

**RESOLUTION NO. 35-23**

**A RESOLUTION APPROVING A PROFESSIONAL SERVICES PROPOSAL  
SUBMITTED BY BHMGE ENGINEERS, INC. FOR AN ELECTRIC SYSTEM STUDY**

**WHEREAS**, the Village of Chatham (“Village”) is an Illinois Municipal Corporation existing and operating under the Illinois Municipal Code and the laws of the State of Illinois; and

**WHEREAS**, the Village sought an engineering proposal to conduct an electric system study evaluating the Village’s electric system and creating a plan for the electric department; and

**WHEREAS**, BHMGE Engineers, Inc. presented a Professional Services Proposal to the Village for the Electric System Study as detailed in the attached **Exhibit A**; and

**WHEREAS**, the Village has budgeted sufficient funds for the Electric System Study; and

**WHEREAS**, the Board of Trustees of the Village believe it is in the best interest of the Village engage BHMGE Engineers, Inc. to perform the Electric System Study as outlined in the Professional Services Proposal.

**NOW THEREFORE, BE IT RESOLVED** by the President and Board of Trustees of the Village of Chatham, Sangamon County, Illinois, as follows:

**Section 1.**     Recitals. The foregoing recitals shall be and are hereby incorporated into and made a part of this Resolution as if fully set forth in this Section 1.

**Section 2.**     Acceptance of Proposal. The Village hereby approves the Professional Services Proposal from BHMGE Engineers, Inc. as attached hereto as **Exhibit A** and authorizes the Village to spend an amount not to exceed \$86,500.00 for these services. The Village authorizes the Village Manager and/or Village President, or designee of either, to execute any documents necessary to complete the transaction contemplated herein.

**Section 3.**     Severability. In the event a court of competent jurisdiction finds this ordinance or any provision hereof to be invalid or unenforceable as applied, such finding shall not

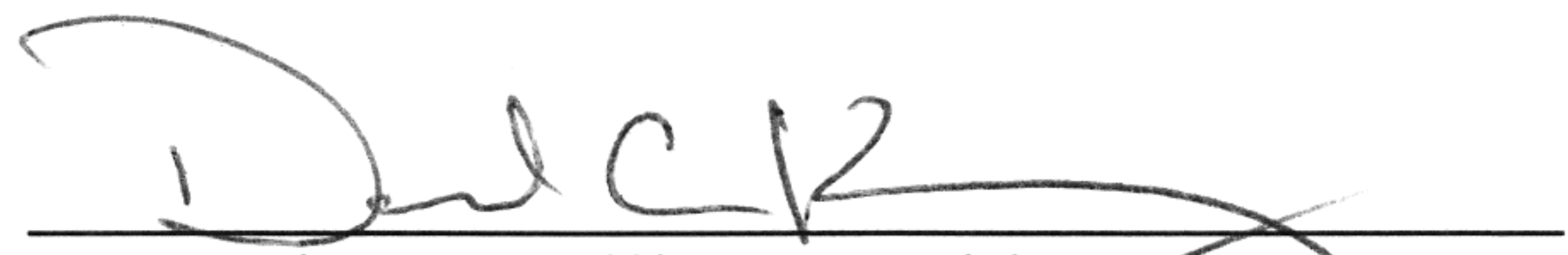
affect the validity of the remaining provisions of this Resolution and the application thereof to the greatest extent permitted by law.

**Section 4.** Repeal and Savings Clause. All resolutions or parts of resolutions in conflict herewith are hereby repealed; provided, however, that nothing herein contained shall affect any rights, actions, or causes of action which shall have accrued to the Village of Chatham prior to the effective date of this Resolution.

**Section 5.** Effective Date. This Resolution shall be in full force and effect from and after its passage and approval.

SO RESOLVED this 25 day of July, 2023.

