

**VILLAGE PRESIDENT**  
Ray Danford

**VILLAGE CLERK**  
Jerry Menard

**VILLAGE TRUSTEES**  
Mike Blaies  
Steve Smith  
Tony Miller  
Rita Baker  
Seth Speiser  
Charlie Mattern

# VILLAGE OF FREEBURG

FREEBURG MUNICIPAL CENTER  
14 SOUTHGATE CENTER, FREEBURG, IL 62243  
PHONE: (618) 539-5545 • FAX: (618) 539-5590  
Web Site: www.freeburg.com

**VILLAGE ADMINISTRATOR**  
Dennis Herzing

**VILLAGE TREASURER**  
Bryan A. Vogel

**PUBLIC WORKS DIRECTOR**  
Ronald Dintelmann

**POLICE CHIEF**  
Melvin E. Woodruff, Jr.

**VILLAGE ATTORNEY**  
Weilmuenster Law Group, P.C

March 7, 2011

## NOTICE

### MEETING OF THE ELECTRIC COMMITTEE (Blaies/Smith/Miller)

An Electric Committee Meeting of the Village of Freeburg will be held at the Municipal Center, Executive Board Room, **Wednesday, March 9, 2011, at 5:30 p.m.**

### ELECTRIC COMMITTEE MEETING AGENDA

#### I. Items To Be Discussed

##### A. Old Business

1. Approval of February 8, 2011 minutes
2. Switchover of Ameren to Freeburg power
3. Village of Freeburg utility needs analysis
4. Replacement of old power plant doors
5. Franchise Fee (Ameren)
6. Highway lighting
7. HAPS
8. Contaminated Fuel in Generators
9. Lightning strike at old power plant
10. Fuel Cost Adjustment
11. Ameren Automated Metering
12. Arc Flash Study
13. Sale of scrap material/surplus material
14. Unisom purchase of cell tower
15. Spill containment/Wiegmann's expansion
16. Chubb Insurance Inspection

##### B. New Business

1. Repairs to Digger truck

##### C. General Concerns

##### D. Public Participation

##### E. Adjourn

At said Electric Committee Meeting, the Village Trustees may vote on whether or not to hold an Executive Session to discuss the selection of a person to fill a public office [5 ILCS, 120/2 - (c) (3)], litigation [5 ILCS, 120/2 - (c)(11)] personnel [5 ILCS, 120/2 - (c) (1) a.]; or real estate transactions [5 ILCS, 120/2 - (c)(5)].



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ELECTRIC COMMITTEE MEETING  
Wednesday, March 9, 2011 at 5:30 p.m.

The meeting of the Electric Committee was called to order at 5:30 p.m. on Wednesday, March 9, 2011 by Chairman Mike Blaies. Committee members present were Chairman Mike Blaies, Trustee Steve Smith, Trustee Tony Miller, Village Administrator Dennis Herzing and Assistant Public Works Director John Tolan. Guests present: Ray Matchett and Jane Kramper (entered late).

## A. OLD BUSINESS:

1. Approval of February 8, 2011 minutes: *Trustee Steve Smith motioned to approve the February 8, 2011 minutes and Trustee Tony Miller seconded the motion. All voting aye, the motion carried.*

2. Switchover of Ameren to Freeburg power: Dennis explained that we were unaware Ameren had a special electric rate for all electric homes which they don't offer to new customers anymore. Apparently, all customers that had that rate were allowed to stay on it. Ray brought in a year of bills and Dennis went through them and said in the winter the bills almost doubled. He has forwarded this information to Mike Gennin at IMEA who is looking it over. Dennis wants to set up a meeting with him and Dean Park. He thinks we may have to set up a special rate class to help these people out. Steve asked for how long and Dennis said he wants to have input from Mike and Dean on this. Dennis said we almost match up on the billing over the summer months. Dennis has told the office staff if customers call and complain, to have them bring in some of their previous Ameren bills. Dennis is hoping to be able to sort out who was on that special rate. Dennis may have Doc from IMEA contact Ameren corporate and see if they can tell us who had that special rate. He also wants them to find out how long that special rate is in effect. Dennis said that special rate only applies in the winter-time. He wants to come up with a rate that will be in line with the one Ameren had charged and for the same amount of time.

Dennis said we have counted 700 streetlights counted and calculated roughly with what Jane gave him from usage that it comes out to about an average of 75 kilowatt hours per unit - the small ones use 50 and the big ones use about 150. Using those numbers, our fuel factor for February would have been 0.0344 instead of 0.0359 which is about a .001 per kilowatt hour which is about \$2 per home for a typical 2000 kilowatt house. It won't make a huge difference on a normal bill. We had thought if it was a significant number, we could eat part of that cost but since it is not, it may not be worth pursuing. Dennis said the way Dean set up the fuel factor calculation is you take the kilowatt hours that you bill for divided by what you pay IMEA which gives you the cost per kilowatt hour, then you subtract out the base rate of 4.3¢ and what is left is your fuel factor. Dennis said the problem is that has been trending up as our costs from IMEA have been going up to the point where the fuel factor is getting up to 3 - 4 cents per kilowatt hour and our base rate varies from 6 - 8 cents

\_\_\_\_\_

depending on how much you use which raises the electric rate 30 - 40%. John said we have four customers left to switch over.

3. Village Utility Needs Analysis: Not discussed.
4. Replacement of old power plant doors: We received bids from Dave Stein and Louis Word. Word's quote is only for 2 doors. Dennis said Dave Stein's bid looks reasonable. Dennis thinks Ron would like to give the job to Dave Stein. He did a great job at the East lagoon for us. This will satisfy the concerns of the Fire Department and insurance company. The committee agreed to go with Dave Stein's proposal.
5. Franchise Fee (Ameren): Nothing new on this topic.
6. Highway lighting: We will work on this after the switchover is complete.
7. HAPS: John said the catalytic converters will be shipped later this week.
8. Contaminated Fuel in Generators: We will call Dave Schmidt to check the status of it.
9. Lightning Strike at old power plant: Dennis said we are waiting on BHM&G's bill for the capacitors and should be done.
10. Fuel Cost Adjustment: Discussed above.
11. Ameren Automated Metering: Dennis said the pole agreement has been sent back with some changes. He has not had a chance to do that yet. They want to change the name of the entity. They did not raise a concern about the price. He will try to get to it within the next week. Dennis said they did send back a list of the exact poles they want to use. He thinks it is at least 12.
12. Arc Flash Study: Dennis received Statements of Qualifications from BHM&G and also Martin Technical. We did send them to RW Beck who is doing the HAPS work for IMEA but did not receive one from them. Dennis said both of these companies are qualified but he thinks BHM&G should do it because they know their system. They have conducted arc flash studies for several other IMEA communities. He thinks the cost will be around \$30,000 and said we don't have a choice - it needs to be done. Dennis said he and Ron will sit down with them and get a price worked out.
13. Sale of scrap material: John thinks some of the transformers have been picked up. Dennis said we received test results back and they tested clean. Julie sent out the information to the 3 companies to get bids on the scrap transformers.
14. Unisom purchase of cell tower: Dennis said the Unisom representative will be here next month. Tony said cell towers may be a thing of the past. He said there is something else out that you can put on the corner of a building that replaces the cell tower. Dennis said we'll see what the rep has to say at the next meeting.
15. Spill containment/Wiegmann: Dennis said we haven't done anything more on that. He wants to go through the budget again. We still need to talk to Wiegmanns.



16. Chubb Insurance Inspection: Mike asked if this was the annual inspection on the equipment. Dennis said Ron was getting some results from last year from BHM&G to forward to John Osseck. Dennis needs to check the status with Ron.

**B. NEW BUSINESS:**

1. Repairs to Digger Truck: Dennis said the turret in the digger truck is damaged and needs to be fixed. It is a big safety concern that needs to be addressed. Dennis said there is \$160,000 in the new budget to buy a truck. Even if we ordered a new digger truck today, it would be 8 months before we got it. John said this is the equipment we use when we need to set a pole. Dennis said it is obvious it is a major repair job because the quote states two men at 66 hours. Since this is such a safety concern, the committee agreed to have Terex start the repair work.

*Trustee Steve Smith motioned to recommend Terex Utilities repair the digger truck at a cost not to exceed \$15,000.00 and Trustee Tony Miller seconded the motion. All voting aye, the motion carried.*

**C. GENERAL CONCERNS:** None.

The annual EPA emission report came back fine. Copies of the report were provided to the committee.

**D. PUBLIC PARTICIPATION:** None.

**E. ADJOURN:** *Trustee Steve Smith motioned to adjourn at 6:30 p.m. and Trustee Tony Miller seconded the motion. All voting aye, the motion carried.*



Transcribed from tape by  
Julie Polson  
Office Manager



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ELECTRIC COMMITTEE MEETING  
Tuesday, February 8, 2011 at 5:30 p.m.

The meeting of the Electric Committee was called to order at 5:34 p.m. on Tuesday, February 8, 2011 by Chairman Mike Blaies. Committee members present were Chairman Mike Blaies, Trustee Steve Smith, Trustee Tony Miller, Village Administrator Dennis Herzing, Public Works Director Ron Dintelmann and Office Manager Julie Polson. Guest present: Janet Baechle (left at 5:52 p.m.).

## A. OLD BUSINESS:

1. Approval of January 12, 2011 minutes: *Trustee Steve Smith motioned to approve the January 12, 2011 minutes and Trustee Mike Blaies seconded the motion. All voting aye, the motion carried.*
2. Switchover of Ameren to Freeburg power: Ron said we are halfway to the nursing home and are ready to resume once the weather improves. He also said we just need to be careful with all of the other facilities in the area and need to wait for the snow/ice to melt. Dennis said he also received a separate bill from Ameren for his security light. Since that happened, he sent a letter to each resident that had been switched over and advised them not to pay a bill from Ameren for security lights.
3. Village Utility Needs Analysis: Dennis said the proposed ordinance was provided at last month's meeting. He said the difference in price between the 10-year and 20-year agreement was not that significant, so if we chose the 10-year option, we would lose a little money but keep our future options open. Tony reminded Dennis we were going to ask surrounding communities what they negotiated in their franchise agreements with Ameren.
4. Replacement of old power plant doors: Ron met with both Dave Stein and Louis Word and is waiting on pricing from them.
5. Franchise Fee (Ameren): Nothing new on this topic.
6. Highway lighting: We will work on this after the switchover is complete.
7. HAPS: Ron had the meeting with BHM&G and the contractor on January 18th. Ron said the converters will take 6 - 8 weeks to build and will probably receive them in April. It was suggested at the meeting that we replace the mufflers with the converters and Dennis said it might be a good idea with respect to future maintenance issues. Ron feels these converters will never wear out. He said 5 of them will be alike and interchangeable on the CAT units while the 6th will only work on the Worthington unit.
8. Contaminated Fuel in Generators: Dave Schmidt has started work on repairing the generator. Ron thinks it will cost in the neighborhood of \$5,000 to fix it which is



much cheaper than buying a new generator. It should be done within the next month or so.

