



**AGENDA ITEM #13C**

**AGENDA ITEM EXECUTIVE SUMMARY  
Village Board Meeting  
8/28/2023**

**Item Title:** Sanitary Sewer Force Main Assessment

**Staff Contact:** Karen Young, Director of Public Works

OLD BUSINESS

**VILLAGE BOARD ACTION:**

**Adopt a Resolution approving and authorizing the Mayor to execute an agreement for the Sanitary Sewer Force Main Assessment between the Village of Roselle and RJN Group in the amount of \$224,800.00.**

**Executive Summary:**

Throughout the community there are nine sanitary sewer force mains that convey sewage pumped from our lift stations to a downstream gravity sewer. These force mains vary in age, size, material, length, and number of customers served, which are summarized in the table below:

Force Main	Age (years)	Diameter (in)	Material	Length
Kennedy	60	10	Ductile Iron	6,500
Den Force	33	8	Ductile Iron	1,755
Fall Circle	52	6	Cast Iron	1,280
Roselle Center	36	6	PVC	5,810
Lincoln	37	4	PVC	615
Chesapeake	4	4	PVC	450
Lake Park	7	6	PVC	1,950
Sycamore	7	6	PVC	700
Spring St.	11	8	PVC	480

Due to the nature of these systems Village staff does not have the ability to televise the mains to determine the existing condition; therefore, staff recommends hiring RJN Group to complete a force main assessment. The scope of work includes an internal inspection

and external corrosion assessment, which will provide data regarding the condition of the main, detection of leaks, identification of deposits/debris/blockages, as well as recommendations for maintenance, repairs and/or replacement. This information would allow staff to determine if rehabilitation is an option to avoid costly full replacement as currently identified in the Village's long-range capital improvement plan.

The force mains proposed to be included in this assessment are Kennedy, Den, Fall Circle and Roselle Center. These locations have been selected due to the following:

- **Age** – Locations are either approaching the end of the typical useful life cycle or are at a point where repairs can be made to extend the useful life with strategic repairs that are less costly than full replacement.
- **Condition** – There have been several costly emergency repairs to the Kennedy Force Main in recent years.
- **Location in the System** – Several of these force mains are located in areas that would create costly emergency repairs, significant intergovernmental cooperation and impacts to the motoring public.
  - **Den Force Main** - Travels in a casing pipe under I-390.
  - **Kennedy Force Main** - Travels under the roadway of Plum Grove Road.
  - **Roselle Center Force Main** – Travels under the railroad tracks.
- **Pipe Material** – Corrosive soils can have negative deterioration impacts to both ductile iron and cast-iron pipes. Determining the existing condition of these pipes and soil conditions will assist in developing potential protection measures.
- **Potential Development Impacts** – There are several properties that have potential for redevelopment that will flow to both the Den and Kennedy force main locations, so determining the condition of the pipes, maintenance needs as well as the capacity will assist with working through any future development projects.
- **Number of Customers Served** – With the exception of the Roselle Center Force Main the other locations serve a larger number of customers.
- **Repair and/or Replacement Costs** – The cost for the full replacement would be significant. Staff looks to evaluate the existing conditions to determine if lower cost options such as repairs, lining or corrosion protection are feasible.

The remaining force main locations have been evaluated and have been determined to be unnecessary to include in this assessment.

The proposal (see attached) from RJN Group for Alternative B for the four force mains (Kennedy, Den, Fall Circle and Roselle Center) includes a total cost of \$224,800. The inspection and field work would be completed in 2023 with the final report being submitted in early 2024. This would allow staff to review the existing conditions and evaluate the proposed options in advance of the 2025 budget preparations and potential development submittals. Staff recommends awarding the contract for this work to RJN Group.

**Implications:**

**Is this item budgeted?** Yes, there is \$300,000 budgeted in 51918280-72050 for Capital Improvements in the Sanitary Collection System for sewer and manhole lining that would be allocated for this project. The remaining funding would be used for the sewer and/or manhole lining work in 2023.