	AYE	NAY	ABSTAIN	ABSENT
KRISTEN CHIARO	✓			
MEREDITH FERGUSON				✓
JOHN FLETCHER	✓			
BRETT GERGER	✓			
TIM NICE	✓			
CARL TRY	✓			
DAVE KIMSEY				
TOTAL	5	-	-	1

  
 Dave Kimsey, Village President

Attest:  
  
 Dan Holden, Village Clerk

**EXHIBIT A**  
**PROFESSIONAL SERVICES PROPOSAL**



**Village of Chatham**  
Chatham, Illinois

Engineering Services for

**Electric System Study**

Submitted by:

**BHM Engineers, Inc.**

June 29, 2023





# Engineering Proposal

## Executive Summary

This Engineering proposal is prepared by BHMg Engineers, Inc. with regard to our work and the services that we can offer towards the Electric System Study. The study will help evaluate and create a plan for the electric department in preparation for some staff departures and help with growth.

BHMg since its establishment in 1972 has been providing excellent utility & consulting engineering services especially in the field of substation design. We look forward to being considered to participate in the Electric System Study, as providing system study services as our experience and skills in the field are widely renowned.

## Our Services

We have gained proficiency in diverse aspects of Engineering Services. Some of the specific projects completed by us are laid out here for your reference. Please contact our project manager for any further details you may seek.

Projects	Services Offered	Professionals Involved
Rochelle Municipal Utilities	Electric System Study	Jason Jackson, Richard Gu
Village of Peru, IL	Electric System Study	Jason Jackson, Richard Gu
Village of Rantoul, IL	Electric System Study	Lukas Pirok, Richard Gu

## Project Description

We have thoroughly evaluated the needs of the project and put together a primary plan to carry out the services that you are looking for. Please see the attached scope of work document for this project.

Upon the acceptance of this proposal, we shall have the access to closely understand this project. A more accurate and detailed final scope of work will be developed, but our initial scope of work is attached to this proposal.

## Problems

The existing electric department is currently managed by personnel who are approaching retirement, and the knowledge and expertise on the system is about to walk out the door. This is also compounded with an electric utility climate which is changing rapidly with long lead times of equipment. The Village has also not worked with any outside design firms to provide assistance to the utility in years.

## Solution

We have assessed the following requirements for the project:

- See BHMg Scope of Work document attached.

## Proposal Assumptions & Clarifications

- The Village will provide access and assist with data gathering as required.
- Electric cost of service studies not included in this proposal.
- Village will share billing information and any historical load data for model generation.

## Project Schedule

BHMg assumes the following schedule for the project:

- See schedule section in attached scope of work.

## Cost Proposal

Compensation for the services provided in accordance with the agreement shall be a lump sum fixed fee amount of the following, which will be billed as percent complete monthly:

Description	Hours	Rate	Total
Electric System Study			\$86,500.00
<b>Total Lump Sum Cost</b>			<b>\$86,500.00</b>

## About Us

BHMg is a leading and reliable name in delivering excellent engineering services in the Midwest. Our engineers are recruited and well trained while keeping in mind the dynamic industry standards. We stay up to date with the new trends and technologies in the market.

BHMg was established in 1972 and has grown to approximately 75 professionals and support personnel. Among them are many registered professional engineers, including

electrical, mechanical, and civil engineers. The company currently has offices in St. Louis, MO and Collinsville, IL, with plans to expand to additional regions.

### The Team

We recruit the finest engineers and further train them into a team of excellent professionals. They work with the utmost details to perfection and review the same in several stages.

We have analyzed the needs of the project and selectively put together a team of suitably experienced professionals to provide our best services to you.

Meet the key members of our team. They are the leading factors behind our progressive development and growth.

