AGENDA ITEM # 13B/C

AGENDA ITEM EXECUTIVE SUMMARY
Village Board Meeting
November 11, 2019

Item Title: **Water Modeling and Master Plan**

Staff Contact: Karen R. Young, P.E., Public Works Director

VILLAGE BOARD ACTION

Adopt a resolution authorizing the Mayor to execute an agreement for engineering services for the Water Modeling and Facilities Master Plan between the Village of Roselle and Trotter & Associates, Inc.

Executive Summary:
At the July 22, 2019 Committee of the Whole meeting as part of the FY 2019 Mid-Year Budget presentation, the Village Board directed staff to proceed with retaining a consulting firm to complete an update to the Water Modeling and Facilities Master Plan. This plan will be used to prepare and budget for future water infrastructure improvements to maintain cost effective and responsible water distribution for the community, but more specifically, identify weaknesses in the water distribution system regarding pressures and rates of flow, analyze the impact of increased population density and development on the existing system, and complete a condition assessment of all existing water system equipment. The consultant will utilize the hydraulic modeling to complete a computer simulation of the water system to identify existing deficiencies as well as forecast future water system upgrades. The plan will assist the Village in establishing a long-term capital plan and then annually review and budget for system maintenance. The study will also provide completed reports according to IEPA requirements should the Village seek IEPA low interest loan funding to complete improvements in the future.

Staff is aware that the residents and business owners of the community have absorbed increased water, sewer, and CIS user fees over the past four years to pay for major improvements to the Village's wastewater and water systems. While a majority of the major improvements will be completed by 2020, the Water Modeling and Facilities Master Plan will provide the framework for reducing increases to user fees while ensuring future regulatory and capacity requirements are met. It will also provide the framework necessary to prepare a new IEPA Loan Facility Plan should the Village want to participate in additional IEPA low interest loan programs to pay for other improvements.

Staff used the Qualifications Based election (QBS) process to determine the most qualified professional services engineering firm to develop the water model and master plan. The QBS procedure is a statutorily required process that guides the selection of a professional services firm based on their qualifications and competencies and is not initially based on the cost. Once a firm is determined to be the most qualified, project scope and costs are negotiated with that firm. Three consultants submitted statements of qualifications; Engineering Enterprises Inc., Strand Associates, and Trotter & Associates. The qualifications were evaluated by staff based on firm experience, project team, project understanding and approach to the project timeline. This was followed by interviews with Strand and Trotter & Associates who further presented information and discussed their qualifications. Through this process Trotter & Associates was selected as the most qualified firm. Staff then met again with Trotter to refine the scope of services, project timeline and negotiated the total not to exceed amount of $93,068.00 to complete the Water Modeling and Facilities Master Plan.

10Implications:

Is this item budgeted? Yes budgeted amount for this project is $100,000 and adequate funds are allocated in the Water and Sewer Capital Reserve Fund.

Any other implications to be considered? Yes, Trotter's proposal reflects compensation for services at a not to exceed cost of $86,636 with an add-on service cost of an additional $6,432.00 for the firm's presentation to the Village Board. Staff will work with representatives of Trotter to determine if a presentation will be necessary.

Attachments:

Resolution Trotter and Associates Inc.
Contract Trotter and Associates, Inc.

RESOLUTION NO. 2019-

A RESOLUTION AUTHORIZING THE MAYOR TO EXECUTE AN AGREEMENT FOR ENGINEERING SERVICES FOR THE WATER MODELING AND FACILITIES MASTER PLAN BETWEEN THE VILLAGE OF ROSELLE AND TROTTER AND ASSOCIATES, INC.

WHEREAS, the corporate authorities of the Village of Roselle deem it in the best interests of the Village to enter into an Agreement with Trotter and Associates, Inc., 40W201 Wasco Road, Suite D, St. Charles, Illinois 60175 for Engineering Services for the Water Modeling and Facilities Master Plan; and

WHEREAS, the Mayor and Board of Trustees have determined that it is in the best interests of the Village of Roselle to authorize the engineering services with Trotter and Associates, Inc. associated with the Water Modeling and Facilities Master Plan; and

WHEREAS, both parties agree to the terms and conditions set forth in the proposal for the Water Modeling and Facilities Master Plan as described in Exhibit A.