**Estimated cost:** \$224,800

**Any other implications to be considered?** No

**Strategic Priority:**

Reliable Infrastructure

**Attachments:**

Resolution

Proposal RJN

Contract RJN

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**THE VILLAGE OF ROSELLE**  
DUPAGE AND COOK COUNTIES, ILLINOIS

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**RESOLUTION**  
NUMBER 2023-\_\_\_\_\_

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**A RESOLUTION  
APPROVING AND AUTHORIZING  
THE EXECUTION OF AN AGREEMENT  
BY AND BETWEEN  
THE VILLAGE OF ROSELLE AND  
RJN GROUP, INC.**

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DAVID PILESKI, Mayor  
AMANDA HAUSMAN, Village Clerk

TOM DELLA PENNA  
WAYNE D. DOMKE  
DENA FORSYTHE  
CHERYL LENISA  
TOM PIORKOWSKI  
LEE TREJO

Village Board

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Published in pamphlet form by authority of the  
Mayor and the Board of Trustees of the Village of Roselle  
on this the 28th day of August 2023

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RESOLUTION NO. \_\_\_\_\_

**A RESOLUTION  
APPROVING AND AUTHORIZING  
THE EXECUTION OF AN AGREEMENT  
BY AND BETWEEN  
THE VILLAGE OF ROSELLE AND  
RJN GROUP, INC.**

**WHEREAS**, the Village of Roselle is a municipal corporation organized pursuant to the laws of the State of Illinois possessing certain powers and perform certain functions pertaining to its local government and affairs as provided for by and through the Illinois Constitution of 1970, Illinois Municipal Code and Illinois Statute;

**WHEREAS**, the Village of Roselle (hereinafter referred to as “Village”) upon approval of the corporate authorities may enter into an agreement with another party pursuant to Illinois Statute;

**WHEREAS**, RJN Group, Inc. (hereinafter referred to as the “Engineer”) is a full-service engineering firm that provides a full array of engineering services including but not limited to design engineering services relating to sanitary sewer force main evaluation;

**WHEREAS**, the Village staff has previously engaged Engineer on other projects and has been extremely satisfied with the level of professionalism and work product provided by Engineer;

**WHEREAS**, the Village desires to engage Engineer for to provide sanitary sewer force main evaluation services relative to the Village’s 2023 Sanitary Sewer Force Main Evaluation (hereinafter referred to as the “Project”); and

**WHEREAS**, the Corporate Authorities of the Village of Roselle have determined that it is in the best interests of the health, welfare and safety of the residents of the Village of Roselle to approve the agreement with RJN Group, Inc. for the purposes referenced herein.

**NOW, THEREFORE, BE IT RESOLVED**, in open meeting assembled, by the Mayor and Board of Trustees of the Village of Roselle, DuPage and Cook Counties, Illinois, as follows:

**Section One – Recitals**

The Corporate Authorities hereby find that all of the recitals hereinbefore stated as contained in the preamble to the resolution are full, true and correct and do hereby, by reference, incorporate and make them part of this resolution as legislative findings.

**Section Two – Approval of Agreement**

The Village hereby approves the Agreement (hereinafter referred to as the “Agreement”) substantially in the form attached hereto and made a part hereof as Exhibit A.

### **Section Three – Authorization and Direction**

The Mayor is hereby authorized to execute, Agreement, substantially in the form of such agreement attached hereto as Exhibit A, with such changes therein as shall be approved by the Village Attorney and the officials of the Village executing the same, their execution thereof to constitute exclusive evidence of their approval to any and all changes or revisions therein from and after the execution and delivery of such agreements.

### **Section Four - Other Actions Authorized**

The officers, employees and/or agents of the Village shall take all actions necessary or reasonably required to carry out and give effect to the intent of this resolution and otherwise to consummate the transactions contemplated herein and shall take all actions necessary in conformity therewith including, without limitation, the execution and delivery of all documents required to be delivered in connection with the transaction contemplated herein.

### **Section Five - Acts of Village Officials**

That all past, present and future acts and doings of the officials of the Village that are in conformity with the purpose and intent of this resolution are hereby, in all respects, ratified, approved, authorized and confirmed.

### **Section Six - Authorization of Expenditures**

The Corporate Authorities hereby authorize, allocate and direct the expenditure of all costs related to the execution of the agreements, additionally, the Village is authorized and directed to allocate and spend all necessary funds to fulfill the requirements of the agreements and of this resolution.