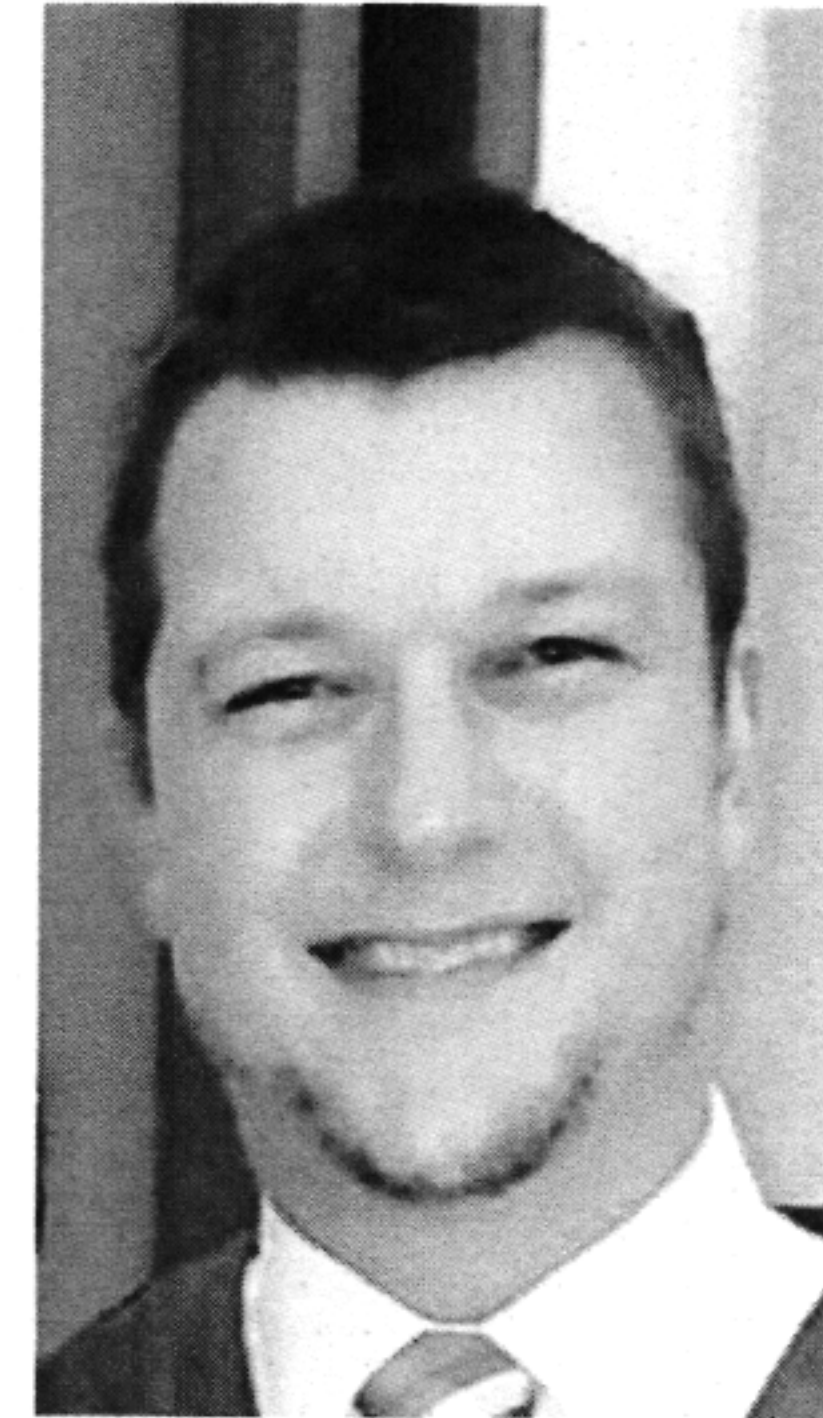
#### **Jason Jackson / Project Manager**