NOW, THEREFORE, be it resolved by the Mayor and Board of Trustees of the Village of Roselle that the Mayor is hereby authorized to sign and the Village Clerk is hereby directed to attest that certain “Agreement for Engineering Services for the Water Modeling and Facilities Master Plan” between the Village of Roselle and Trotter and Associates, Inc., which is attached hereto and incorporated as fully set forth as Exhibit A.

ADOPTED this 11th day of November, 2019

AYES:
NAYS:
ABSTAIN:
ABSENT:

_____
Andrew J. Maglio, Mayor

ATTEST:

_____
Patricia Burns, Village Clerk

CONTRACT NO. _____ 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 Trotter and Associates, Inc. (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 engineering services associated with Water Modeling and Master Plan to the Village; and

WHEREAS, Trotter and Associates, Inc. (hereinafter “Consultant”) agrees to provide the necessary engineering 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 engineering 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 an amount not-to-exceed $93,068.00. A breakdown of these fees by task is summarized in the Scope of Services Exhibit. 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. Term of Agreement. The term of this Agreement shall be for a period of 1 years terminating November 11, 2020, unless terminated earlier by either party pursuant to Paragraph 11 and provided the term of the Agreement may be extended upon mutual written agreement.

5. 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.

6. 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 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.

7. 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.

(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.

8. 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 of modification of the policies shall occur without at least 30 days' written notice to the Village. 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 (D) as additional insured. No policy shall require contribution by the Village's insurance.

9. 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.

10. 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.

11. 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 the Village 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.

12. Ownership of Documents & Release of Information. All 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. 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.

13. 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.

14. 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.

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

IN WITNESS WHEREOF, the parties have entered into this Contract as of the 11th day of November, 2020.

VILLAGE OF ROSELLE
VILLAGE ADMINISTRATOR
31 S. PROSPECT STREET
ROSELLE, IL 60172

BY:_____
Mayor

ATTEST:_____
Clerk

TROTTER AND ASSOCIATED, INC.
40W201 WASCO ROAD, SUITE D
ST. CHARLES, IL 60175

BY:_____

ATTEST:_____

TROTTER and ASSOCIATES, INC.
ENGINEERS AND SURVEYORS

November 4th, 2019

Village of Roselle
Public Works Department
474 Congress Circle North
Roselle, Illinois 60172

Attn: Mr. Mike Schulz – Water Superintendent

Re: **2019 Water Master Plan**
Professional Engineering Services

Dear Mr. Schulz,

Trotter and Associates, Inc. (ENGINEER) is pleased to provide professional services to the Village of Roselle (CLIENT) for the 2019 Water Master Plan Project (hereinafter referred to as the "PROJECT").

Project Background and Understanding

The Village of Roselle owns and maintains approximately 107 miles of water main that serve the community's nearly 23,000 residents, as well as commercial, industrial, and municipal users. The distribution system is generally bounded by Lake Street/Route 20 on the south and Nerge Road to the north.

The Village has an Illinois Department of Natural Resources Lake Michigan water allocation of 2.341 MGD in 2019, which is supplied through the City of Chicago and the DuPage Water Commission (DWC). Roselle operates its water system at a hydraulic grade similar to the DWC system to reduce the amount of energy lost to pressure adjustment and repumping.

As part of the Village's ongoing efforts to maximize capital investments while maintaining the highest degree of water service, staff has recognized the need for a modern hydraulic modeling tool. The Village is seeking to create, calibrate, and analyze the distribution system in Bentley's WaterGEMS/WaterCAD™. The model will be created through importation of GIS database information and will require scrubbing to verify all elements are properly represented. In our experience, importing GIS data is highly effective, but careful review will be necessary to ensure main connections are accurately reflected.

