

**ATTACHMENT A**

**TASK ORDER NO. 06**

In accordance with Section 1.2 of the Master Contract dated April 14, 2009 between the Village of La Grange (the "Village") and Baxter & Woodman, Inc. (the "Consultant"), the Parties agree to the following Task Number 6:

**1. Contracted Services:**

Baxter & Woodman shall perform an evaluation of the East Avenue Pumping Station as described in the attached proposal dated July 22, 2010. The scope of services shall be as defined in the attached proposal. All terms and conditions of the master task order contract dated April 14, 2009 with the Village of La Grange shall apply.

**2. Project Schedule** (attach schedule if appropriate):

Baxter & Woodman shall provide a draft report by Friday, October 22, 2010. Baxter & Woodman shall provide the final report by Friday, November 5, 2010.

**3. Project Completion Date:**

All Contracted Services must be completed on or before December 31, 2011.

**4. Project Specific Pricing** (if applicable):

Baxter & Woodman shall be compensated on a cost plus fixed fee basis in an amount not to exceed \$19,900.

**5. Additional Changes to the Master Contract** (if applicable):

N/A

All other terms and conditions remain unchanged.

**[signature page follows]**



**VILLAGE**

**CONSULTANT**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Director of Public Works

\_\_\_\_\_  
Name (Printed or Typed)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

If greater than, \$2,000, the Village Manager's signature is required.

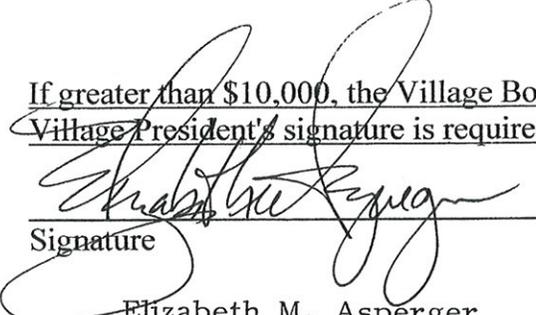
\_\_\_\_\_  
Signature

\_\_\_\_\_  
Village Manager

\_\_\_\_\_  
Date

If greater than \$10,000, the Village Board must approve the Task Order in advance and the Village President's signature is required.

\_\_\_\_\_  
Signature

  
Elizabeth M. Asperger

\_\_\_\_\_  
Village President

\_\_\_\_\_  
September 27, 2010

\_\_\_\_\_  
Date



Consulting Engineers

July 22, 2010

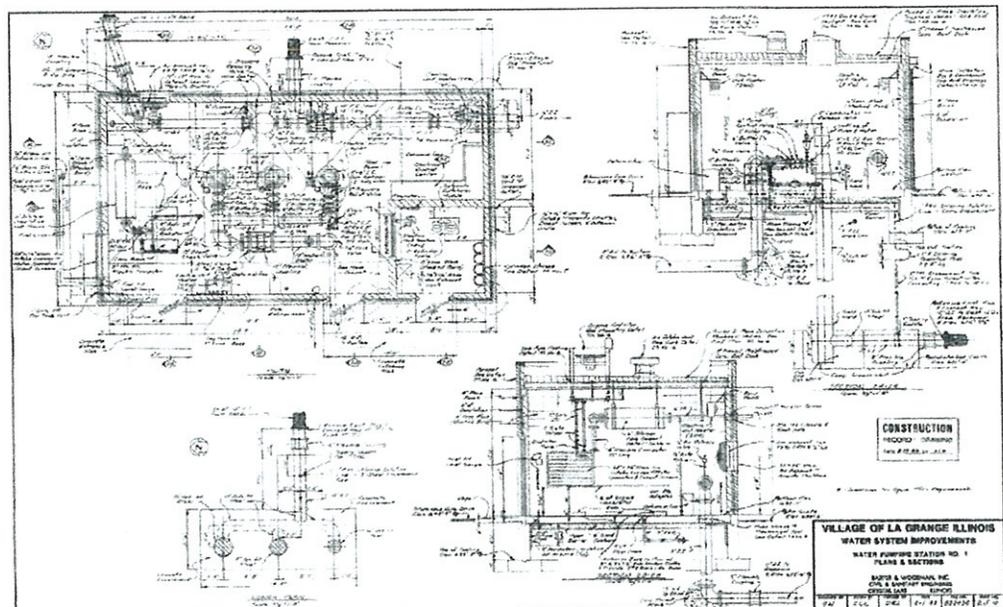
Mr. Ryan Gillingham  
Public Works Director  
Village of La Grange  
53 South La Grange Road  
La Grange, Illinois 60525-0668

**Subject: Village of La Grange – East Avenue Pumping Station Evaluation Study**

Dear Mr. Gillingham:

A safe, reliable supply of water is vital to the well-being of your community. Efficient long-term operation, control, and security is critical to the Village of LaGrange's water system. Baxter & Woodman is proposing a very unique set of skills and staff for the East Avenue Pumping Station Evaluation Study. Our team will consist of professional engineers, certified water operators, a licensed electrician, and control systems engineers. Baxter & Woodman's hands-on, practical, yet analytical approach to this assessment will allow us to provide the Village with a concise and useful report that will allow the Village to effectively plan for pumping station mechanical, structural, electrical and operational improvements.

Baxter and Woodman designed the existing 1.75 Million Gallon reservoir and pumping station in the early 1980s.



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Crystal Lake, IL 60012  
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Fax 815 455 0450

info@baxterwoodman.com

In 1993 the pumping capacity of the original station was augmented with the construction of a prefabricated, below grade pumping station, also designed by Baxter and Woodman. Unlike the original station, the 1993 pumping station has the capability to bypass the reservoir and pump water directly to the Village from the McCook supply. We have information available in-house that will allow us to begin the pumping station evaluation immediately.