### **Section Seven – Effective Date**

This resolution shall be in full force and effect from and after its passage, approval and publication as provided by law.

### **Section Eight - Publication**

This resolution shall be published in book or pamphlet form as provided by the Illinois Municipal Code.

### **Section Nine – Conflict Clause**

All resolutions, parts of resolutions or board actions in conflict herewith are hereby repealed to the extent of such conflict.

### **Section Ten – Saving Clause**

If any section, paragraph, clause or provision of this resolution is declared by a court of law to be invalid or unconstitutional, the invalidity or unconstitutionality thereof shall not affect the validity of any other provisions of this resolution which are hereby declared to be separable.

**Section Eleven – Recording**

This resolution shall be entered into the minutes and upon the journals of the Board of Trustees of the Village of Roselle.

**DECIDED** pursuant to a Roll Call Vote:

	YES	NO	ABSENT	ABSTAIN
Tom Della Penna				
Wayne D. Domke				
Dena Forsythe				
Cheryl Lenisa				
Tom Piorkowski				
Lee Trejo				
David Pileski (if necessary)				
<b>TOTAL</b>				

**PASSED AND APPROVED** by the Village of Roselle Board of Trustees on the 28th day of August 2023:

\_\_\_\_\_  
David Pileski  
Mayor

ATTEST:

\_\_\_\_\_  
Amanda Hausman  
Village Clerk

STATE OF ILLINOIS )  
 ) SS  
 COUNTIES OF DUPAGE AND COOK )

**CLERK’S CERTIFICATION**

I, Amanda Hausman hereby certify that I am the duly elected and qualified Village Clerk in and for the Village of Roselle, DuPage and Cook Counties, Illinois; that I am the keeper of the files, records, and seal of said Village, and that the following is a true and correct copy of Resolution No. \_\_\_\_\_

**A RESOLUTION  
 APPROVING AND AUTHORIZING  
 THE EXECUTION OF AN AGREEMENT BY AND BETWEEN  
 THE VILLAGE OF ROSELLE AND  
 RJN GROUP, INC.**

adopted and approved by the Mayor and the Board of Trustees at an official meeting held on August 28, 2023 and that the vote on the motion for adoption was as follows:

	YES	NO	ABSENT	ABSTAIN
Tom Della Penna				
Wayne D. Domke				
Dena Forsythe				
Cheryl Lenisa				
Tom Piorkowski				
Lee Trejo				
David Pileski (if necessary)				
TOTAL				

I do further certify that the deliberations of the Board on the adoption of said ordinance were conducted openly, that the vote on the adoption of said ordinance was taken openly, that said meeting was called and held at a specified time and place convenient to the public, that notice of said meeting was duly given to all of the news media requesting such notice, that said meeting was called and held in strict compliance with the provisions of the Open Meetings Act of the State of Illinois, as amended, and with the provisions of the Village Code of the Village of Roselle, as amended, and that the Board has complied with all of the provisions of said Act and said Code and with all of the procedural rules of the Board.

I further state that this Certification is issued under my hand and the seal of the Village of Roselle as required in the Illinois Compiled Statues 65 ILCS 5/1-2-4.

**IN WITNESS WHEREOF**, I have hereunto set my hand and caused to be affixed the Corporate Seal of said Village of Roselle, DuPage and Cook Counties, Illinois on the date set forth herein.

\_\_\_\_\_  
 Amanda Hausman, Village Clerk

(SEAL)



Exhibit A

Agreement

DRAFT

## CONTRACT FOR PROFESSIONAL SERVICES

THIS CONTRACT is made and entered into by and between the Village of Roselle, a body politic and corporate (hereinafter the "Village"), and RJN Group (hereinafter "Consultant").

### WITNESSETH:

WHEREAS, the Village of Roselle (hereinafter "Village") has determined that it is reasonable, necessary and desirable to obtain the services of a firm to provide force main assessment services in the Village; and

WHEREAS, RJN Group (hereinafter "Consultant") agrees to provide the necessary professional services upon the terms set forth herein.