- BSME, PE
- 23 years experience
- jjackson@bhmg.com



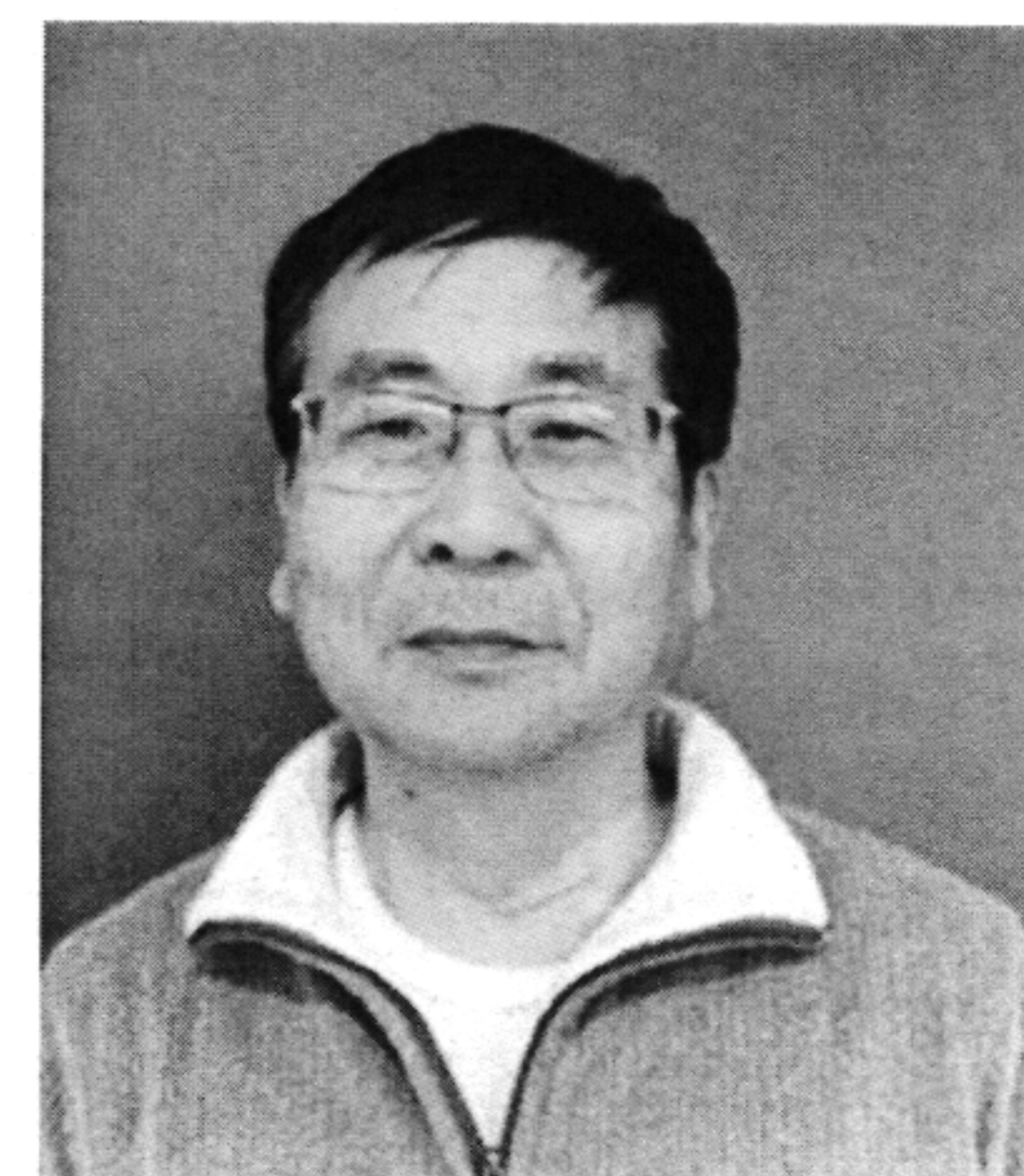
#### **Kyle Schaefer / Project Engineer**