9. Lightning Strike at old power plant: BHM&G will start work on the capacitors on February 15th, weather permitting. Julie will advise the claims adjuster.

10. Fuel Cost Adjustment: Ron said he has assigned Randy and Tim to start mapping the street lights tomorrow. Dennis said right now the electric customers are paying for the lights. He said our options are to have the street department pay for the lights or have the electric department absorb the cost. Dennis does not think the street department can absorb this cost. Ron commented it is not fair to make the citizens to pay for the lights.

11. Ameren Automated Metering: Dennis will check the status on this.

12. Arc Flash Study: Dennis put the public notice in the paper for proposals. He said we will send a copy of this to BHM&G and Ron found another firm to send it to. Ron will check with IMEA to see who is conducting their HAPS work and send them a proposal. Steve suggested we have an area on our website for public notices. Julie will check with CompuType to see if they can do some work on the website until she gets trained.

13. Sale of scrap material: Two ordinances were provided to the committee for the sale of scrap material and surplus material. The scrap material ordinance covers transformers that are not usable and authorizes Ron to dispose of them. He plans to sell them to Solomon Corp., who is legally authorized to dispose of PCB contaminated transformers. The surplus ordinance allows us to sell the transformers that we don't use. He has talked to T&R and Solomon who are willing to purchase them.

*Trustee Tony Miller motioned to recommend to the full Board the ordinance authorizing the sale of surplus transformers and the ordinance authorizing the disposal of scrap material be approved and Trustee Steve Smith seconded the motion. All voting aye, the motion carried.*

14. Unisom purchase of cell tower: Unisom offered to buy out our existing 8-year lease with AT&T for their cell tower at a price of \$60,000. Mike did not like that it was a perpetual agreement and Dennis agreed. The committee did not feel it was a good idea to enter into this agreement at the present time and instructed Dennis to tell them no. We'll see if they come back with another offer.

15. Wiegmann expansion: Ron received an email from Roger Skaer who stated Wiegmann wants to upgrade their meter in order to monitor their peak. Ron has not heard anything from Roger about the spill containment project and the \$30,000 from IMEA. Ron would like to have Dean from BHM&G come back over and present a more solid proposal and see if Wiegmann would be willing to participate. Dennis said when he and Ron went to review Wiegmann's situation, they found more problems than not having the spill containment dykes so we need to correct everything. With Wiegmann's expansion, Ron said we will go ahead and put the new service in at the warehouse.



**B. NEW BUSINESS:** Ron brought up our spill containment program and the need to get some issues taken care of. He talked to Gregg Blomenkamp, Sr., about moving some dirt at the new power plant in order to make room for spill containment vessels. He talked to Kohnen Concrete who has the containment vessels that the transformers would be placed in. It would cost about \$10,000 for this to be done and would be taken out of next year's budget. Ron said it would be cheaper to do this rather than build a permanent wall. He also liked the fact that the containment vessels are movable and meet the spill control requirements. Ron said it would be a nice, neat transformer yard.

Ron said he met with John Osseck of Chubb Insurance who requested some transformer oil samples, an also oil analysis on the units dedicated to IMEA and the infrared scan. Ron asked Julie to try to find the results letter from BHM&G. The committee was fine with BHM&G conducting the infrared scan.

Dennis said we moved the \$100,000 targeted for a new bucket truck over to the HAPS line item to start covering BHM&G's engineering costs.

Ron provided a quote from 1st Choice Fencing Services who installed the fence at the new power plant. The gate doesn't open when the power is out so we need to correct the problem. Their quote amounted to \$750.00 to take care of this issue. The committee agreed to the quote to install a walk gate.

**C. GENERAL CONCERNS:** None.

**D. PUBLIC PARTICIPATION:** Before Janet left, she thanked the public works department for keeping the power on in the storm.

**E. ADJOURN:** *Trustee Steve Smith motioned to adjourn at 6:33 p.m. and Trustee Tony Miller seconded the motion. All voting aye, the motion carried.*



Julie Polson  
Office Manager



DRS Construction & Landscaping, LLC

5618 Seasons Ridge  
Smithton, IL 62285  
IL LIC# 104-015310  
618-406-1486

# Estimate

Date	Estimate #
2/14/2011	131

Name / Address
Power Plant Freeburg II

Project
Power Plant Door re...

Description	Qty	Rate	Total
Replace Exterior Doors -Includes all 3 exterior doors. Includes removal, installation of new metal doors including panic hardware (specs on additional sheet)  Materials: 4,527.00 Labor: 22 hours at \$50/ hr \$ 1100.00		6,189.70	6,189.70
<b>Total</b>			\$6,189.70



PHONE: 618-235-5678

FAX: 618-235-2169

# COMMERCIAL DOOR



# HARDWARE SERVICE

3525 WEST MAIN STREET  
SUITE 200  
BELLEVILLE, IL 62226

02/07/2011

## PROPOSAL

CECO DOOR PRODUCTS

CORBIN/RUSSWIN

SUBMITTED TO:  
DRS CONSTRUCTION

JOB: VILLAGE OF FREEBURG  
POWER HOUSE.

YALE LOCKS

For the sum of \$4,527.00 we propose to supply:

PDQ LOCKS

(2) Ceco 3/4 X 7/0 18 GA. Galv. metal door and 16 GA. GALv. frame with 24" X 30" lite kit with 1/4" wire glass, (6) non-ferrous hinges, (2) Yale 2100 series stainless steel rim exit device with keyed lever on exterior, (2) closer, (2) set threshold, weather seal and sweep.

NORTON

(1) Ceco 3/0 X 7/0 18 GA. Galv. metal door and 16 GA. GALv. frame with 24" X 30" lite kit with 1/4" wire glass, (3) non-ferrous hinges, (1) Yale 2100 series stainless steel rim exit device with keyed lever exterior trim, (1) closer and (1) set threshold, weather seal and sweep.

RIXON

We hereby propose to furnish materials— complete in accordance with the above Specifications, for the sum of :

HAGER HINGERS

**FOUR THOUSAND FIVE HUNDRED TWENTY SEVEN and 00/100 Dollars**  
**(\$4,527.00)**

PBB HINGERS

**TERMS:- 50% DOWN OR NET15 WITH APPROVED CREDIT.**  
**PRICE DOES NOT INCLUDE TAX, INSTALLATION OR FINISH PAINTING OF NEW FRAMES & DOORS.**

ROCKWOOD

All material is guaranteed to be as specified. Any alteration from above specifications involving extra costs will be executed only upon written orders and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accident or delays beyond our control. This proposal subject to acceptance within 30 days and it is void thereafter at the option of the undersigned.

AIR LOUVERS

NATIONAL GUARD PRODUCTS

Authorized Signature: Kan Beyon

KOLBE-KOLBE

### ACCEPTANCE OF PROPOSAL

The above prices, specifications and conditions are hereby accepted. You are authorized to do the work as specified. Payments will be made as outlined above.

WOODFOLD

ACCEPTED: Signature \_\_\_\_\_

DATE: \_\_\_\_\_ Signature \_\_\_\_\_

MANKO

CORRIM

GRAHAM

**TERMS:** Cash upon delivery unless stated otherwise. **FINANCE CHARGE & COLLECTION:** Invoices past due subject to finance charge of 1-1/2% per month (18% annum). The undersigned agrees to pay Commercial Door & Hardware Service all costs and expenses (including reasonable attorneys' fees) incurred by Commercial Door & Hardware Service in connection with the collection of any amounts past due. **LOSS & DAMAGE CLAIMS:** Must be noted immediately on shipping ticket and signed by Commercial Door & Hardware Service representative. **RETURNS:** No returns accepted without written authorization and final approval of management. Authorized returns shall have a minimum of 20% restocking fee. **SPECIAL MADE GOODS ARE NOT RETURNABLE & CANCELLATIONS & ORDER CHANGES:** Orders in progress will be invoiced for the amount of work completed. **UNLOADING OF MATERIAL:** Customers shall assist unloading of large items at jobsite. **CODE ACCEPTANCE, BUILDING PERMITS & INSPECTION FEES:** It is the responsibility of the buyer, owner, architect or builder to apply to the proper authorities for code acceptance and is NOT the responsibility of Commercial Door & Hardware Service. Building permit & inspection fees are not included and are the responsibility of the buyer. **PRICES:** good for 30 days, unless stated otherwise. **CONTRACT AGREEMENT:** By executing this document, buyer agrees that the entire agreement between Commercial Door & Hardware Service and the buyer is expressly limited to the written terms of this contract. **ALARM/SECURITY SYSTEMS:** Commercial Door & Hardware Service will NOT be responsible for security system wiring, sensors or parts that become damaged or broken during the replacement of any doors, frames and/or hardware.



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1356 S. Fifth St.  
St. Charles, MO 63301

Office # (636) 443-0375  
Fax # (636) 443-0376  
24 Hour # (636) 530-0013  
Toll free # 1-877-275-0013

# Hunter Contracting & Development

To: Julie Fax: (618) 539-5590

From: Louis Word Date: 2-14-11

CC: Pages: 2

Ref: Power Plant bid

Urgent     Reply ASAP     Please Comment     Please Review     For your Info

.....





February 14, 2011

Village of Freeburg  
14 Southgate  
Freeburg, IL 62243

RE: Exterior Door Replacement at 412 W. High Street

To Whom It May Concern,

We are pleased to submit a bid for your review for furnishing all materials, labor, equipment, insurance, tools, etc. to do the following work.

1. Remove two (2) exterior steel doors including all door hardware (panic bars, closers)
2. Install two (2) new exterior steel doors (Village of Freeburg to provide electric for the new doors).
3. We will clean up and remove all work related debris and/or materials.

**Price for the above scope of work**

**\$ 4,720.00**

**Note:** The above price does not include a third door. At this time, that door has not been inspected; we appreciate the opportunity to bid and will make inspection arrangements upon your request. If you have any questions or concerns, please feel free to contact me directly at (314) 504-4489 or my office at (636) 443-0375.