NOW, THEREFORE, in consideration of the mutual promises, terms and conditions set forth herein, the parties agree as follows:

1. Scope of Services. Village hereby retains Consultant, and Consultant hereby agrees to act as the independent contractor for the Village performing those services, which are described in the Scope of Services Exhibit (hereinafter the "Work"), attached hereto and incorporated herein as if fully set forth as Exhibit A.

2. Standard of Care. Consultant represents and warrants that it shall perform its services in a manner consistent with the level of care and skill customarily exercised by other professional consultants under similar circumstances at the time the services are performed. Where this Agreement is inconsistent with any provision of Exhibit A this Agreement shall control.

3. Compensation. The Village shall pay the Consultant for time and material per the Consultant's Proposal. Consultant shall submit itemized invoices containing sufficient detail of the Work performed to enable the Village to properly evaluate the payout request and the Village shall pay Consultant in accordance with the Local Government Prompt Payment Act.

4. Additional Services. Additional services that are not part of the Work may be assigned subject to prior written approval or direction of the Village. Payment for additional services shall be as mutually agreed upon by the parties before the commencement of any additional services.

Any additional services shall be subject to the terms and conditions of this Agreement.

5. Hold Harmless and Indemnification. Consultant shall defend, hold harmless and indemnify the Village, its officers, agents, employees and elected officials, from any loss, damage, demand, liability, cause of action, fine, judgment or settlement, together with all costs and expenses related thereto (including reasonable expert witness and attorney fees), that may be incurred as a result of bodily injury, sickness, death or property damage or as a result of any other claim or suit of any nature whatsoever arising from or in any manner connected with, directly or indirectly, the negligent acts, errors, omissions, or intentional willful acts or omissions of Consultant in performing the services provided for in this Contract. The obligation on the part of the Consultant to defend, hold harmless and indemnify the Village shall survive the expiration or termination of this contract.

6. Insurance. Unless otherwise authorized in writing by the Village Administrator, Consultant shall purchase and maintain during the term of this Contract insurance coverage which will satisfactorily insure Consultant and, where appropriate, the Village against claims and liabilities which may arise out of the services referred to in this Contract. Such insurance shall be issued by companies authorized to do business in the State of Illinois and approved by the Village. The insurance coverages shall include, but not necessarily be limited to, the following:

(A) Worker's Compensation insurance with limits as required by the applicable statutes of the State of Illinois. The Employer's Liability coverage under the Worker's Compensation policy shall have limits of not less than \$500,000 each accident/injury; \$500,000 each employee/disease; \$500,000 policy limit. This shall only be required if Consultant hires employees in addition to himself to provide services to the Village.

(B) Commercial general liability insurance protecting Consultant against any and all public liability claims which may arise in the course of performance of this Contract. The limits of liability shall be not less than \$1,000,000 each occurrence bodily injury/property damage combined single

limit and \$2,000,000 aggregate bodily injury/property damage combined single limit. The policy of commercial liability insurance shall include contractual liability coverage and an endorsement naming the Village as an additional insured.

(C) Commercial automobile liability insurance covering Consultant's owned, non-owned and leased vehicles which protects Consultant against automobile liability claims whether on or off of the Village's premises with coverage limits of not less than \$1,000,000 per accident bodily injury/property damage combined single limit. The policy of commercial liability insurance shall include contractual liability coverage and an endorsement naming the Village as an additional insured.

(D) Umbrella or Excess liability insurance with limits of not less than \$1,000,000 per occurrence bodily injury/property damage combined single limit. The Umbrella or Excess coverage shall apply in excess of the limits stated in subparagraphs (B) and (C) above, and shall either include an endorsement naming the Village as an additional insured or provide "following form" coverage for the primary insurance.

(E) Professional liability insurance with limits of not less than \$1,000,000 per claim covering Consultant against all sums which Consultant may become obligated to pay on account of any liability arising out of the performance of the professional services for the Village under this Contract when caused by any negligent act, error or omission of Consultant or of any person employed by Consultant or any others for whose actions Consultant is legally liable. The professional liability insurance shall remain in force for a period of not less than four years after the completion of the services to be performed by Consultant under this Contract.