The model will incorporate water supply, booster stations, elevated and ground storage, valves, and hydrants to represent the Village's system dynamically. The model will be suited for the evaluation of pending developments, ISO reports, and analysis for proposed capital improvement projects. Conceptual level designs and cost estimates will be presented for recommended distribution system improvement projects in a manner which can easily and clearly be integrated into the Village's capital program. A prioritization matrix will be created to objectively evaluate and rank the distribution system improvements. This will include coordinating proposed distribution system projects with the Village's roadway rehabilitation program, based on the recently completed IMS street study, as well as sanitary sewer improvement projects.

Additionally, TAI will review the existing supply, treatment, and storage infrastructure of the Village's water system. This will include site visits to each facility to document historical operational or control issues. Condition Assessment Tables which detail the installation year, condition, and replacement/rehabilitation timeframe will be provided for each piece of major equipment. Conceptual cost estimates and designs will be provided for any recommended infrastructure upgrades or rehabilitations, suitable to be incorporated into the Village's Capital Improvements Plan.

As part of the America's Water Infrastructure Act (AWIA) signed into law in 2018, communities serving more than 3,300 people are required to develop a Risk and Resilience Assessment (RRA) by June 30th, 2021 and an Emergency Response Plan (ERP) by December 30th, 2021. The RRA provides an evaluation of vulnerabilities, threats, and consequences from potential hazards to drinking water systems. The ERP provides a strategic response to each of the vulnerabilities identified within the RRA. While completion of the RRA and ERP are not part of the scope of this Water Master Plan, the Village should plan for completion of these documents well ahead of the federal deadline. The Master Plan layout will be conducive to the future incorporation of the RRA and ERP, following their completion.

Scope of Services

During the planning process, we will work closely with the Village staff, holding several work sessions to gather data, visit facilities, discuss alternatives, review our analyses and develop consensus on recommended solutions. These work sessions will also serve to document our progress and keep the project moving forward to a timely completion. The project scope will generally follow the deliverable of the final report:

Section #1 – General Background

1.1. Review historical data and previous reports, plans, and capital improvements.

1.2. Conduct a Site Visit of each facility in the water system in order to understand daily operation and layout.

1.3. Summarize the Village's goals, challenges, concepts, requirements and objectives.

Section #2 – Community Needs

2.1. Document Comprehensive and Land Use Plans at they pertain to current water usage.

2.2. Review billing and water data to determine current population projections and usage.

2.3. Gain concurrence on the current, 10-Year and 20-year population projections.

2.4. Summarize and document the projections and back-up information.

Section #3 – Evaluation of Existing Infrastructure

3.1. Develop a hydraulic model of the Village's water distribution system utilizing Bentley's WaterCAD V8i.

3.1.1. Utilize the Villages existing GIS database to create an accurate, up-to-date, calibrated hydraulic model of the water system. This model will include connections to DWC, elevated storage tanks, at-grade storage, booster stations, pressure adjusting stations, and emergency interconnects with Hanover Park, Schaumburg and Elk Grove Village.

3.1.2. Once the model is created, demands throughout the system will be added based on historical water usage data, land use, and zoning density.

3.1.3. TAI will coordinate with the Village Water and Fire Departments to obtain historical fire flow testing data.

3.1.4. In conjunction with Water Department staff, perform supplementary fire flow testing for calibration purposes. TAI will document all pressure and flow results

3.1.5. TAI will calibrate the hydraulic model based on the fire flow testing data and institutional knowledge of the Department staff.

3.1.6. Once calibration is complete, a work session will be held at TAI's office for Village staff to review the model, understand the intricacies, and gain consensus on accuracy.

3.2. Run WaterCAD Analyses

3.2.1. The model will be run under Average Day Demand as well as Maximum Day Demand conditions to observe the available fire flows and residual pressures throughout the system. The results will be provided in both graphical and tabular formats. These analyses will utilize both steady-state and extended period simulation as required.