Since the pump station's construction in 1984, many advances in energy conservation have become economically available to public utilities. The evaluation of the existing facility will include recommendations to reduce operating and maintenance costs.

Possible recommendations could include the use of variable frequency drives to start and stop the high service pumps rather than using pump control valves. Currently, the pumps start and stop against a closed valve, and the valve creates additional headloss; therefore, it may be possible to recover the cost of the drives in a relatively short period of time.

Another possibility is to use the pressure from McCook, which is currently being lost through a pressure reducing valve, to operate electrical generation turbines. This could allow the Village to recover some of its electrical operating costs whenever the reservoir is being filled.

An additional consideration for the Village is that grants and tax credits are available for facility improvements which result in a more energy efficient facility, as well as for a facility which becomes more sustainable or "green".

The East Avenue pumping station is located across the street from a residential area, and the storage of gas chlorination poses a threat to public safety. The evaluation may consider the use of liquid chlorine to replace the existing gas chlorination system. Since the Village receives water from the Village of McCook and the water has been previously treated and chlorinated, the Village should not need to feed a significant amount of chlorine. As a result, the evaluation may determine that the much safer liquid chlorine could be a viable alternative to chlorine gas.

Operation and routine maintenance are critical to maintain a pumping facility in peak operating and efficient performance. Our evaluation will include a review of operation and maintenance procedures to determine if the facility can be operated more efficiently to meet the needs of the Village. The operations portion of the evaluation will include a review of the Village's current emergency response plan and vulnerability assessment.

The scope of the investigation is as follows:

## **SCOPE OF SERVICES**

### **I. Project Management and Administration**

- A. Plan, schedule, and control the activities that must be performed to complete the project. These activities include:
- budget control and invoicing
  - schedule control
  - coordinating activities of engineering and production staff
  - reviews for the purpose of quality control, quality assurance, and permitting
  - project scope control
- B. Meet with Village staff.
- Initial project kick-off meeting and site visit
  - Final evaluation meeting
- C. Confer with Village staff via email on a regular basis (no less than bi-weekly) to clarify project status, discuss project progress, and solicit owner input on design decisions.

### **II. East Avenue Pumping Station Evaluation**

#### *Electrical/Instrumentation/Controls*

- a. Review electrical equipment including service entrance equipment, motor control equipment, conduit, conductors, and diesel engine generator to determine extent of deterioration and useful remaining life. Evaluate generator replacement alternatives, including opinions of probable cost. Review lighting system (indoor/outdoor).

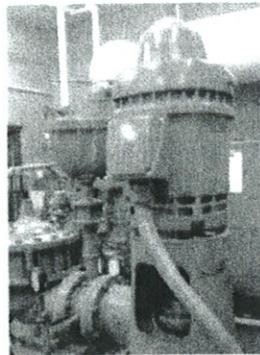
- b. Review instrumentation, including methods of recording and saving operating data. Review electrical billing over the past 10 years to determine cost per KWH and cost per MG pumped.
- c. Review current pump station supervisory system and evaluate life expectancy including availability of repair parts as well as available information and desired information. Evaluate an upgrade to a modern SCADA system.
- d. Review possible energy generation utilizing the water entering the ground storage tank and a simple turbine system.
- e. Make recommendations for equipment replacement, including cost estimates.

#### *Operations*

- a. Review operational data including chemical feed costs vs. chlorine residual, daily pumping data including gallons entering tank vs. gallons pumped out, etc. Review pump run times and options to improve pumping efficiency while reducing pumping costs.
- b. Review general condition of above grade and below grade pumping stations and make recommendations for maintenance and repairs.
- c. Review emergency response plan and vulnerability assessment for recommendations to be implemented. Evaluate means to maintain operations during emergency scenarios.
- d. Identify alternatives to automate pump station operation and reduce operational costs.
- e. Make recommendations for operational and maintenance procedural changes.

*Mechanical*

- a. Evaluate condition of physical facilities such as pipes, valves, flow meter, “can-style” pump intakes, pumps, chemical feed equipment, etc. to determine repair or replacement.



*Evaluate Condition of Pumps*

- b. Review pump curves and evaluate pump efficiency.
- c. Evaluate possible replacement of pump control valve with VFD’s or other “soft-start” options to reduce electrical costs.
- d. Evaluate liquid chlorine versus gas chlorine.
- e. Make recommendations including cost estimates of repairs or replacement.

**III. Submit Draft Report**

Summarize the results of the analysis, evaluation of alternatives, cost estimates, recommendations, and prioritized list of selected alternatives for the distribution system will be prepared and submitted to Village staff for review. We will meet with Village staff to go over comments on the draft report, and then incorporate staff comments and suggestions into the final report. Cost estimates for future improvements will be included.

**IV. Submit Final Report**

Ten (10) copies of the final written report will be prepared and submitted to the Village, along with an electronic PDF copy. The final report will be completed by the end of September, 2010.



Mr. Ryan Gillingham  
Village of La Grange

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**ENGINEERING FEE**

Our engineering fee for the East Avenue Pumping Station Evaluation Report project Items I-IV is based upon our standard hourly rates of compensation for actual work time performed plus reimbursement for out-of-pocket expenses including travel which will not exceed \$19,900.

We look forward to assisting you with this important project.

Very truly yours,

BAXTER & WOODMAN, INC.  
CONSULTING ENGINEERS

A handwritten signature in cursive script that reads "John V. Ambrose".

John V. Ambrose, PE  
Vice President

JVA:rk