7. Evidence of Insurance. Consultant shall furnish the Village with a certificate of insurance and, upon the Village's request, copies of all insurance policies and endorsements thereto evidencing the coverages stated above. The insurance certificates and policies shall provide that no cancellation or modification of the policies shall occur without at least 30 days' written notice to the Village, with 10 day except for non-payment of premium. Consultant shall not commence

any services under this Contract until evidence of the required insurance is received and approved by the Village. The Village shall be named on the policies required by Section 5 subsections (B) and (C) as additional insured. No policy shall require contribution by the Village's insurance.

8. Compliance with Laws. Consultant shall comply with all applicable federal, state and local laws, rules and regulations, and with all Village ordinances, rules and regulations now in force or hereafter enacted in the performance of the services required under this Contract.

9. Control of Services. The Village shall not be responsible for or have control over the means, methods, techniques or procedures with respect to the performance by Consultant of the services in this Contract.

10. Termination of Contract. If Consultant fails to perform according to the terms set forth herein, the Village may terminate this Contract upon seven days' written notice to Consultant. This Agreement may be terminated by either the Village or the Consultant without cause upon fourteen days written notice. In the event of a termination, the Village shall pay Consultant for the services performed and expenses incurred as of the effective date of termination, less any sums attributable, directly or indirectly, to Consultant's breach. The written notice required under this paragraph shall be either (a) served personally during regular business hours; (b) served by facsimile during regular business hours; (c) served by certified or registered mail, return receipt requested, addressed to the address listed at the end of this contract with postage prepaid and deposited in the United States mail or by e-mail sent to the Consultant's Project Manager. Notice served personally, by facsimile transmission or e-mail shall be effective upon receipt, and notice served by mail shall be effective upon receipt as verified by the United States Postal Service. Consultant shall provide the Village with its Project Manager's e-mail address upon its execution of this Agreement.

11. Ownership of Documents & Release of Information. All original records, reports, tests, studies, documents, data or other information, regardless of whether in written, electronic or other format, prepared or generated by Consultant in connection with performing the services provided

for herein shall be regarded as the property of the Village and shall not be utilized by Consultant in any manner on other projects or distributed to third parties without the prior consent of the Village, except as may be required under court order and after written notice to the Village. In addition, any information provided by the Village to Consultant in connection with Consultant's performance of the services provided for herein and all information associated with Consultant's work product shall remain confidential and shall not be disclosed to any third party without the prior written consent of the Village.

12. FOIA. Consultant agrees to furnish all records related to this Agreement and any documentation related to the Village required under an Illinois Freedom of Information Act (ILCS 140/1, et/ seq.) (hereinafter "FOIA") request within five business days after Village issues notice of such request to the Consultant. Consultant's fees for FOIA disclosure shall be consistent with the requirements set forth by the FOIA.

13. Integration. The provisions set forth herein represent the entire agreement between the parties and supersede all prior agreements, promises and representations, as it is the intent of the parties to provide for a complete integration within the terms of this Contract. This Contract may be modified only by a further written agreement between the parties, and no modification shall be effective unless properly approved and executed by each party.

14. Electronic Signatures. Each party agrees that this agreement may be executed by electronic signatures, whether digital or encrypted, of the parties included in this agreement and shall have the same force and effect as manual signatures. Similarly, delivery of this agreement by electronic mail in "portable document format" (".pdf") form or by another electronic means will have the same legal effect as delivery of an original executed copy of this agreement.

15. Exclusive Jurisdiction. Any disputes under this Agreement shall be in the 18<sup>th</sup> Judicial Circuit Court, Wheaton, DuPage County, Illinois.

IN WITNESS WHEREOF, the parties have entered into this Contract as of the 28<sup>th</sup> day of August, 2023.