3.2.2. Modeling of specific scenarios as requested by the Village (e.g. loss of DWC, loss of elevate storage, water age/residual, etc.)

3.3. Provide an evaluation of the distribution system, including a review of water main age, size, material, and break history (if available). Create a prioritization matrix including these parameters, as well as consideration for the Village's roadway and sanitary sewer programs.

3.4. Supply, Storage and Treatment Evaluation

3.4.1. Perform on-site analysis with Village staff of the existing infrastructure to review strengths, limitations, and remaining service life of equipment. This shall also include documentation of building envelope condition (structure, roof, doors, windows) and heating/ventilation systems. Review of the envelop and ventilation system shall be based on data provided by the Village and will not require onsite inspection by structural or mechanical engineers.

3.4.2. Create Condition Assessment Tables to detail remaining service lives, replacement costs, and timeframes which can be integrated into a CIP for replacement/rehabilitation.

3.4.3. Narratively document the condition of existing supply, storage, and treatment infrastructure, as well as current operational strategies.

Section #4 – Recommended Upgrades and Replacement

4.1. Using the findings of the hydraulic modeling and distribution system evaluation, TAI will provide recommendations for improvement to the water distribution system. These improvements will cover capacity upgrades for fire protection or pressure stability, future development, and improved hydraulics throughout the Village. Conceptual layouts and costs will be provided.

4.2. TAI will prepare conceptual level designs and cost estimates for the recommended supply, storage, and treatment improvement projects. These designs will include conceptual layout, component sizing, and detailed cost estimates sufficient for future implementation.

4.3. Summarize and document the alternatives reviewed, findings, implementation and recommendations. Hold a work session to review recommendations and gain consensus.

Section #5 – Implementation plan

5.1. Integrate recommendations for capital projects from Section #4.

5.2. Develop a phased approach consistent with expected service life and regulatory requirements.

5.3. Develop an implementation plan including project descriptions, cost estimates, and schedules.

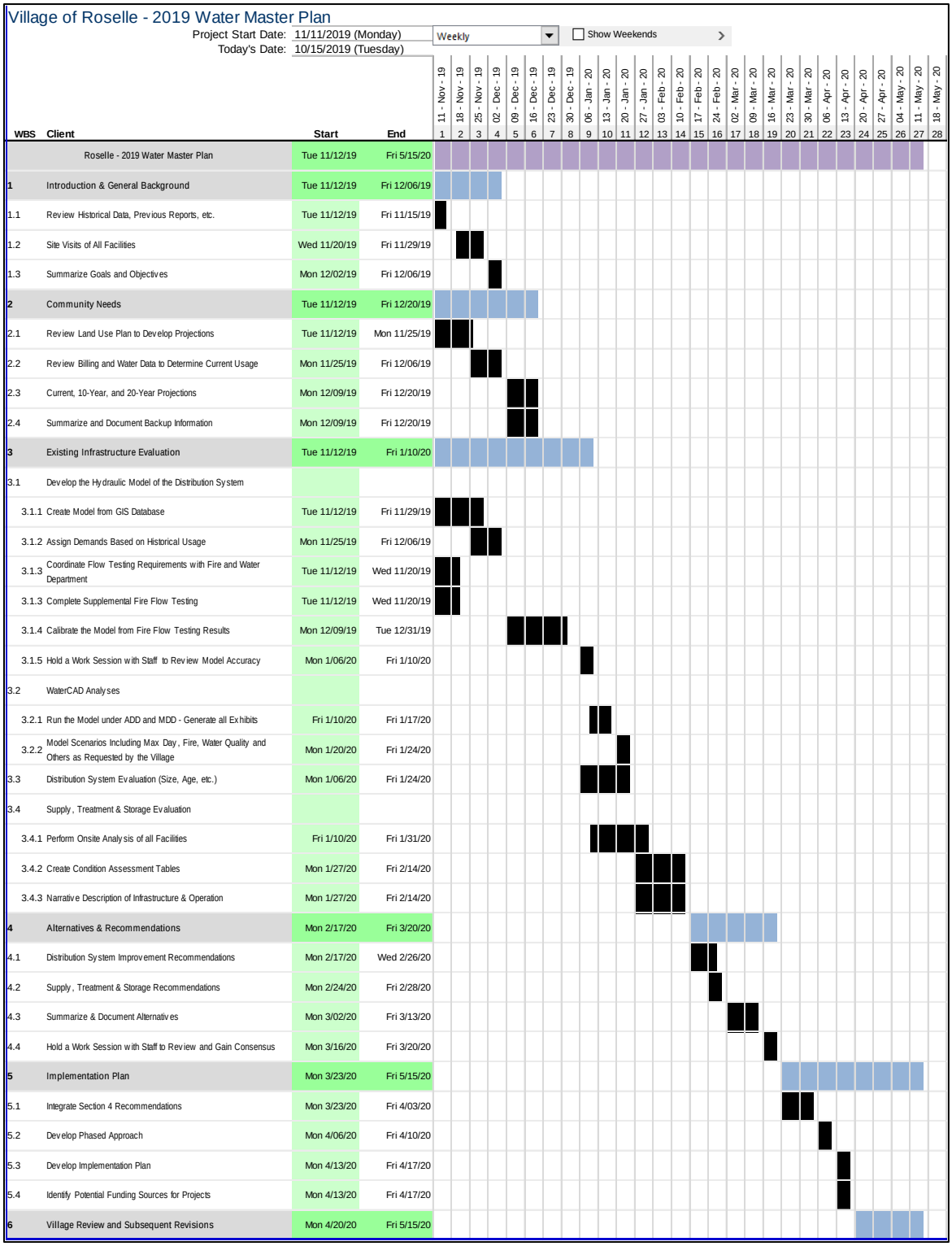
5.4. Identify any potential funding sources the recommended improvements. This will include a review of loan funding, available grants, bonds, and any other applicable means of funding.