- BSEE, MSEE, PE
- 10 years experience
- kschaef@bhmg.com



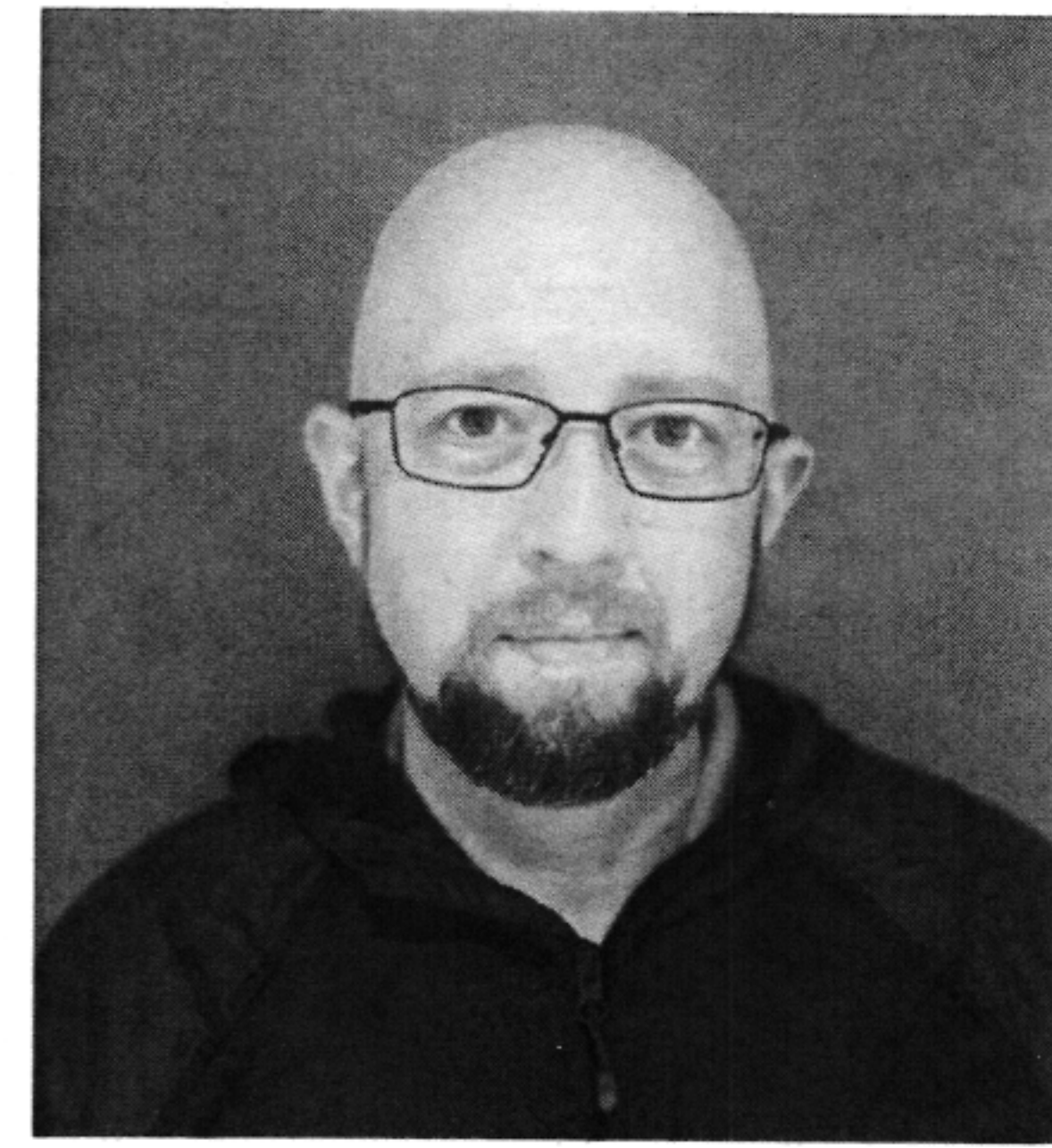
#### **Richard Gu / Engineer**

- BSEE, MSEE, PE
- 30 years experience
- rgu@bhmg.com



**Corey Jasper / Engineer**

- BSEE
- 18 years experience
- [cjasper@bhmg.com](mailto:cjasper@bhmg.com)



## References

Reference #1 – Rochelle Municipal Utilities (Rochelle, IL)