Village of Roselle  
Mayor  
31 S. Prospect Street  
Roselle, IL 60172

RJN Group  
950 Essington Road  
Joliet, Illinois 60435

BY: \_\_\_\_\_  
David Pileski, Mayor

BY: \_\_\_\_\_  
Name:  
Title:



August 10, 2023

Ms. Kristin Mehl, PE  
Assistant Director of Public Works / Village Engineer  
Village of Roselle  
474 Congress Circle North  
Roselle, Illinois 60172

**Subject: Proposal for Professional Engineering Services  
Force Main Assessments**

Dear Ms. Mehl:

RJN Group, Inc. (RJN) is pleased to submit this proposal to the Village of Roselle (Village) for internal inspections of nine of the Village's force mains and external corrosion assessment of the three oldest force mains:

<b>Force Main</b>	<b>Age (years)</b>	<b>Diameter (in)</b>	<b>Material</b>	<b>Length</b>
<b>Kennedy</b>	60	10	Ductile Iron	6,500
<b>Den Force</b>	33	8	Ductile Iron	1,755
<b>Fall Circle</b>	52	6	Cast Iron	1,280
<b>Roselle Center</b>	36	6	PVC	5,810
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<b>Lake Park</b>	7	6	PVC	1,950
<b>Sycamore</b>	7	6	PVC	700
<b>Spring St.</b>	11	8	PVC	480



Each of these force mains serve critical roles within the Village and have never been inspected. The Village would like to determine the condition of these force mains and determine if rehabilitation may be necessary.

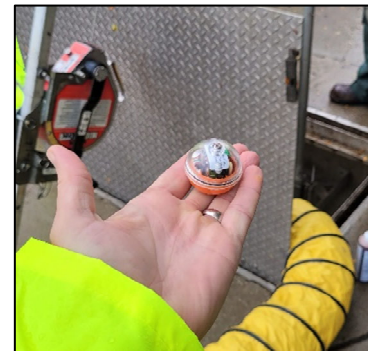
## Key Project Goals and Objectives

The primary goal of this project is to review all available data and records and to conduct an internal inspection of each force main. The inspection results will be reviewed and recommendations for operation and maintenance methods will be provided as well as rehabilitation recommendations if warranted.

The inspection will include the following:

- Data collection and review
- General lift station assessment
- In-line screening assessment of force mains
- Corrosion assessment of selected oldest force mains
- A summary of results and recommendations

The internal screening will be completed using INGU Solutions' in-line screening technology, a free-floating multi-sensor technology called Pipers®.



*Piper ready for deployment in Naperville, IL*

The Pipers technology allows for a complete screening assessment of the pipeline including:

- Acoustic leak detection (under appropriate pressures)
- Air and gas pocket detection
- High resolution pressure sensing
- Deposit, debris, and blockage locating
- Magnetometer survey to identify bulk wall thickness changes on metallic pipe.

The deployment of the Pipers will be a joint effort between RJN and the Village. RJN will perform the preliminary planning and meet with the Village to discuss their role which will include operating the lift stations and assistance with Piper insertion.

The external corrosion assessment will be completed using Cathodic Protection Management, Inc that includes an on-site visual investigation as it pertains to corrosion issues.

The external corrosion assessment will include:

- Specifications, design, and construction review
- Visual inspection of pipeline right-of-way
- Structure potentials and electrical continuity on the existing pipe
- Soil resistivity data

Upon completion of the corrosion assessment, the report will include feasibility and necessity of cathodic protection, applicable corrosion control types, and recommendations of design concept formulation.

**Following the completion of this project, the Village will have actionable intelligence regarding the chosen force mains and recommendations for future testing and/or rehabilitation of each.**

### **Assuring Quality**

RJN is committed to providing quality deliverables. The data, analysis, and recommendations provided by RJN will be used to make decisions on how much and where to spend Village sanitary sewer system funds. RJN's use of electronic forms for data collection with standardized entry and error trapping, the use of QC tools in our in-house data management software, as well as our corporate training and QC processes in place will ensure that results and recommendations will provide value to the Village.

### **Price and Schedule Summary**

RJN will invoice this project monthly on a Lump Sum, percent complete basis as outlined in Exhibit B. There are three alternatives outlined for the Village to decide on for scope, including singular force main inspection, four total inspections, and a complete nine force main inspection program. RJN is ready to begin the project immediately upon an agreement with the Village. Complete Scope of Service, Pricing, and Schedule are provided in the following exhibits:

- Exhibit A – Scope of Services
- Exhibit B – Pricing
- Exhibit C – Schedule

It is our pleasure to submit this proposal to the Village of Roselle. Please feel free to contact me by email at [patrick.hulsebosch@rjnmail.com](mailto:patrick.hulsebosch@rjnmail.com) or at 224.425.1014 if you would like to discuss this proposal. We are looking forward to the opportunity to continue working with the Village on these important projects.