Presentation

Development and presentation of implementation plans through the utilization of professional staff and exceptional graphics that clearly convey the need, alternatives and selected solutions so that public officials, regulators, and the general public can understand and support the proposed improvements.

Schedule

The schedule for the 2019 Water Master Plan is anticipated to generally follow the below outline, subject to timely supply of information requested from the Village:



WBS	Client	Start	End
	Roselle - 2019 Water Master Plan	Tue 11/12/19	Fri 5/15/20
1	Introduction & General Background	Tue 11/12/19	Fri 12/06/19
1.1	Review Historical Data, Previous Reports, etc.	Tue 11/12/19	Fri 11/15/19
1.2	Site Visits of All Facilities	Wed 11/20/19	Fri 11/29/19
1.3	Summarize Goals and Objectives	Mon 12/02/19	Fri 12/06/19
2	Community Needs	Tue 11/12/19	Fri 12/20/19
2.1	Review Land Use Plan to Develop Projections	Tue 11/12/19	Mon 11/25/19
2.2	Review Billing and Water Data to Determine Current Usage	Mon 11/25/19	Fri 12/06/19
2.3	Current, 10-Year, and 20-Year Projections	Mon 12/09/19	Fri 12/20/19
2.4	Summarize and Document Backup Information	Mon 12/09/19	Fri 12/20/19
3	Existing Infrastructure Evaluation	Tue 11/12/19	Fri 1/10/20
3.1	Develop the Hydraulic Model of the Distribution System		
3.1.1	Create Model from GIS Database	Tue 11/12/19	Fri 11/29/19
3.1.2	Assign Demands Based on Historical Usage	Mon 11/25/19	Fri 12/06/19
3.1.3	Coordinate Flow Testing Requirements with Fire and Water Department	Tue 11/12/19	Wed 11/20/19
3.1.3	Complete Supplemental Fire Flow Testing	Tue 11/12/19	Wed 11/20/19
3.1.4	Calibrate the Model from Fire Flow Testing Results	Mon 12/09/19	Tue 12/31/19
3.1.5	Hold a Work Session with Staff to Review Model Accuracy	Mon 1/06/20	Fri 1/10/20
3.2	WaterCAD Analyses		
3.2.1	Run the Model under ADD and MDD - Generate all Exhibits	Fri 1/10/20	Fri 1/17/20
3.2.2	Model Scenarios Including Max Day, Fire, Water Quality and Others as Requested by the Village	Mon 1/20/20	Fri 1/24/20
3.3	Distribution System Evaluation (Size, Age, etc.)	Mon 1/06/20	Fri 1/24/20
3.4	Supply, Treatment & Storage Evaluation		
3.4.1	Perform Onsite Analysis of all Facilities	Fri 1/10/20	Fri 1/31/20
3.4.2	Create Condition Assessment Tables	Mon 1/27/20	Fri 2/14/20
3.4.3	Narrative Description of Infrastructure & Operation	Mon 1/27/20	Fri 2/14/20
4	Alternatives & Recommendations	Mon 2/17/20	Fri 3/20/20
4.1	Distribution System Improvement Recommendations	Mon 2/17/20	Wed 2/26/20
4.2	Supply, Treatment & Storage Recommendations	Mon 2/24/20	Fri 2/28/20
4.3	Summarize & Document Alternatives	Mon 3/02/20	Fri 3/13/20