- Project: System Study
- Contacts: Blake Toliver, Superintendent of Electric Operations, [btoliver@rmu.net](mailto:btoliver@rmu.net), 815-622-1145

Reference #2 – Village of Peru (Peru, IL)

- Project: System Study
- Contacts: Eric Carls, Director of Engineering, [ericcarls@peru.il.us](mailto:ericcarls@peru.il.us), 815-224-6020

Reference #3 – Village of Rantoul (Rantoul, IL)

- Project: System Study
- Contacts: Jake McCoy, Director of Public Works, [jmccoy@village.rantoul.il.us](mailto:jmccoy@village.rantoul.il.us) 217-892-6526



# Terms and Conditions

To assure an understanding of matters related to our mutual responsibilities, these terms and conditions for services are made a part of this agreement for our services:

## **Amendments**

This agreement may be amended in writing providing both the Owner and Company agree to such modifications.

## **Compensation for Services**

The basis for compensation will be as identified in the agreement.

When "Lump Sum" payment is utilized, it shall include all labor and expenses (for the scope of work as defined in the agreement) incurred by the Company and shall not exceed the fixed payment amount without prior authorization of the Owner.

When a "Payroll Costs" payment is utilized it shall be computed by a multiplier factor times payroll cost plus reimbursable expenses.

The "Payroll Costs" means the salaries and wages paid to all personnel engaged directly on the work plus the cost of customary and statutory benefits including social security contributions, unemployment, health, sick leave, vacation, workman's compensation, incentive and holiday pay applicable thereto.

"Reimbursable Expenses" means the actual expenses incurred directly or indirectly in connection with the work including but not limited to the following: Transportation and subsistence, toll telephone calls, telegrams, reproduction or printing, computer time and outside consultants.

The "Multiplier" is a factor for general direct overhead, indirect costs, profit and other costs. The Multiplier factor rate shall be identified in the agreement.

## **Time of Payment**

The Company may submit monthly statements for services and expenses based upon the proportion of the actual work completed at the time of billing. Unless provided for otherwise, payments for engineering services will be due and payable thirty (30) calendar days from the issuance of the Company's statement.

## **Late Payment**

If the Owner fails to make any payment due the Company for services and expenses within the time period specified, a service charge of 1-1/2% per month will be added to the Owners account. This is an annual rate of 18%.

## **Limitation of Liability**

The Owner agrees to limit the Company's liability to the Owner and to all construction contractors and subcontractors where applicable, on this work, for damages to them, due to the Company's negligent acts, errors or omissions, such that the total aggregate liability of the Company to all those named shall not exceed \$50,000 or the Company's total fee for services rendered on this work, whichever is greater.

**Termination**

This agreement may be terminated by either party upon written notice. Any termination shall only be for good cause such as for legal, unavailability of adequate financing or major changes in the work. In the event of any termination the Company will be paid for all services and expenses rendered to the date of termination on a basis of payroll cost times a multiplier of 2.5 (if not previously provided for) plus reimbursable expenses.

**Reuse of Documents**

All documents including drawings and specifications furnished by Company pursuant to this Agreement are instruments of his services in respect of the work. They are not intended or represented to be suitable for reuse by Owner or others on extensions of this work, or on any other work. Any reuse without specific written verification or adaptation by Company will be at Owner's sole risk, and without liability of Company, and Owner shall indemnify and hold harmless Company from all claims, damages, losses and expenses including attorneys fees arising out of or resulting therefrom. Any such verification or adaptation will entitle Company to further compensation at rates to be agreed upon by Owner and Company.

**Estimates of Cost**

Since the Company has no control over the cost of labor, materials or equipment or over a Contractor(s) method of determining prices, or over competitive bidding or market conditions, his opinions of probable Project Cost or Construction Costs that may be provided for herein are to be made on the basis of his experience and qualifications and represent his best judgment as a design professional familiar with the construction industry, but Company cannot and does not guarantee that proposals, bids or the construction cost will not vary from opinions of probable cost prepared by him. If the Owner wishes greater assurance as to the construction cost, he shall employ an independent cost estimator.