Sincerely,



Francisco Sobral, P.E.  
Client Manager



Patrick Hulsebosch, P.E.  
Project Manager



Tom Romza, P.E.  
Regional Manager



# EXHIBIT A

## SCOPE OF SERVICES

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RJN is proposing the following scope of services for the Force Main Assessments for the Village of Roselle.

### 1. Preparatory Work & Data Review

- a. Conduct a kickoff meeting with the Village to discuss the project.
- b. Discuss lift station histories, operations, and maintenance.
- c. Gather and review all available data from the Village regarding the lift stations and force mains, including GIS maps and databases, design and/or record drawings, maintenance, modification/rehabilitation, and repair records, past inspection data, lift station operational data, and any other related data.
  - i. Dye Test Travel Time Calculations
  - ii. Finalize Launch and Retrieval Locations
- d. Share follow-up questions with the Village for discussion during the site visit.
- e. Prepare for a field planning visit.
- f. INGU Data Preparation
  - i. Kickoff Meeting – RJN and INGU
  - ii. INGU Deliverables
    1. KMZ File of Force Main Paths
      - a. Mapping grade locates
    2. Excel Elevation Profile(s)
    3. Questionnaire(s)

### 2. Field Planning Visit

- a. Meet with Village staff on-site for site visit inspections. During visit, discuss any questions that arose during the data review process.
- b. Lift station assessment:
  - i. Perform general assessments including verifying data from data review and accessing force main access for internal inspections.
  - ii. Observe pump operations and conduct a dye test to measure travel time.
  - iii. Discuss and confirm ability to provide supplemental water to wet wells for extended pumping of lift station to complete inspection, if necessary.
  - iv. GPS locate (mapping grade) lift station structures.
- c. Field assessment:
  - i. Visually inspect all ARV valves and structures on the force main route. Observe valve exercising by Village staff to confirm operation, if possible.
  - ii. Inspect force main outlet. Look for signs of corrosion and H<sub>2</sub>S gas and lamp up the force main pipes, as able. Determine methodology for catching Pipers.
  - iii. GPS locate (mapping grade) ARVs, known bends, other force main structures, and downstream discharge structures.
    1. To be incorporated into KMZ file

- d. Provide access to collected data on Clarity®, RJN's online data management hub.
- e. Discuss results of preliminary assessment with Village. Confirm that internal inspection of the force mains is feasible.

### **3. Internal Inspection**

- a. Contract with INGU on the rental of Pipers multi-sensors.
- b. Provide equipment and personnel as necessary to perform internal inspection of the force mains and retrieval of the inspection tools. Customize catching devices as necessary for each force main discharge point.
- c. Work with the Village to assist in the launching and operation of the lift stations.
  - i. Perform up to three Piper deployments for each of the force mains, with a minimum of two successful capture and retrievals.

### **4. External Corrosion Assessment**

- a. Familiarize with the work site
  - i. Review existing specifications, design, and construction drawings as it pertains to the line and any type of corrosion issues
  - ii. Determine direct access points to force mains
  - iii. Coordinate with Village additional access point to force mains, if necessary
- b. Site Investigation
  - i. Visual Inspection of pipeline right-of-way (path) to gather CP Information (i.e. foreign line concerns, obstructions, etc.)
  - ii. Collect structure potentials on the existing pipe, where possible
  - iii. Obtain soil resistivity data
  - iv. Attempt to determine if the pipe is electrically continuous from end to end
  - v. Conduct additional testing based on results of above investigation

### **5. Data Evaluation and Technical Memorandum (TM)**

- a. Review and analyze inspection results and recommendations.
  - i. Pipers' technology includes the following results:
    1. Acoustic leak detection
    2. Air and gas pocket detection
    3. High resolution pressure sensing
    4. Deposit, debris, and blockage locating
    5. Magnetometer survey to identify bulk wall thickness changes in metallic pipe.
  - ii. Corrosion Assessment technology includes to following results:
    1. Feasibility of providing cathodic protection
    2. Corrosion control types and configuration
    3. Recommendation of design concept formulation, if feasible
- b. Include a summary of the work completed and results of the internal screening.
- c. Prepare a GIS map of the force main system, including findings from the site inspections, document review, and internal screening.