4.4	Hold a Work Session with Staff to Review and Gain Consensus	Mon 3/16/20	Fri 3/20/20
5	Implementation Plan	Mon 3/23/20	Fri 5/15/20
5.1	Integrate Section 4 Recommendations	Mon 3/23/20	Fri 4/03/20
5.2	Develop Phased Approach	Mon 4/06/20	Fri 4/10/20
5.3	Develop Implementation Plan	Mon 4/13/20	Fri 4/17/20
5.4	Identify Potential Funding Sources for Projects	Mon 4/13/20	Fri 4/17/20
6	Village Review and Subsequent Revisions	Mon 4/20/20	Fri 5/15/20

Compensation

An amount equal to the cumulative hours charged to the Project by each class of ENGINEER's employees times Standard Hourly Rates for each applicable billing class for all services performed on the Project. Subconsultants have been incorporated into the fee. Reimbursable expenses will be charged at 0% markup.

ENGINEER's Reimbursable Expenses Schedule and Standard Hourly Rates are attached to this Exhibit B.

The total compensation for services will not exceed **$93,000.00**.

The total estimated compensation for ENGINEER's services included in the breakdown by phases incorporates all labor, overhead, profit, Reimbursable Expenses and ENGINEER's Consultant's charges. The amounts billed for ENGINEER's services will be based on the cumulative hours charged to the PROJECT during the billing period by each class of ENGINEER's employees times Standard Hourly Rates for each applicable billing class, plus Reimbursable Expenses and ENGINEER's Consultant's charges. The Standard Hourly Rates and Reimbursable Expenses Schedule will be adjusted annually as of January 1st to reflect equitable changes in the compensation payable to ENGINEER.

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CLIENT Initial _____

TAI Initial _____

TROTTER and ASSOCIATES, INC.
ENGINEERS AND SURVEYORS

EXHIBIT A
SCHEDULE OF HOURLY RATES AND REIMBURSABLE EXPENSES

2019 Schedule of Hourly Rates

Classification	Billing Rate
Engineering Intern	$54.00
Engineer Level I	$106.00
Engineer Level II	$118.00
Engineer Level III	$129.00
Engineer Level IV	$144.00
Engineer Level V	$163.00
Engineer Level VI	$188.00
Engineer VII	$198.00
Engineer VIII	$224.00
Principal Engineer	$228.00
Technician Level I	$98.00
Technician Level II	$112.00
Technician Level III	$130.00
Technician Level IV	$142.00
Senior Technician	$156.00
GIS Specialist I	$98.00
GIS Specialist II	$111.00
GIS Specialist III	$146.00
Clerical Level I	$64.00
Clerical Level II	$76.00
Clerical Level III	$88.00
Survey Technician Level I	$66.00
Survey Technician Level II	$79.00
Survey Crew Chief	$156.00
Professional Land Surveyor	$188.00
Department Director	$186.00
Prevailing Wage Survey Foreman**	$185.00
Prevailing Wage Survey Worker**	$181.00
Sub Consultants	Cost Plus 5%