  
\_\_\_\_\_  
Louis Word  
Hunter Contracting and Development

\_\_\_\_\_  
Date

\_\_\_\_\_  
Village of Freeburg



February 14, 2011

Dennis R. Herzing, P.E.  
Village Administrator  
14 Southgate Center,  
Village of Freeburg, IL 62243

Mr. Herzing:

Martin Technical would like to be considered for the Village of Freeburg arc flash analysis project for your power plants and wastewater treatment facility.

We believe that we are uniquely qualified for this project and provide several advantages, including:

- Recent & relevant experience with arc flash analysis for power plants, wastewater treatment facilities and municipalities.
- One of the most experienced arc flash engineering team in the world.
- One of the few national companies whose primary business is arc flash analysis.
- We don't sell electrical equipment, PPE or other services that might compromise or influence the outcome of our studies.

I will personally be traveling near Freeburg, IL on March 7<sup>th</sup>, so if there is a need or opportunity to meet on the 8<sup>th</sup> it would be easy to make arrangements.

Best regards,



James R Schuster  
CEO



**Martin Technical™**

**Arc Flash Analysis Statement of  
Qualifications**

**For**

**Village of Freeburg**



*Making Facilities Better, Safer and More Efficient*

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## Martin Technical Company Background

### About the Firm

Martin Technical makes facilities better, safer and more efficient through engineering, consulting and training services. Our team of experts combine their past experience with today's technologies to provide the best solutions for our partners. Based in Denver, CO and with satellite offices and team members spread throughout the United States, we service customers of all sizes and in all industries on a global basis.

### What Differentiates Martin Technical

- ▶ **Experience** Martin Technical actively recruits team members that have both practical field experience and the right technical or engineering skills. Having both the technical skills and knowledge of real world applications allows our team to provide better understanding of the customer's needs and the best solutions.
- ▶ **Quality** Our commitment to details along with our core competencies has developed a solid reputation for Martin Technical as a best-in-class company. Our concentration and vision is to continue to build our skill set and provide specialized and customized services, focusing on our clients' needs for efficient, productive, scalable, secure and dependable infrastructures.
- ▶ **Dependability** We proactively reduce project costs, meet deadlines and exceed expectations throughout each project phase, from planning through construction. We measure our successes through positive client feedback, repeat business and solid client relationships.

### Services

The diversity of our specialized services and our workforce has enabled Martin Technical to undertake, and successfully complete, many types of projects in the Commercial, Industrial, Environmental and Institutional arenas.

- Power Distribution Systems Analysis and Studies: Determine its existing condition, conduct a needs assessment and electrical maintenance program. Arc flash hazard analysis, short circuit studies, protective device coordination, electrical load flow studies, motor starting studies, and one line diagram development.
- Electrical Safety Services: Electrical Safety Audits, Lockout / Tagout Programs, Qualified Worker Certification, Infrared Inspections, Electrical Safety Program Development and Electrical Safety Training.
- Training: Facility and Plant Maintenance and Management Training
- Engineering design of electrical power distribution systems, prepare for unprecedented electric power demands to maintain 24x7 operations.

## Why Martin Technical

Because of our electrical specialization and our experience in conducting arc flash analysis on all types and sizes of electrical systems, Martin Technical has the capability to provide an effective and efficient arc flash program and analysis.

Our skills will enable us to evaluate the existing electrical systems infrastructure; and perform electrical analysis expeditiously, while proactively incorporating electrical safety opportunities.

Martin Technical has developed a solid reputation as engineers who have the technical competence as well as understand our client's key business drivers, the field conditions as well as facility requirements for a seamless implementation.

### Arc Flash Focus

Unlike many of our competitors, Martin Technical is an arc flash analysis and electrical safety specialist company with over 80% of our revenue from these services.

### Team Member Expertise & Experience

Our arc flash team members are some of the most experienced in the world, with some having done nothing but arc flash analysis since 2002. Some of our team members have done hundreds of arc flash analysis jobs, compared to the industry average of dozens. Our team members include keynote speakers, college professors, authors and board members of industry organizations.

### Unbiased Reporting

As we are not affiliated with nor sell electrical equipment, PPE or other downstream services, we remain an independent consultant unbiased to offer real world solutions based on engineered systems that are not product driven.

### Quality Assurance & Quality Control (QA/QC)

Martin Technical takes QA/QC so seriously that we developed the Westchester County Department of Public Works engineering group's QA/QC program that was implemented to monitor the performance of all professional engineering service firms. The caliber of the people on our team is exceptional as we all strive toward the company's common mission of quality assurance! Our internal quality assurance and quality control program is managed on a routine basis by the President and Senior Management team.

### On-Going Training

Technical excellence from the engineering professional is paramount to the success of all our projects. Successful projects require a combination of technical excellence, a thorough understanding of the client's business, commitment and enthusiasm of the team to see the project through.

## Commitment to the Internal Control Process

- Understand the Client's Needs First.
- Team Input and Communicate.
- Think of Big Results – Set & Maintain High Expectations.
- Develop a Positive Vision - Begin with the End in Mind.
- Encourage Team Members and Create Accountability.
- Avoid "Time Wasters" and Track & Monitor Success.
- Evaluate Process and Revise as Needed.
- Overall Commitment to Practice the Standard Operating Procedure.

## Planning

Through proper planning we proactively identify and address potential challenges, and create opportunity through those challenges.

## Measure Performance

We have a high rate of repeat clientele and their satisfaction is evaluated and measured on an on-going basis. They have been the catalyst for our growth and development.

## Flexibility, Adjust & Change

We have the ability to react quickly to maintain efficiency and effectiveness.

## Execution

We believe our response and execution during moments of challenge and adversity will differentiate us most from our competition. Our culture requires everyone to embrace accountability to each other and ultimately, to the client.

## Quality / No Corner Cutting

We take every measure to provide the most complete and detailed service possible. We do not cut corners.

## Dependability

We proactively reduce project costs, meet deadlines and exceed expectations throughout each project phase, from planning through construction. We measure our successes through positive client feedback, repeat business and solid client relationships.

## Project Organization & Resumes

Martin Technical Power System Engineering Team is a diverse group of power engineers, including professional engineers, master degrees in power engineering and business administration and university professors, who have an average of 12 years of experience with the design and analysis of power systems and equipment by nearly every industry manufacturer for nearly every type of power system.

The Martin Technical engineers are among the most experienced and respected teams of power system engineers in the industry, with industry-standard software, advanced modeling and analysis capabilities. We provide engineering and consulting services, for electric power systems, that focus on understanding customer requirements and developing strategies to satisfy ever-changing business and energy needs.

Martin Technical engineers conduct services for clients throughout the United States and understand the importance of meeting clients' goals. Meeting these goals are not limited to engineering, they extend to meeting project budgets and deadlines. Our engineers consistently deliver completed projects that meet or exceed clients' expectations, while still being on time and under budget.

This section includes summary resumes of Martin Technical, Project Manager and staff members likely to be assigned to the project, and are included for your review. The employees identified and included in this proposal are a sample of the engineering staff at Martin Technical.

Mark B. Cavallaro, P.E. will serve several functions, including Project Manager. He will be directly involved with the details of the analysis and as he is a Master Electrician with formal NFPE 70E and electrical safety training. He will be the primary author of the analysis report and provide overall QA/QC review of project activities.

Each of our engineers has the education, training and experience to perform power system engineering and analysis including arc flash hazard analysis projects. They have attended formal training on conducting analysis and NFPA-70E training, and all actively participate in the company's internal training program.

**The following are selected team member biographies**

**Mark B. Cavallaro, P.E.**  
Chief Engineer & Project Manager

## **SUMMARY:**

Mr. Cavallaro has over 22 years of experience in the electrical industry including: engineering, design, system analysis and studies, cost estimating, value engineering, construction management, on-site field engineering, testing and installation of power distribution systems for commercial, municipal, industrial, institutional and environmental facilities and projects. Mark is both a Professional Engineer and Master Electrician. He is an Adjunct Professor of Graduate Studies in Power Engineering and has served as an expert witness in litigation cases in the electrical industry. He has excellent managerial, communication and personal skills.

## **EDUCATION & REGISTRATION:**

- Villanova University, Villanova, PA  
Bachelor of Science - Electrical Engineering
- Professional Engineer (P.E.)
- Master Electrician

## **EXPERIENCE:**

### **Martin Technical – Chief Engineer & Project Manager**

Mark is actively involved with all client relations, services and projects. Mark is the lead technical engineer for the company and is responsible for all quality control for each project. Responsibilities include design engineering, power system studies and analysis, cost estimating, value engineering, claims review, construction reviews/reports and electrical training.

### **Malcolm Pirnie Consulting Engineers, Inc. - Engineer**

Mark was involved with the electrical engineering and design activities, related to the electrical power distribution and instrumentation requirements for industrial and environmental facilities. Designs include distribution system planning, design and system analysis, power and lighting layouts, selection and specification of electrical equipment, engineering studies, instrumentation and control engineering. Construction administration responsibilities include; the review of shop drawings, preparation of costs estimates and the negotiation of change orders with contractors, assist contractors in the interpretation of contract drawings, plant start-up activities, conduct site visits with installation inspections and prepare sketches to resolve field conditions.

### **B.A.C. Electrical Construction Co., Inc. - Engineer**

Mark provided electrical engineering and technical support for office and field staff. He performed engineering analysis and re-designs of various types of electrical systems. He was responsible for developing coordination/as-built drawings, detailed installation drawings and point-to-point interconnection diagrams between all electrical and instrumentation control devices, including panels and equipment. Responsibilities also included: value engineering, project management, estimating, and coordinate material purchasing.

## **AREAS OF EXPERTISE:**

- Power distribution system engineering & design of 38 kV, 15 kV, 5 kV & 600 volt power systems.
- Power system studies and analysis, including: short circuit studies, protective device coordination studies and arc flash hazard analysis.
- Stand-by generator design and transfer schemes.
- Protective relaying schemes.
- Switchgear schematics for synchronization and breaker controls.
- Field surveys and data collection including electrical equipment testing and operation.

**Russ Strickler, P.E.**  
Sr. Electrical Engineer

## **SUMMARY:**

Mr. Strickler has began as an apprentice electrician installing electrical systems. After four years of apprenticeship, he passed the Colorado State Electrician Exam and became a licensed Electrician. His experience as a Journeyman Electrician has proved invaluable to electrical engineering. His expert knowledge of installation is implemented into his designs-this skill set and design perspective is rare among electrical engineers.

