C1383): Analyzes resonant frequency data and reflected compressional wave phases in the thickness direction. This determines pipe core concrete thickness, assesses for hydrogen sulfide thinning, identifies micro-cracking, and internal delaminations. Reduced or absent full thickness resonant frequencies indicate weak, micro-cracked, or delaminated concrete. Visual Inspection: Conducted concurrently with sonic/ultrasonic testing to map cracking, assess the pipe's exterior, and locate anomalies. Data Analysis & Reporting: Frequency measurements are used to assess pipe wall thinning due to deterioration. Collected velocity and frequency data are analyzed and presented to show pipe wall thickness, with threshold values and clock positions used for PCCP section assessment.</p> <p>Project Execution Plan: NDT Division proposes a three-task approach: Task 1: Mobilization and demobilization to/from the project site in Sterling, MA. Task 2: Field data collection at 8 test pit locations (excavated and maintained by Superior). Estimated onsite data collection time is 3-4 hours per test pit, with preliminary data analysis conducted during standby time. NDT Division will begin work once Superior confirms a safe excavation. Work is expected to be continuous, including Saturdays, assuming a single mobilization. Task 3: Comprehensive data analysis, presentation of results, and report development. Productivity is estimated at one test pit per day.</p>
Attachment F Value/Cost Efforts Schedule of		