***Rates will be escalated for Overtime & Holiday Pay to adjust for Premium Time based on the current Illinois Department of Labor Rules*

Note: On January 1st of each year, the fees and hourly rates may be escalated by an amount not to exceed five (5) percent.

2019 Reimbursable Expenses

Item	Unit	Unit Price
Engineering Copies 1- 249 Sq. Ft.	Sq. Ft.	$0.29
Engineering Copies 250-999 Sq. Ft.	Sq. Ft.	$0.27
Engineering Copies 1000-3999 Sq. Ft.	Sq. Ft.	$0.25
Engineering Copies 3999 Sq. Ft. & Up	Sq. Ft.	$0.23
Mylar Engineering Copies up to 24" by 36"	Each	$8.00
Color Presentation Grade Large Format Print	Sq. Ft.	$5.15
Comb Binding > 120 Sheets	Each	$4.75
Comb Binding < 120 Sheets	Each	$3.50
Binding Strips (Engineering Plans)	Each	$1.00
5 Mil Laminating	Each	$1.25
Copy 11" x 17" - Color	Each	$0.50
Copy 11" x 17" - Black and White	Each	$0.25
Copy 8.5" x 11" - Color	Each	$0.25
Copy 8.5" x 11" - Black and White	Each	$0.12
Recorded Documents	Each	$25.00
Plat Research		Time and Material
Per Diem	Each Day	$30.00
Field / Survey Truck	Each Day	$45.00
Postage and Freight		Cost
Mileage	Per Mile	Federal Rate

2020 Schedule of Hourly Rates

Classification	Billing Rate
Engineering Intern	$55.00
Engineer Level I	$110.00
Engineer Level II	$122.00
Engineer Level III	$134.00
Engineer Level IV	$149.00
Engineer Level V	$168.00
Engineer Level VI	$195.00
Engineer VII	$205.00
Engineer VIII	$233.00
Principal Engineer	$238.00
Technician Level I	$98.00
Technician Level II	$116.00
Technician Level III	$135.00
Technician Level IV	$147.00
Senior Technician	$162.00
GIS Specialist I	$98.00
GIS Specialist II	$111.00
GIS Specialist III	$151.00
Clerical Level I	$64.00
Clerical Level II	$76.00
Clerical Level III	$88.00
Survey Technician Level I	$66.00
Survey Technician Level II	$79.00
Survey Crew Chief	$161.00
Professional Land Surveyor	$194.00
Department Director	$192.00
Prevailing Wage Survey Foreman**	$185.00
Prevailing Wage Survey Worker**	$181.00
Sub Consultants	Cost Plus 5%

***Rates will be escalated for Overtime & Holiday Pay to adjust for Premium Time based on the current Illinois Department of Labor Rules*

Note: On January 1st of each year, the fees and hourly rates may be escalated by an amount not to exceed five (5) percent.