# Acceptance and Signature

If you wish to engage our services, please provide your acceptance by signing below:

The Village of Chatham

Patrick McCarthy

Sign: Patrick M. McCarthy  
Print: Patrick M. McCarthy  
Date: 7-26-2023

BHMG Engineers, Inc.

Jason F. Jackson

Sign: [Signature]  
Print: Jason Jackson  
Date: 06/29/2023

**Scope Document**  
Village of Chatham, IL  
System Planning Study



Rev. 00  
June 29, 2023

**A. GENERAL DESCRIPTION**

Adequate, reliable, and efficient electric service is the goal of all electric utilities. To that end, long term planning for system maintenance and expansion is essential. The Municipal Utilities of the Village of Chatham has engaged BHMGG Engineers, Inc. (BHMGG) to review the existing system capacity and derive a plan for any necessary expansion due to anticipated load growth in the existing service territory.

This study reviews the existing electric system to identify any deficiencies in sufficiency and/or reliability, with the present electric system configuration and capacity, and offers engineering recommendations for cost effective improvements. Additionally, the study reviews planned growth areas for the same criteria.

**B. DETAILED WORK DESCRIPTION**

a. Load Review & Load Growth Forecast:

- i. Evaluate system-wide growth patterns based on historical, recent (last 10-year period) and expected future growth through 7-year future, based on information provided by the city, State, County and IMEA. This data is used to estimate future feeder and substation peak loading, load balance of circuits, system improvement needs, and for system analysis scenarios.

b. Establish System Planning & Design Criteria:

- i. Establish realistic planning criteria thresholds and objectives upon which short-term and long-term planning action and improvements should be based. The criteria are used to determine loading and reliability guidelines, acceptable voltage drop levels, scheduling of improvements, and contingency plans under sectionalized and major source and substation transformer outage conditions.

c. System Evaluation:

- i. Evaluate the City's electric system and provide comments, observations, and recommendations in line with the established system planning and design criteria. The substations and City-owned distribution system are evaluated on the basis of equipment ratings, operating configurations, reliability, maintenance programs, vintage, condition, and equipment capacities compared with projected load forecasts. The transformation fee agreements with IMEA are reviewed and different options for reducing total transformation costs to the City are evaluated.
- ii. The existing transmission system facilities serving the city are evaluated to determine interconnection and switching flexibility, looping capabilities, isolated segments, and overall operation of power supply to the City's electric system. The transmission system reliability, are also considered to evaluate power availability, interruption frequency, and emergency operating conditions.

d. Power Flow Analysis:

- i. Analyze the City's complete electric system using SKM analysis software. The system will be modeled on a system wide three phase basis.

**Scope Document**  
Village of Chatham, IL  
System Planning Study



Rev. 00  
June 29, 2023

- e. Capacity for Future Growth, System Improvement Recommendations
  - i. Evaluate all analysis and evaluation results to determine if any portion of the system may not meet the planning criteria based on the stated assumptions for future load growth. Solutions and system improvements (immediate, intermediate and long-term), are recommended as necessary to mitigate possible system performance issues in the form of a prioritized work plan with budgetary cost estimates.

**C. ROLES AND RESPONSIBILITIES**

- a. BHMg Responsibilities:
  - i. Complete System Study Analysis and presentations.

**D. CRITICAL DATES** – These are tentative dates and are subject to change.

a. Project Kickoff Meeting	1 day	Start: 8/7/2023	End: 8/7/2023
b. Data Gathering phase	8 wks	Start: 8/29/2023	End: 10/23/2023
c. System Modeling	8 wks	Start: 9/19/2023	End: 11/13/2023
d. Preliminary Results	2 wks	Start: 11/14/2023	End: 11/27/2023
e. Proposed Recommendations	3 wks	Start: 11/28/2023	End: 12/18/2023
f. Cost Estimate Generations	4 wks	Start: 12/12/2023	End: 1/8/2024
g. Client Review Phase	3 wks	Start: 1/9/2023	End: 1/29/2024
h. Final Presentation/Report	2 wks	Start: 1/30/2024	End: 2/12/2024