- d. Provide recommendations for further inspections, rehabilitation/repair, and/or maintenance of the force mains.
- e. Include budgetary pricing and recommended timing (urgency) for implementation of recommendations.
- f. Technical Memorandum Submittal:
  - i. Provide a digital draft of TM,
  - ii. Revise draft based on Village comments and submit a digital and two hard copies (if desired) of final TM.
  - iii. Provide digital copies of all data, results, and photographs from inspections.
  - iv. Upload final report to Clarity.

## 6. Project Management

- a. Provide project management services including invoicing, scope, schedule, and fee tracking, and closeout services.
- b. Provide monthly updates to Village staff through the duration of the project.
- c. Meet with Village staff as necessary to discuss progress of the project.

## Items Requested from the Village

1. Updated GIS geodatabases and/or shape files for the sanitary sewer collection system.
2. Copies of available plan sets, specifications, record/as-built drawings, hydraulic profiles, pump records, or other documents related to the lift stations and force mains.
3. Access to sanitary structures for inspection. Assistance locating and opening seized/buried manholes and valve vaults/boxes as required.
4. If necessary, vacuum out structures that are inundated with infiltration.
5. Direct access to the force main, if necessary, for the external corrosion inspection via potholing or digging.
6. **We request the Village operate lift stations and valves during Pipers launch and assist by opening launch locations and inserting Pipers.**
7. Provide supplemental water for continuous pumping of the lift station during the tests, if necessary.
8. Assistance with traffic control in high traffic areas, as necessary.



## EXHIBIT B PRICING

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This project will be invoiced on a lump sum, percent complete basis based on the cost schedules below. Pricing is outlined for one force main, 4 force mains, and 9 force mains.

### *Alternative A - One Force Main (Kennedy Force Main)*

Task	Fee
Preparatory Work, Data Review, & Planning	\$6,600
Field Reconnaissance Visit & Equipment Preparation	\$15,800
Internal Inspections	\$21,100
External Corrosion Inspections	\$21,500
Data Evaluation and Technical Memorandum	\$8,700
Project Management & Meetings	\$4,000
<b>TOTAL</b>	<b>\$77,700</b>

### *Alternative B - Four Force Mains (Kennedy, Den, Fall Circle, and Roselle Center)*

Task	Fee
Preparatory Work, Data Review, & Planning	\$20,800
Field Reconnaissance Visit & Equipment Preparation	\$53,600
Internal Inspections	\$80,000
External Corrosion Inspections (Kennedy, Den, Fall Circle)	\$33,600
Data Evaluation and Technical Memorandum	\$25,600
Project Management & Meetings	\$11,200
<b>TOTAL</b>	<b>\$224,800</b>

*Alternative C - Nine Force Mains (all force mains except Cherry St)*

Task	Fee
Preparatory Work, Data Review, & Planning	\$37,800
Field Reconnaissance Visit & Equipment Preparation	\$109,800
Internal Inspections	\$172,800
External Corrosion Inspections (Kennedy, Den, Fall Circle)	\$33,600
Data Evaluation and Technical Memorandum	\$51,300
Project Management & Meetings	\$18,000
<b>TOTAL</b>	<b>\$423,300</b>

**Contract Option**

This contract can be amended to include additional work upon joint approval by the Village and RJN.



## EXHIBIT C PROPOSED SCHEDULE

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RJN is prepared to start work immediately upon receiving a signed contract with the Village.

Task	Timeline
<b>Field Reconnaissance Visit</b>	Will be completed following the kickoff meetings with Village and INGU. To be completed within 2 months of NTP.
<b>Internal Inspections</b>	To be completed within two months of successful field reconnaissance visit.
<b>Technical Memorandum</b>	To be completed within 6 months of NTP.