## **EDUCATION**

University of Colorado

B.S. in Electrical Engineering,

Emphasis in Power; Minor in Mathematics

CITC, Lakewood, Colorado

Electrical Technology, Fundamentals of Electrical Installation and Theory

## **EXPERIENCE:**

### **Martin Technical – Sr. Electrical Engineer**

As a Sr. Electrical Engineer, Russ' responsibilities include design power system studies and analysis with emphasis on arc flash analysis. He is responsible for quality control and project management for studies under his direction.

### **Forerunner Corporation – Contract Electrical Engineer**

Performed short-circuit, coordination and arc flash studies, Designed electrical systems for compressor stations.

### **Mazzetti & Associates – Electrical Engineer**

Commissioning, Design electrical systems for data centers and health care facilities

### **Assoc of Builders & Contractors / San Diego Community College - Instructor**

Instructed bi-weekly course in electrical studies

### **Berg Electric - Electrical Engineer**

Organized and managed commercial projects, Drafted 2-D and 3-D blueprints, designed commercial electrical systems, installation of electrical systems.

## **AREAS OF EXPERTISE:**

- Power system studies and analysis, including: short circuit studies, protective device coordination studies and arc flash hazard analysis.
- Power distribution system engineering & design of 38 kV, 15 kV, 5 kV & 600 volt power systems.
- Protective relaying schemes.
- Switchgear schematics for synchronization and breaker controls.
- Field surveys and data collection including electrical equipment testing and operation.

## Mike Woodruff

Sr. Field Technician & Electrical Engineer

### SUMMARY:

Mr. Woodruff has over 20 years of experience in electrical engineering and electrical safety. He has been a full-time data collector for arc flash analysis since 2004, making him perhaps the most experienced arc flash data collector in the world. His skills include: arc flash hazard analysis, field data collection, electrical safety compliance, electrical safety training and electrical engineering.

### EDUCATION

Purdue University  
Bachelor of Science in Electrical Engineering  
Iowa State University  
Masters in Business Administration  
Master Electrician

### EXPERIENCE:

#### **Martin Technical** – Sr. Field Technician & Electrical Engineer

As a Sr. Field Technician, Mike is responsible for interfacing with the customer from understanding the project all the way through to the close of the project. Jobs include customer consultation on arc flash, arc flash data collection, report delivery, label application and electrical safety training.

#### **Lewellyn Technologies** - Data Collection Specialist

- Developed and managed the arc flash data collection team for Lewellyn
- Electrical Safety Trainer

#### **Cell Rover, LLP.** – Vice President of Engineering & Operations

- Managed team that collected signals and geographic data in the field and transferred data to large central databases. Redistributed processed data to wireless operators.

#### **American Mobile Satellite** – Vice President of Technology and Operations

- Directed 200 staff and development / management of IT, engineering, telecommunications and operations of \$70M wireless data communications company.

#### **Northrop Corporation** – Director, Quality Assurance & Total Quality Management

- Managed division quality assurance and reliability. Developed and implemented TQM philosophy

#### **Rockwell International** – Applications Engineer, Quality Assurance Manager

### AREAS OF EXPERTISE:

- Arc flash hazard analysis.
- Power system operation.
- Data Collection
- Electrical Safety Compliance
- Electrical Safety Training

**Adrian Cocoli**  
Senior Electrical Engineer

## **SUMMARY:**

Mr. Cocoli has more than 16 years experience in the electrical industry including engineering design, power systems analysis, equipment and system startup and project management of various types and sizes of projects. He is experienced in the engineering and design of power systems for all types of facilities, development of power system analysis and studies, including arc flash hazard analysis, project management and equipment field surveys. Adrian has excellent managerial and personal skills and a great team player.

## **EDUCATION:**

- Polytechnic University of Tirana - Tirana, Albania  
Bachelor of Science - Electrical Engineering
- Iona College – New Rochelle, NY  
Graduate Certificate in Telecommunications
- New York University – New York, NY  
New York Electrical Code, National Electrical Code and Electrical System Design

## **EXPERIENCE:**

### **Martin Technical - Senior Engineer**

Adrian is responsible for managing the engineering team, including assisting in their performance and quality control. He is also involved and is responsible for: power system analysis and related calculations, engineering design of power distributions systems, relay applications, generator system and equipment designs, written correspondence and reports and electrical construction cost estimating.

### **Independent Contractor**

Managed an electrical field crew for electrical construction projects, performed electrical installations, cost estimates and engineering design for commercial and residential buildings.

### **New York Board of Trade (NYBOT) - Senior Engineer**

Analyzed, designed, installed, connected equipment on the trading floor. Reviewed and qualified systems and engineering specifications from different vendors. Managed, prepared and estimated various projects budgets and assisted in the cost reduction initiatives for various projects.

### **CT CORP - Engineer**

Designed, installed and performed troubleshooting of different electrical systems. Maintained and designed infrastructure including the review of drawings and diagrams of new data centers.

### **Abn Amro - Technician**

Managed daily operations for electrical and mainframe networks. Coordinated accurate functioning and connectivity of all equipment locally and remotely.

### **O.M.T Electrical Construction - Electrical Engineer**

Designed and implemented various electrical installations in the industrial, commercial and residential markets. He was also responsible for marketing, client relations, project management and estimating.

## **AREAS OF EXPERTISE:**

- Power distribution system engineering and design.
- Power system studies, including: short circuit analysis, protective device coordination and arc flash hazard analysis.
- Protective relaying schemes.
- Field surveys and data collection including electrical equipment testing and operation.

**TERENCE "TERRY" KAGLER**  
Electrical Engineer

## **SUMMARY:**

Mr. Kagler has approximately 4 years of engineering experience in the electrical industry. His skills include: electrical power distribution system engineering design; power system analysis, short circuit calculations, protective device coordination studies and arc flash hazard analysis; project management and cost estimating.

## **EDUCATION**

NYU of Polytechnic University  
Masters of Science in Electrical Power Engineering

Pennsylvania State University, State College, PA  
Bachelor of Science in Electrical Engineering

## **PROFESSIONAL AFFILIATIONS:**

Institute of Electrical and Electronic Engineers (IEEE).

## **EXPERIENCE:**

### **Martin Technical - Engineer**

As an Engineer, Terry is responsible for engineering design of power distribution systems and related calculations, power system analyses including short circuit, protective device coordination studies and arc flash hazard analysis, on site surveys to collect field data, related calculations and software applications. Terry is also involved with overseeing construction administration activities of design projects, coordinating and communicating with owners and contractors including developing sketches to resolve field conflicts.

### **OLA Consulting Engineers, PC - Engineer**

- Electrical design and main point of contact for multiple construction projects
- Visit various job sites to evaluate existing conditions of electrical components
- Review shop drawings for approval against technical specifications

### **Jaros Baum & Bolles - Engineer**

- Electrical design and main point of contact for multiple construction projects
- Visit various job sites to evaluate existing conditions of electrical components
- Review shop drawings for approval against technical specifications

## **AREAS OF EXPERTISE:**

- Power distribution system engineering and design.
- Power system analysis, short circuit studies and protective device coordination studies.
- Power system operation.
- Power system software and AutoCAD use including software applications.
- Medium voltage relay protection schemes.

**CHRIS BAISCH**  
Electrical Engineer

## **SUMMARY:**

Mr. Baisch has approximately 2 years of engineering experience in the electrical industry. His skills include: electrical power distribution system engineering design; power system analysis, short circuit calculations, protective device coordination studies and arc flash hazard analysis.

## **EDUCATION**

State University of NY at New Paltz - New Paltz, NY  
Bachelor of Science in Electrical Engineering

## **EXPERIENCE:**

### **Martin Technical - Engineer**

As an Engineer, Chris is responsible for engineering design of power distributions and related calculations, power system analyses including short circuit, protective device coordination studies and arc flash hazard analysis, on site surveys to collect field data and software applications. Chris is experienced in feeder calculations, circuit and power system equipment applications including breaker protection and control schematics.

### **Jaros Baum & Bolles - Engineering Assistant**

- Electrical design for multiple projects including assisting in the design of World Trade Tower 4
- Feasibility studies
- Visit various job sites to evaluate existing conditions of electrical components
- Extensive use of design and industry software

### **International Brotherhood of Electrical Workers (I.B.E.W.) - Electrical Helper**

- Participant in the Summer Work Program for college students.
- Apprenticed with first-hand experience working with contractors and foremen.
- Assisted in electrical installation in various high profile projects including wire pulling, electrical room work, installations and device connections.

## **AREAS OF EXPERTISE:**

- Power distribution system engineering and design.
- Power system analysis, short circuit studies and protective device coordination studies.
- Arc flash hazard analysis.
- Medium voltage breaker protection and control schematics
- Power system operation.
- Power system software and AutoCAD use including software applications.

**GREG PAGELLO**  
Electrical Engineer

## **SUMMARY:**

Mr. Pagello has been with Martin Technical for approximately 5 years. His skills include: electrical power distribution system engineering design; power system analysis, short circuit calculations and protective device coordination studies; arc flash hazard analysis and cost estimating.

## **EDUCATION**

Western New England College – Springfield, MA  
Bachelor of Science in Electrical Engineering

Springfield Technical Community College  
Electrical Engineering Technology

## **EXPERIENCE:**

**Martin Technical** – Engineering Technician

Greg is responsible for engineering design of power distributions and related calculations, power system analyses including short circuit, protective device coordination studies and arc flash hazard analysis, site surveys to evaluate existing conditions of electrical components and record nameplate data including software applications. Greg also assists with company standards, reports, project management, equipment applications and control schematics.

## **AREAS OF EXPERTISE:**

- Power distribution system engineering and design.
- Power system analysis, short circuit studies and protective device coordination studies.
- Arc flash hazard analysis.
- Medium voltage breaker protection and control schematics
- Setting and programming of protective relays.
- Power system operation.
- Power system software and AutoCAD use including software applications.

## Previous Experience

Martin Technical core services of power system analysis / arc flash hazard analysis has been performed for various types of facilities across the United States as well as international markets. Our services in this arena have been so sought after that many of our projects have been for other engineering firms.