2020 Reimbursable Expenses

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Engineering Copies 250-999 Sq. Ft.	Sq. Ft.	$0.27
Engineering Copies 1000-3999 Sq. Ft.	Sq. Ft.	$0.25
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	Village of Roselle - 2019 Water System Modeling & Evaluation	Trotter Principal Engineer	Marschinke Project Manager	Berry Project Engineer	Healy Staff Engineer		
Section #1 – Introduction & General Background							
1.1	Kick-Off Meeting and Data Request	2	2	4	4	$	1,782.00
1.2	Site Visit of All Facilities	4	4	4	6	$	2,776.00
1.3	Summarize the Village's goals, challenges, concepts, requirements and objectives		1	2	4	$	875.00
						$	**5,433.00**
Section #2 – Community Needs							
2.1	Document Comprehensive and Land Use Plans as they pertain to current water usage. Assign water usage by type.				6	$	636.00
2.2	Review billing and water data to determine current usage (included in Wastewater Facility Plan)					$	-
2.3	Hold work session to gain concurrance on current, 10-year, and 20-year popultation projects (included in Wastewater Facility Plan)					$	-
2.4	Summarize and document the back-up information			1	4	$	568.00
						$	**1,204.00**
Section #3 – Evaluation of Existing Infrastructure							
3.1	Create & Calibrate WaterCAD Model						
3.1.1	Create water model from GIS Data (Including minor scrubbing of data)			10	30	$	4,620.00
3.1.2	Assign demands (including top users) throughout the system based on historical water usage data, land use, and zoning density	1		4	20	$	2,924.00
3.1.3	TAI will coordinate with the Village Water and Fire Departments to obtain fire flow testing data (Check against Model)			4	4	$	1,000.00
3.1.4	TAI will perform supplementary flow testing of up to 20 hydrants for validation of existing flow testing data	1	4	16	20	$	5,304.00
3.1.5	TAI will calibrate the hydraulic model based on the fire flow testing and background data	2	4	12	40	$	7,076.00
3.1.6	Hold a work session at TAI's office for Village staff to review the model, and gain consensus on accuracy	2	2	4	4	$	1,782.00
3.2	WaterCAD Analyses						
3.2.1	Run the model under average and maximum day demands, produce exhibits including AFF, pressure contours, heat maps, etc.	1	4	20	16	$	5,456.00
3.2.1	Modeling scenarios requested by the Village (e.g. loss of DWC supply, loss of elevated storage, water age/residual etc.)	2	4	8	24	$	4,804.00
3.3	Distribution System Evaluation - Main size, age, material, break history	4	8	16	16	$	6,216.00
3.4	Supply, Storage & Treatment Evaluation						
3.4.1	Perform on-site analysis of the existing infrastructure and document strengths, limitations, and remaining service lives	4	6	6	8	$	3,602.00
3.4.2	Create Condition Assessment Tables for all infrastructure to schedule replacement/rehabilitation timeframes and costs	1	4	8	20	$	4,152.00
3.4.3	Document condition of existing supply, storage, and treatment infrastructure (including operational strategy)	1	5	10	22	$	4,815.00
						$	**51,751.00**
Section #4 – Analysis of Alternatives							
4.1	Identify distribution system improvements based on evaluations in Section #3; provide conceptual designs and cost estimates	6	8	16	24	$	7,520.00
4.2	Create prioritization tables for distribution improvements (including criticality, road program, etc.)	1	2	4	6	$	1,766.00
4.3	Identify supply, storage & treatment improvements based on evaluations in Section #3; provide conceptual designs and cost estimates	4	8	12	20	$	6,064.00
4.4	Work session with Village staff to review identified upgrades and gain consensus on prioritization and implementation	4	4	4		$	2,140.00
						$	**17,490.00**
Section #5 – Recommendations and Implementation							
5.1	Integrate and summarize Section 4 recommendations		2	4	8	$	1,750.00
5.2	Develop a phased plan that is consistant with expected service life and regulator requirements	1	2	2	4	$	1,266.00
5.3	Develop an implementation schedule		2	2	4	$	1,038.00
5.4	Indentify funding sources including SRF, bonds, grants, etc.			2	6	$	924.00
						$	**4,978.00**
QA/QC Report & Subsequent Revisions		**8**	**8**	**8**		**$**	**4,280.00**
Reimbursable Expenses						**$**	**1,500.00**
Presentation to Village Board (Including preparation of presentation)		**8**	**16**	**8**	**8**	**$**	**6,432.00**
							Total
		57	100	191	328		676
		$ 12,996	$ 16,300	$ 27,504	$ 34,768	**$**	**93,068.00**
					Average Hourly Rate:	$	137.67