**E. BHMg JOB NUMBER**

- a. 3240

**F. PROJECT TEAM**

- a. Client Contact Details:
  - i. Primary Contact: Patrick McCarthy – Village Manager
    1. Office: (217) 697-5809
    2. Cell: (217) 341-8114
    3. Email: [pmccarthy@chathamil.gov](mailto:pmccarthy@chathamil.gov)
  - ii. Any questions, comments or concerns related to project should be addressed to the above-named individual.

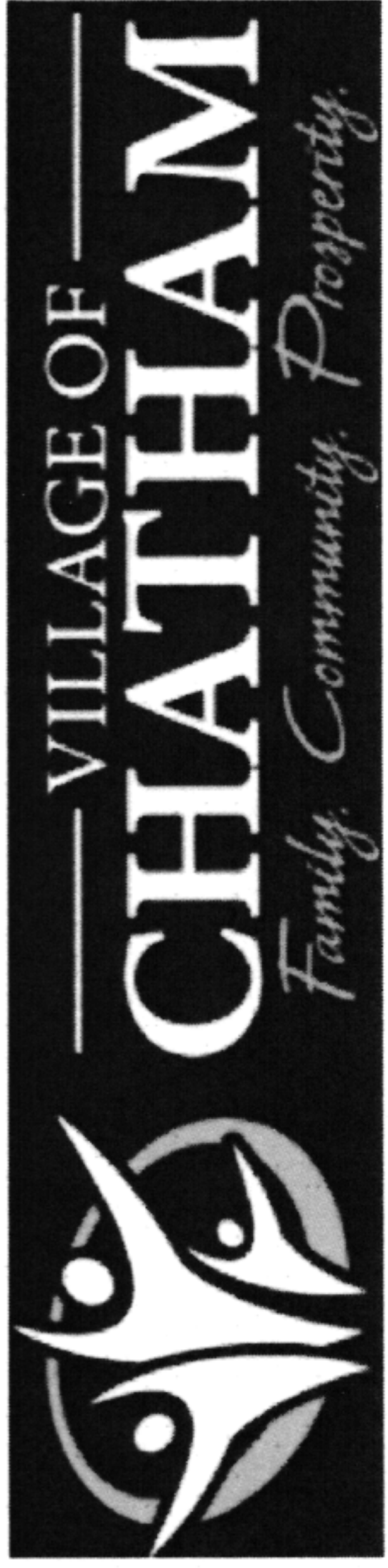
**Project Resources**

Jason Jackson – Project Manager, (636) 333-3926, [jjackson@bhmig.com](mailto:jjackson@bhmig.com)

Richard Gu – Lead P&C Engineer, (636) 333-3927, [rgu@bhmig.com](mailto:rgu@bhmig.com)

Corey Jasper – Power System Engineer, (636) 333-3834, [cjasper@bhmig.com](mailto:cjasper@bhmig.com)

Resumes for related education/experience are available upon request



# Electric System Study

## Proposed Project Schedule

Village of Chatham

ID	Task Name	Duration	Start	Finish	Qtr 2, 2023			Qtr 3, 2023	
					Feb	Mar	Apr	May	Jun
1	Project Kickoff Meeting	1 day	8/7/2023	8/7/2023					
2	Data Gathering phase	8 wks	8/29/2023	10/23/2023					
3	System Modeling	8 wks	9/19/2023	11/13/2023					
4	Preliminary Results Discussions	2 wks	11/14/2023	11/27/2023					
5	Proposed Recommendations	3 wks	11/28/2023	12/18/2023					
6	Cost Estimate Generations	4 wks	12/12/2023	1/8/2024					
7	Client Review Phase	3 wks	1/9/2024	1/29/2024					
8	Final Presentation/Report	2 wks	1/30/2024	2/12/2024					