Our customers represent a broad spectrum, big and small, and include virtually every type of company, plant or facility, including:

- Manufacturing Plants
- Schools & Universities
- Data & Service Centers
- Airports
- Government & Military
- Hospitals
- R&D Facilities
- Public Buildings
- Energy & Utility Plants
- Water & Waste Water
- Hotel & Hospitality
- Commercial Buildings

### Sample Customer List Showing Geographic and Industry / Plant / Facility Type Coverage

- Buckley Air Force Base – Aurora, CO
- Innovative Medical Devices – Vandalia, OH
- NY Life Insurance Company – Manhattan, NY
- Lake Pleasant Water Treatment Plant – Phoenix, AZ
- Navy Federal Credit Union – Vienna, VA
- Southern California TRACON (Federal Aviation Administration) – San Diego, CA
- EMCO – Kingdom of Bahrain
- Schroeder Co – Maplewood, MN
- Trane – Plano, TX
- AES Power Plant – Kapolei, HI
- Lockheed Martin – Multiple Sites
- All Municipal Buildings in a large city – Southwestern US (client confidential)
- ALMA – San Pedro de Atacama, Chile
- E&J Gallo Wines – Modesto, CA & Healdsburg, CA
- Crown Cork & Seal – Batesville, MS & Cheraw, SC
- Valmont Industries – Omaha, NE
- White Creek Wind Farm – Roosevelt, WA
- Firestone – Aurora, CO
- Akzo Nobel Paints – Oakwood, GA
- Cal State University, San Marcos – San Marcos, CA
- Hydro Aluminum – Ellenville, NY
- Cedar River Water Treatment Plant – Seattle, WA
- Fresh Start Bakeries – Brea, CA
- Modell's Sporting Goods – Bronx, NY

## Descriptions of Recent Relevant Projects

The following represents a detailed description of five (5) recent and relevant projects we have performed a recent power system and Arc Flash Hazard Analysis. The following Power Plant and Water Wastewater & Municipality projects have been included for your review:

1. Confidential Public Municipality – Large Southwest City with 93 Facilities
2. AES Kalaeloa Power Plant – Kapolei, HI
3. White Creek Wind Farm, Roosevelt, WA
4. Wards Island Waste Water Treatment Plant – New York City, NY
5. South Bay Pumping Plant – Byron, CA

### 1. Confidential Public Municipality – Large Southwest City with 93 Facilities

Due to confidentiality agreements we are unable to identify the client or facility.

An arc flash program that includes a separate and detailed arc flash hazard analysis for each of the 93 facilities across the City including water and waste water treatment plants and pumping stations. As each facility was designed and built by different engineers and contractors the City does not have a reliable power distribution one line diagram of any facility. Our services started with an onsite assessment where we developed a power system one-line diagram of each facility as the basis of the analysis and for the City to use for maintenance activities. Several facilities include a medium voltage service and others include a 480 Volt and/or 208 Volt utility service.

#### **COMPLETION DATE:**

January 2011

#### **ELECTRICAL DETAILS:**

- Medium voltage 15 kV utility services
- Low voltage (480 and 208 Volt) utility services
- Facility generators
- City wide 93 facility program
- Multiple building campus or large single building structure
- Industrial and commercial buildings
- Environmental facilities including water and waste water treatment plants and pumping stations

### 2. AES Kalaeloa / Hawaii Electrical – Kapolei, HI

Martin Technical performed a short circuit study, protective device coordination study and arc flash analysis for this medium-sized 203 MW coal-powered electrical power plant.

#### **COMPLETION DATE:**

Fall 2010

#### **ELECTRICAL DETAILS:**

- 203 MW coal powered electrical power plant
- Connected to 110 KV switchgear
- 6.9 kV busbar
- 25 MVA transformers
- 480/240V Distribution System

### 3. White Creek Wind Farm, Roosevelt, WA

White Creek Wind Farm is a consumer owned utilities and is the largest public power initiated wind project in the US. The power stations include 89 wind turbines covering 9,500 acres and capable of producing 205 MW. Martin Technical performed a short circuit study, protective device coordination study and arc flash analysis for this wind farm.

**COMPLETION DATE:**

Spring 2010

**ELECTRICAL DETAILS:**

- 89 x 2.3 MW wind turbines
- Interconnected Medium voltage power distribution network
- 690 V Transformers & switchgear
- Substations

### 4. Wards Island Waste Water Treatment Plant – New York City, NY

As one of the largest waste water treatment plants in the New York City system, the Wards Island facility treats waste water for thousands of NYC residents. The facility includes several medium voltage feeders, on-site medium voltage generators multiple buildings with several unit substations, each plant facility building includes several motor control centers and varied items of electrical distribution equipment.

**COMPLETION DATE:**

Summer 2010

**ELECTRICAL DETAILS:**

- Multiple medium voltage 15 kV utility services
- Medium voltage stand-by generators
- Medium voltage power distribution arrangement
- Double ended unit substations
- Motor control centers
- Multiple building facility

### 5. South Bay Pumping Plant – Byron, CA

Martin Technical performed a short circuit study, protective device coordination study and arc flash analysis for the complete power system associated with the South Bay Pumping Plant Facility. The facility pumps from the Bethany Reservoir and is the only main line pumping plant for the South Bay Aqueduct. The study and analysis included all three stages of switchgear, a service bay, station service substation, and the 230 kV transformer switchyard.

**COMPLETION DATE:**

Summer 2010

**ELECTRICAL DETAILS:**

- Multiple medium voltage 230 kV utility services
- Medium voltage power distribution arrangement
- Numerous unit substations and switchboards
- Motor control centers

## **Liability / Insurance**

### **Liability / Insurance**

We carry the following insurance policies:

- General Liability - \$2 Million per occurrence / \$4 Million aggregate policy
- Professional Liability - \$1 Million policy

In addition, any outside engineers used on projects are required to have their own individual professional liability and general liability insurance.

Village of Freeburg, IL

Statement of Qualifications  
for  
Professional Engineering Services

Arc Flash Hazard Study

For the VILLAGE'S NORTH  
POWER PLANT, SOUTH POWER  
PLANT AND WEST WASTEWATER  
TREATMENT FACILITY

Submitted by

BHMG Engineers, Inc.  
Engineers Serving Municipalities and Utilities

February, 2011



BARNES, HENRY,  
MEISENHEIMER & GENDE, INC.  
Engineers Serving Municipalities and Utilities

February 23, 2011

Mr. Dennis R. Herzing  
Village Administrator  
Village of Freeburg  
14 Southgate Center  
Freeburg, IL 62243

Re: Statement of Qualifications  
Arc Flash Hazard Study

Dear Mr. Herzing:

We are pleased to submit for the Village of Freeburg's consideration our qualifications for professional engineering services relative to the Arc Flash Hazard Study for the Village's North Power Plant, South Power Plant and West Wastewater Treatment facility.

BHMG is well suited for this challenging project. The success of any project is not determined by the name of the firm or lengthy lists of prior projects, but rather by the individuals doing the work. **The BHMG team presented here has demonstrated its ability to perform on similar projects, as documented in our proposal.**

The caliber of our work is not only reflected in our design work, but also in our careful consideration of other important aspects of the project, such as project coordination and communication. We encourage you to contact our references to discuss our capabilities and performance on similar projects.

The scope of services includes all of the items in our Project Approach.

We look forward to the opportunity to be of service to the Village of Freeburg. If you have any questions, please do not hesitate to contact me at our Arnold office.

Sincerely,  
**BHMG Engineers, Inc.**

  
Marty E. Thomas, P.E.  
President

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# I. INTRODUCTION

## A. ABOUT BHMG

BHMG Engineers, Inc. was established in 1972 to provide comprehensive engineering services to local, state, federal and private entities. The company provides complete engineering services for electric and natural gas utilities including planning, feasibility, valuation and rate studies; design for electric and gas distribution facilities, design for electric and natural gas transmission facilities, electric substations and natural gas regulator stations; and engine, turbine, hydro-electric, and wind power production facilities. BHMG provides engineering services throughout the Midwest from its offices in Arnold, Missouri and Mount Vernon, Illinois. The company provides electric and natural gas testing services through BHMG Service Corporation. BHMG Service Corporation also designs, manufactures and installs complete SCADA systems, Oxidation-Catalyst systems and large water-pumping control systems.

BHMG is also affiliated with two other engineering organizations with offices located in Carlyle and Mundelein, Illinois. Through this affiliation we are able to offer comprehensive services to our clients in a more efficient manner and can draw upon a staff of highly competent specialists tailored to meet project needs. Each office is a self-sufficient consulting engineering organization managed by its major stockholders.

Among the staff are registered professional engineers, electrical and mechanical engineers. Their professional abilities and experience establish the foundation on which the company and its reputation have been built.

## B. STAFF CAPABILITIES

BHMG and its affiliated offices have a staff of 78 persons in all types of engineering disciplines, plus appropriate support personnel. The general organizational thrust is to provide efficient, specific and personal service-oriented engineering. The following is a summary of the professional staff by engineering discipline:

Electrical Engineers .....	7
Mechanical Engineers .....	2
Structural Engineers .....	3
Civil Engineers.....	9
Sanitary/Environmental Engineers .....	10
Transportation Engineers.....	4
Land Surveyors .....	3

**C. INVOLVEMENT OF PRINCIPALS OF THE FIRM**

Our philosophy at BHMGM is to have our principals involved in the day-to-day engineering design aspects of a project. Consequently, all of the owners are "hands-on" engineers. This philosophy is successful because all of our principals enjoy doing engineering work as opposed to being strictly managers or business developers.

A principal is assigned to each of our projects. This principal serves as the primary contact person with the client, and directs and coordinates the efforts of all of the other BHMGM project team members.

We believe that our philosophy of having principals of the firm involved in the detailed engineering aspects of projects is one of the key features that differentiates BHMGM from other firms.

**D. FACILITIES/EQUIPMENT**

The BHMGM office and its affiliate offices are equipped with state of the art office automation and computer facilities and survey equipment which help us provide quality, cost effective service to our clients.

**E. OFFICES**

BHMGM has offices in Arnold, Missouri and Mount Vernon, Illinois. This project will be staffed from our Arnold office:

630 Jeffco Boulevard  
Arnold, MO 63010  
Telephone: 636-296-8600  
Facsimile: 636-296-8611

This office is staffed by a total of 17 professionals and support personnel.

Marty E. Thomas, P.E., Principal and President, will be the contact person and project manager for the Village of Freeburg's Arc Flash Hazard Study for the Village's North Power Plant, South Power Plant and West Wastewater Treatment facility. His e-mail address is [mthomas@bhmg.com](mailto:mthomas@bhmg.com).

**F. PROFESSIONAL LICENSES**

BHMGM is licensed to practice in the states of Missouri and Illinois. A copy of our Illinois License is included on the following page.

**State of Illinois**  
 Department of Financial and Professional Regulation  
 Division of Professional Regulation

**LICENSE NO.**  
 184-004266

**EXPIRES:**  
 04/30/2011

This person, firm or corporation whose name appears on this certificate has complied with the provisions of the Illinois Statutes and/or rules and regulations and is hereby authorized to engage in the activity as indicated below.

**PROFESSIONAL DESIGN FIRM  
 PROFESSIONAL ENGINEERING  
 CORPORATION**

**BARNES HENRY MEISENHEIMER & GENDE INC  
 630 JEFFCO BLVD  
 ARNOLD, MO 63010**

The official status of this license can be verified at [www.idpr.com](http://www.idpr.com)



MICHAEL T. McRAITH  
 ACTING SECRETARY

*Daniel Bluthardt*  
 DANIEL E. BLUTHARDT  
 DIRECTOR

3898970

## II. PROJECT TEAM

BHMG Engineers, Inc., St. Louis Office  
630 Jeffco Boulevard  
Arnold, MO 63010

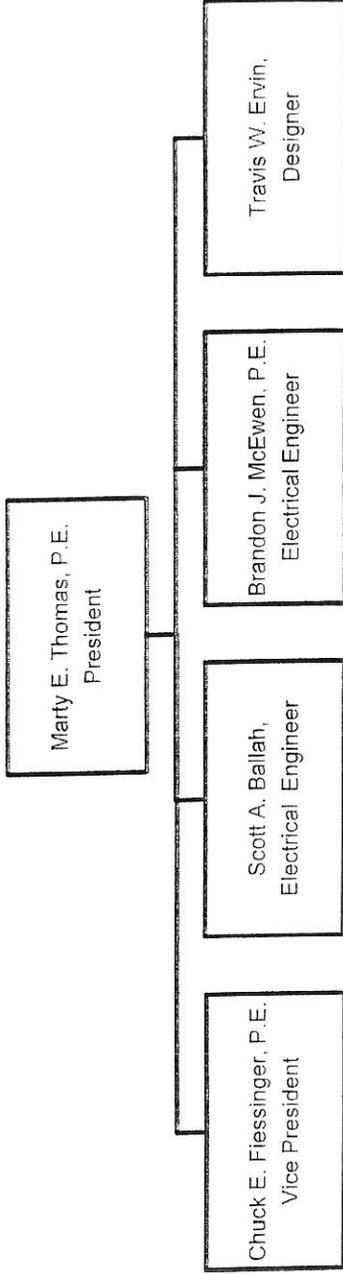
The following staff members will be assigned to this project:

Marty E. Thomas, P.E., Principal  
Chuck E. Fiessinger, P.E., Principal  
Scott A. Ballah, Electrical Engineer  
Brandon J. McEwen, P.E., Electrical Engineer  
Travis W. Ervin, Designer

Qualifications and experience of the team members follow.

# BHMG Engineers, Inc.

## Project Personnel



## **QUALIFICATIONS AND EXPERIENCE OF MARTY THOMAS**

Marty Thomas attended the University of Southern Illinois at Edwardsville, graduating in 1990 with a Bachelor of Science degree in electrical engineering. Shortly after receiving his degree, he began work as an engineer with BARNES, HENRY, MEISENHEIMER & GENDE, INC., Consulting Engineers in St. Louis, Missouri. His duties consisted of design and construction observation for projects related to electrical and electronic controls for power plants, electric substations, and water and wastewater treatment facilities. He later became involved in supervisory control systems, telemetry, and the control and troubleshooting of diesel and dual-fuel engine generator power plants.

In 1992, his duties were expanded to cover transmission and distribution substation design and field services; implementation of SCADA systems; and system protection studies for the firm's municipal and industrial clients in Missouri, Illinois, Iowa and Arkansas.

Mr. Thomas has been either a lead engineer or a team member for a wide range of projects, including electric transmission, distribution, and customer substations; primary and secondary electric feeders; system protection studies; design, installation, and testing of sophisticated relay protection and control systems for substations and power plants; generator voltage conversions, switchgear design and replacement. Marty is the principal in charge of the design, development, and installation of SCADA systems, telemetry, and electronic controls for electric, water, and wastewater utilities.

Mr. Thomas is a Professional Engineer licensed in the States of Missouri and Illinois. He is a Principal and the President of the firm.

## **QUALIFICATIONS AND EXPERIENCE OF CHUCK E. FIESSINGER**

Chuck Fiessinger graduated in May 1994 from Southern Illinois University at Carbondale with a Bachelor of Science degree in Electrical Engineering. While attending college he worked for Scientific Games, during which time he developed skills in project management.

Upon graduation Mr. Fiessinger joined Square D Company, an electrical engineering and service company in Palatine, Illinois. As a field service engineer, he performed industrial and substation design, relay coordination, repair and start-up of all electrical equipment including transformers, breakers and protective relays.

In August 2000, Mr. Fiessinger joined Barnes, Henry, Meisenheimer & Gende, Inc., as an electrical engineer. His responsibilities include but are not limited to relay coordination, scada system design, specification preparation, field service in all aspects of electrical substations and generating plants, and miscellaneous other facilities.

Mr. Fiessinger is a licensed Professional Engineer in the State of Missouri. Chuck is a member of Institute of Electrical and Electronics Engineers (IEEE). He became a principal of the firm in October of 2009.

## **QUALIFICATIONS AND EXPERIENCE OF SCOTT A. BALLAH**

Scott Ballah graduated from the University of Illinois with a Bachelor of Science degree in Electrical Engineering. After graduation, he worked as an electrician until being employed by Engineered Fluid, Inc. as a Field Service Technician. He installed, tested and put into service pump stations, control systems and other related equipment.

Mr. Ballah joined Micromedical Technologies, Inc. in September 1994 as an Electrical Design Engineer. He designed new products, managed production of equipment orders and installed/tested equipment for customers.

In 1995 he returned to Engineered Fluid, Inc. as a Design Engineer. He designed electrical power and control systems for all of the manufactured equipment and programmed PLCs for SCADA systems. In 1997, Scott became the Senior Design Engineer. He supervised a team of electrical engineers, electricians and PLC control system designers.

In 2009, Mr. Ballah joined BHMG Engineers as an Electrical Engineer. Scott designs and implements SCADA control systems for water and wastewater projects, performs Arc Flash studies and helps expand the BHMG customer base.

## **QUALIFICATIONS AND EXPERIENCE OF BRANDON J. MCEWEN**

Brandon McEwen graduated from Southern Illinois University-Edwardsville in August 2006. He graduated Cum Laude with a Bachelor of Science degree in Electrical Engineering. While attending school, Mr. McEwen completed an internship with AmerenCIPS at Marion, IL. His primary responsibility was correcting errors in the Automated Mapping and Facilities Management (AM/FM) system. Beginning in September 2005, he interned with BHMGE Engineers in Arnold, MO until his graduation date.

Upon graduation, Mr. McEwen was hired full-time by BHMGE Engineers as an electrical engineer. His responsibilities include, but are not limited to: substation controls, generator controls, generator sizing, SCADA systems and drafting.

Mr. McEwen is a licensed Professional Engineer in the State of Illinois. Brandon is also a member of the Institute of Electrical and Electronics Engineers (IEEE).

## **QUALIFICATIONS AND EXPERIENCE OF TRAVIS W. ERVIN**

Travis Ervin graduated from Vatterott College in the spring of 2002. He graduated with an Associate of Occupational Studies in Computer Aided Drafting Technology. After graduation he began working for Tennill & Associates, an engineering firm that employs electrical & mechanical engineers. While employed there, he did Electrical Drafting as well as Entry Level Design on schools, hospitals and various commercial buildings.

In the winter of 2005, Travis began working for BHMG Engineers as the Lead Drafter. He did the majority of the drafting for substations, wastewater plants, water plants, electrical distribution and transmission line work in addition to various other projects.

In the summer of 2007, he began night classes at Vatterott College to receive his Associate of Occupational Studies in Applied Electrical Technology. After graduating in the spring of 2009, he transferred to our Service Corporation division. Mr. Ervin has begun field service with respect to electrical substations, generating plants, wastewater plants and miscellaneous other facilities. He continues to draft and design in addition to the field services.

### III. RELATED EXPERIENCE

#### Arc Flash Hazard Study Experience

The following Arc Flash Hazard Study projects were performed by BHMG.

ARC FLASH HAZARD STUDIES	
Breese, IL	Power Plant and Electric 69 kV, 12.47 kV, 5 kV system
Village of Chatham, IL	The city electric 69 kV and 12.47 kV system
Higginsville, MO	The Power Plant and two substations
Highland, IL	Power Plant and all other substations
Mascoutah, IL	138 kV / 13.8 kV Substation and power plant
Metropolis, IL	69 kV / 12 kV South, North, and West Substations
Princeton, IL	138 kV / 34.5kV / 12.47 kV Substation and Power Plant
Sullivan, IL	69 kV / 12.47 kV Substation and Power Plant
Waterloo, IL	34.5 kV / 13.2 kV Power Plant and North Substation

PROJECT: Sullivan, Illinois  
Arc Flash Hazards Study

CLIENT: City of Sullivan  
2 West Harrison Street  
Sullivan, IL 61951

CLIENT REFERENCES: Shannon Risley  
Electric Superintendent  
(217) 728-7815

Doug Carnes  
Generation Foreman  
(217) 728-4932

DATE: 2009

**Description of the Project:** Arc Flash Hazards study

The project was to perform an Arc Flash Hazards Study for the City of Sullivan's electric utility.

**Scope of Professional Services:**

The City of Sullivan, Illinois contracted with BHMG Engineers to perform an Arc Flash Hazards Analysis Study on the City's Electric utility distribution system and to calculate incident energy available until a category 0 or the lowest branch level is reached.

This study will be performed in accordance with the accepted industry practices consistent with NFPA 70E 2004 and IEEE 1584 Guide for performing Arc Flash Hazards. This study is not intended to check the capability of the system design to accommodate the electrical load of the distribution circuits. As such, the continuous electrical capacities of the electrical conductors and busses, transformer sizes, and overcurrent protective devices have not been examined.

Any increase in the available fault current and any changes in relay settings, fuse sizes or coordination will require an updating of the results provided in this report. Also, any changes to the distribution systems under study may require a revision of this study.

The Arc Flash analysis and Personal Protective Equipment (PPE) needed will be calculated using ETAP, a commercially available fault/arc flash analysis program. This program uses the NFPA 70E-2004 and the IEEE 1584-2002 and IEEE 1584a-2004 arc flash calculations. The Arc Flash Hazards study provides a system one-line diagram and the calculated maximum fault currents, incident energy and category rating found at each location. There will also be a detailed listing of the calculated fault currents and PPE rating at each location.

Project was completed in 2009.

PROJECT: City of Mascoutah  
Arc Flash Hazards Study

CLIENT: City of Mascoutah  
3 West Main Street  
Mascoutah, IL 62258

CLIENT REFERENCES: Dan Schrempp  
Director of Public Works  
(618) 566-2964

Roger Klingel  
Electric Foreman  
(618) 566-2918

DATE: 2010

**Description of the Project:** Arc Flash Hazards study

The project was to perform an Arc Flash Hazards Study for the City of Mascoutah's electric utility.

**Scope of Professional Services:**

The City of Mascoutah, Illinois contracted with BHMG Engineers to perform an Arc Flash Hazards Analysis Study on the City's Electric utility distribution system and to calculate incident energy available until a category 0 or the lowest branch level is reached.

This study will be performed in accordance with the accepted industry practices consistent with NFPA 70E 2004 and IEEE 1584 Guide for performing Arc Flash Hazards. This study is not intended to check the capability of the system design to accommodate the electrical load of the distribution circuits. As such, the continuous electrical capacities of the electrical conductors and busses, transformer sizes, and overcurrent protective devices have not been examined.

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Project was completed in 2010.

PROJECT: City of Metropolis  
Arc Flash Hazards Study

CLIENT: City of Metropolis  
P.O. Box 682  
Metropolis, IL 62960

CLIENT REFERENCES: Billy McDaniel  
Mayor  
(618) 524-4016  
  
Mr. Jackie Sawyers  
Light Superintendent  
(618) 528-2711

DATE: 2009

**Description of the Project:** Arc Flash Hazards study

The project was to perform an Arc Flash Hazards Study for the City of Metropolis's electric utility.

**Scope of Professional Services:**

The City of Metropolis, Illinois contracted with BHMG Engineers to perform an Arc Flash Hazards Analysis Study on the City's Electric utility distribution system and to calculate incident energy available until a category 0 or the lowest branch level is reached.

This study will be performed in accordance with the accepted industry practices consistent with NFPA 70E 2004 and IEEE 1584 Guide for performing Arc Flash Hazards. This study is not intended to check the capability of the system design to accommodate the electrical load of the distribution circuits. As such, the continuous electrical capacities of the electrical conductors and busses, transformer sizes, and overcurrent protective devices have not been examined.

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Project was completed in 2009.

PROJECT: Waterloo, Illinois  
Arc Flash Hazards Study

CLIENT: City of Waterloo  
100 W. 4<sup>th</sup> Street  
Waterloo, IL 62298

CLIENT REFERENCES: Tim Birk  
Director of Public Works  
(618) 939-8661

Chuck Steppig  
Electric Line Department Foreman  
(618) 939-6414

DATE: 2009

**Description of the Project:** Arc Flash Hazards study

The project was to perform an Arc Flash Hazards Study for the City of Waterloo's electric utility.

**Scope of Professional Services:**

The City of Waterloo, Illinois contracted with BHMG Engineers to perform an Arc Flash Hazards Analysis Study on the City's Electric utility distribution system and to calculate incident energy available until a category 0 or the lowest branch level is reached.

This study will be performed in accordance with the accepted industry practices consistent with NFPA 70E 2004 and IEEE 1584 Guide for performing Arc Flash Hazards. This study is not intended to check the capability of the system design to accommodate the electrical load of the distribution circuits. As such, the continuous electrical capacities of the electrical conductors and busses, transformer sizes, and overcurrent protective devices have not been examined.

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Project was completed in 2009.

PROJECT: Breese, Illinois  
Arc Flash Hazards Study

CLIENT: City of Breese  
800 North First Street  
Breese, IL 62230

CLIENT REFERENCES: Dale Detmer  
Plant Operations Manager  
(618) 526-7151

DATE: 2008

**Description of the Project:** Arc Flash Hazards study

The project was to perform an Arc Flash Hazards Study for the City of Breese's electric utility.

**Scope of Professional Services:**

The City of Breese, Illinois contracted with BHMG Engineers to perform an Arc Flash Hazards Analysis Study on the City's Electric utility distribution system and to calculate incident energy available until a category 0 or the lowest branch level is reached.

This study will be performed in accordance with the accepted industry practices consistent with NFPA 70E 2004 and IEEE 1584 Guide for performing Arc Flash Hazards. This study is not intended to check the capability of the system design to accommodate the electrical load of the distribution circuits. As such, the continuous electrical capacities of the electrical conductors and busses, transformer sizes, and overcurrent protective devices have not been examined.

Any increase in the available fault current and any changes in relay settings, fuse sizes or coordination will require an updating of the results provided in this report. Also, any changes to the distribution systems under study may require a revision of this study.

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Project was completed in 2008.

PROJECT: Princeton, Illinois  
Arc Flash Hazards Study

CLIENT: City of Princeton  
2 South Main Street  
Princeton, IL 61356

CLIENT REFERENCES: Jason Bird  
Supt. of Electric and Telecommunications  
(815) 875-1231

DATE: 2008

**Description of the Project:** Arc Flash Hazards study

The project was to perform an Arc Flash Hazards Study for the City of Princeton's electric utility.

**Scope of Professional Services:**

The City of Princeton, Illinois contracted with BHMG Engineers to perform an Arc Flash Hazards Analysis Study on the City's Electric utility distribution system and to calculate incident energy available until a category 0 or the lowest branch level is reached.

This study will be performed in accordance with the accepted industry practices consistent with NFPA 70E 2004 and IEEE 1584 Guide for performing Arc Flash Hazards. This study is not intended to check the capability of the system design to accommodate the electrical load of the distribution circuits. As such, the continuous electrical capacities of the electrical conductors and busses, transformer sizes, and overcurrent protective devices have not been examined.

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Project was completed in 2008.

PROJECT: Highland, Illinois  
Arc Flash Hazards Study

CLIENT: City of Highland  
2610 Plaza Drive  
Highland, IL 62249

CLIENT REFERENCES: Daniel Cook  
Director of Light and Power  
(618) 654-1805

DATE: 2011

**Description of the Project:** Arc Flash Hazards study

The project was to perform an Arc Flash Hazards Study for the City of Highland's electric utility.

**Scope of Professional Services:**

The City of Highland, Illinois contracted with BHMGE Engineers to perform an Arc Flash Hazards Analysis Study on the City's Electric utility distribution system and to calculate incident energy available until a category 0 or the lowest branch level is reached.

This study will be performed in accordance with the accepted industry practices consistent with NFPA 70E 2004 and IEEE 1584 Guide for performing Arc Flash Hazards. This study is not intended to check the capability of the system design to accommodate the electrical load of the distribution circuits. As such, the continuous electrical capacities of the electrical conductors and busses, transformer sizes, and overcurrent protective devices have not been examined.

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Project to be completed in 2011.

PROJECT: Village of Chatham, Illinois  
Arc Flash Hazards Study

CLIENT: Village of Chatham  
116 E. Mulberry  
Chatham, IL 62629

CLIENT REFERENCES: Shane Hill  
Electric Foreman  
(217) 483-2451

DATE: 2010

**Description of the Project:** Arc Flash Hazards study

The project was to perform an Arc Flash Hazards Study for the Village of Chatham's electric utility.

**Scope of Professional Services:**

The Village of Chatham, Illinois contracted with BHMG Engineers to perform an Arc Flash Hazards Analysis Study on the Village's Electric utility distribution system and to calculate incident energy available until a category 0 or the lowest branch level is reached.

This study will be performed in accordance with the accepted industry practices consistent with NFPA 70E 2004 and IEEE 1584 Guide for performing Arc Flash Hazards. This study is not intended to check the capability of the system design to accommodate the electrical load of the distribution circuits. As such, the continuous electrical capacities of the electrical conductors and busses, transformer sizes, and overcurrent protective devices have not been examined.

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Project completed in 2010.

PROJECT: Higginsville, Missouri  
Arc Flash Hazards Study

CLIENT: City of Higginsville  
P.O. Box 110  
1922 Main Street  
Higginsville, MO 64037

CLIENT REFERENCES: Don Trigg  
Electric Superintendent  
(660) 584-2106

DATE: 2008

**Description of the Project:** Arc Flash Hazards study

The project was to perform an Arc Flash Hazards Study for the City of Higginsville's electric utility.

**Scope of Professional Services:**

The City of Higginsville, Missouri contracted with BHMG Engineers to perform an Arc Flash Hazards Analysis Study on the City's Electric utility distribution system and to calculate incident energy available until a category 0 or the lowest branch level is reached.

This study will be performed in accordance with the accepted industry practices consistent with NFPA 70E 2004 and IEEE 1584 Guide for performing Arc Flash Hazards. This study is not intended to check the capability of the system design to accommodate the electrical load of the distribution circuits. As such, the continuous electrical capacities of the electrical conductors and busses, transformer sizes, and overcurrent protective devices have not been examined.

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Project completed in 2008.

## IV. PROJECT APPROACH

The Project Approach is described herein. The project scope may be fine-tuned as desired by the City prior to contract award.

### **Task 1: Project Kickoff and Data Collection/Review**

- Meet with staff to review the implementation requirements for the Village of Freeburg.
- Meet with staff to review available background information, including all pertinent documents that relate to the project.
  - Existing Electrical Substation Drawings
  - Review of existing facilities
  - Gather all needed data for study.
- Coordinate project timeline, milestone dates, process and deliverables.

### **Task 2: Develop Electric System One-line**

- Build One-line of electric system in ETAP program
- Enter all data Transformer size, Buss size, Breaker ratings, and Etc.
- Determine available Short Circuit Current study

### **Task 3: Protective Device Coordination Study**

- Enter all protective device information.
- Run coordination study.
- Modify Coordination to correct for any miss coordination
- Rerun Coordination study

### **Task 4: Arc Flash Analysis**

- Develop arc flash analysis
- Enter data for arc flash
- Run arc flash study
- Modify arc study as required
- Rerun arc flash study

### **Task 5: Document Incident Energy, Flash Hazard Boundaries, Risk Hazard Category**

- Determine arc flash incident energy.
- Determine arc flash hazard boundaries.
- Determine arc flash risk hazard categories.
- Determine PPE clothing requirements.

**Task 6: Complete Arc Flash Hazard Report**

- Develop draft report for review.
- Review with client the results.
- Make any corrections to report.
- Print out Arc Flash Hazards Labels.
- Deliver Final Arc Flash Hazards Report.

The above is a typical approach to an Arc Flash Hazards Study.

## V. SCHEDULE

BHMG anticipates beginning work on this project once notice of award has been given and contract is signed.

Implementation of this schedule will require close coordination between BHMG and the City as work progresses on all tasks. The following schedule indicates that the study should be completed within the following timeframe.

# PROJECT TIMELINE:

Start Date	Task 1 - Project Kickoff Meeting	Task 2 - System One-line Design	Task 3 - Protective Device Coordination	Task 4 - Arc Flash Analysis	Task 5 - Incident Energy	Task 6 - Complete Arc Flash Study
Notice of Award, Contract Signature	2 Weeks	1 Month	1/2 Month	1/2 Month	1/2 Month	1/2 Month

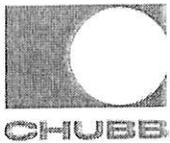
## **VI. REASONS FOR SELECTING BHMG**

BHMG ENGINEERS OFFERS THE FOLLOWING:

- **Extensive Related Experience**
- **Work Performed by Principals**
- **Proven Project Manager and Project Team**
- **Sound, Customized Project Approach**
- **Creative Solutions**

WITH THE FOLLOWING BENEFITS TO THE VILLAGE OF FREEBURG:

- **Cost-Effective Project**
- **High Quality Products - Complete and Thorough**
- **Timely Performance**
- **Close Communications - There will be no surprises!**
- **Desired Results - Successful projects!**



# CHUBB GROUP OF INSURANCE COMPANIES

8000 MARYLAND AVENUE, SUITE 1500, ST. LOUIS, MO 63105-3913  
Phone: (314) 889-4449 • Fax: (314) 889-4455 • Email: josseck@chubb.com

February 11, 2011

Mr. Ron Dittlemann  
C/O Power Plant  
14 Southgate Center  
Freeburg, IL 62243

Subject: General Inspection:

Insured: Village of Freeburg, Freeburg Light And Power  
Policy: ATD MONO / 78314649

RECEIVED  
FEB 15 2011

Dear Ron:

Chubb Loss Control Services personnel conducted an evaluation of machinery and equipment, as part of routine inspection activity. The following areas were analyzed:

1. Infrared Study.
2. Oil Analysis on LTC's and Transformers
3. Oil Analysis on Engines.

## OBSERVATIONS

Plant management is well advised on the emission laws on the internal combustion engines. They will get back to normal and start performing the preventative maintenance procedures that were in place.

## RECOMMENDATIONS

The following summarizes the recommendations submitted is to help reduce frequency and severity of loss and comply with applicable laws and standards. A full explanation of all recommendations is found in the attached Recommendations document.

## NEXT VISIT

The next visit to your facility will be scheduled January 2012, to conduct a jurisdictional inspection on your unfired pressure vessels.

## SUMMARY

Please reply to the enclosed recommendations, detailing either your completed actions or compliance intentions within the response time associated with the recommendation.

If you have any questions regarding the information contained in this report, please contact me at (314) 889-4449 or josseck@chubb.com.

Sincerely,

*John A. Osseck*

John A. Osseck  
Senior Machinery Breakdown Risk Engineer  
Loss Control Services

Client: Village Of Freeburg, Freeburg Light And Power  
DBA: Power Plant  
Coverage/Policy #: 78314649  
Report Date: February 11, 2011

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cc: R W Troxell & Company, William Sowle

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*This document is advisory in nature. It is offered as a resource to be used together with your professional insurance advisors in maintaining a loss control program. Evaluations, reports, and recommendations are made solely to assist the insurer in underwriting and loss control. Evaluation for any hazard or condition does not imply that it is covered under any policy. Reports or certificates provided in connection with any state-required pressure vessel inspection do not mean that all hazards or conditions were controlled at the time of the inspection. No liability is assumed by the information contained in this document. Chubb refers to the member insurers of the Chubb Group of Insurance Companies*

## RISK IMPROVEMENT RECOMMENDATIONS

Recommendations characterized as *Risk Improvement* identify hazards or exposures where there is potential for loss if controls are not addressed. Completion of these recommendations generally involves the improvement of existing prevention measures or the implementation of a different or higher level of control measure.

### Engines

**MB-2011-02-1 Risk Improvement**

**Equipment:** All Engines - # 6, # 8, # 9, # 10, # 11, # 12  
**Response Time 60- Days**

It is recommended that you run a lube oil analysis on all internal combustion engines. Please submit your results to our office.

### Electrical

**MB-2011-02-2 Risk Improvement**

**Equipment:** Main Switch Gear Infrared Testing

Failures in electrical systems do not normally occur in a sudden manner. In most instances, they develop over a long period of time through a gradual deterioration process. During this process, heat is emitted from the system at the point where the defect or problem is present. Early identification of the condition through the detection of the telltale heat emitted will allow corrective action to be implemented prior to failure.

Schedule and conduct a comprehensive infrared inspection of your electrical system. Additionally, periodic infrared testing should be incorporated into your facility's maintenance program at a period not to exceed one year.

**Reference:** Electrical Equipment Maintenance, NFPA 70b, Chapter 18  
National Electrical Testing Association, Maintenance Test Specifications

**Response Time: 90-Days**



*This document is advisory in nature. It is offered as a resource to be used together with your professional insurance advisors in maintaining a loss control program. Evaluations, reports, and recommendations are made solely to assist the insurer in underwriting and loss control. Evaluation for any hazard or condition does not imply that it is covered under any policy. Reports or certificates provided in connection with any state required pressure vessel inspection do not mean that all hazards or conditions were controlled at the time of the inspection. No liability is assumed by the information contained in this document. Chubb refers to the member insurers of the Chubb Group of Insurance Companies.*

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**MB-2011-02-3 Risk Improvement**

**Equipment: Transformer Oil Testing**

The oil inside your transformer is a critical component of the transformer's electrical insulation system and cooling system. Additionally, incipient fault conditions in transformer's electrical system often manifest themselves long before failure by characteristic changes in the dissolved gas content of the transformer's oil.

Sampling the oil and testing it for dielectric strength, moisture content, acid content, and interfacial tension will determine the adequacy of your oil for service as an insulation and cooling medium. Testing the oil for dissolved gas content will provide an indication of the condition of the transformer electrical system.

Schedule and conduct comprehensive oil screening and dissolved gas analysis on the transformer insulation fluid. This testing should be conducted on an annual basis.

**Reference:** Electrical Equipment Maintenance, NFPA 70b, Appendix h, table h-4  
National Electrical Testing Association, Maintenance Test Specifications

**Response Time:** 60-Days

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**MB-2011-02-4 Risk Improvement**

**Equipment: Transformer, Loaded Tap Changers**

The sub-station power transformer has a loaded tap changer (LTC). These units operate under load to regulate system voltage and are subject to wear and tear. It has been a number of years since the LTC was serviced.

Schedule an outage for the sub-station transformer to service the LTC including inspection and testing of contacts, bolted connections, operating mechanisms and sampling and reconditioning, as necessary, of the tap changer compartment's insulating fluid.

It is further recommended periodic servicing be incorporated into your sub-station transformer's maintenance program at a period not to exceed every 3 years.

**Reference:** Electrical Equipment Maintenance, NFPA 70b, Chapter 7  
National Electrical Testing Association, Maintenance Test Specifications

**Response Time:** 90-Days



*This document is advisory in nature. It is offered as a resource to be used together with your professional insurance advisors in maintaining a loss control program. Evaluations, reports, and recommendations are made solely to assist the insurer in underwriting and loss control. Evaluation for any hazard or condition does not imply that it is covered under any policy. Reports or certificates provided in connection with any state required pressure vessel inspection do not mean that all hazards or conditions were controlled at the time of the inspection. No liability is assumed by the information contained in this document. Chubb refers to the member insurers of the Chubb Group of Insurance Companies.*



# TEREX

Date: 2-11-11  
Attention: Ron Ditelman  
Fax: 618-539-5876  
Number of pages including cover: 7

From: Randy Harris

Terex Utilities  
142 Gembler Road  
San Antonio, TX 78219  
Office: 210-476-7777 \*146  
Fax: 210-476-7755  
[randy.harris@terexutilities.com](mailto:randy.harris@terexutilities.com)

Comments: HERE IS THE QUOTE KENNY LENART ASKED  
ME TO PUT TOGETHER FOR YOU, IF YOU HAVE ANY  
OTHER QUESTIONS PLEASE LET ME KNOW.  
IF YOU WOULD LIKE FOR US TO DO THIS WORK FOR  
YOU PLEASE SIGN + ISSUE A P.O. # ON THE LAST  
PAGE.

THANK YOU!  
Randy

\*Should you experience a problem while receiving this fax, please contact me at the number provided.



142 Gembler Road • P.O. Box 1119 • San Antonio, TX 78294  
 Phone 210/476-7777 • Fax 210/224-6885 [www.terex.com](http://www.terex.com)

## ESTIMATE PROPOSAL

**Customer :** Freeburg Municipal  
**Power and Light**  
**Address :** 412 W. High Street  
**City, St, Zip :** Freeburg, Il.

**Randy Harris**

**Ph:** 210-476-7777 ext. 3788  
**Fax:** 210-476-7755

**Attention:** Ron Diteiman  
**Office:** 618-530-0677  
**Fax:** 618-539-5876

**Date :** 02/11/2011  
**Proposal :** 11SR-056

Estimate prepared for the following unit : Model : Telecon II S/N : TELII-217 FY

- Spec 1. Remove and replace rotation bearing w / new bolts, washers, nuts and hardware
- Spec 2. Reseal both lift cylinders ( 2 ea. ) and installing new seal between rot. motor and gear box
- Spec 3. Remove and replace both auger pressure and return hoses w/ new fittings
- Spec 4. Replace handle rack decals (both sides)
- Spec 5. Replace hyd. oil filter and general lube on unit

After completion of repairs, a complete operational and a dielectric test will be completed on this unit

\*NOTE\* This estimate is prepared only for the repair work listed above. Should any additional work be required for the completion of the above repair or should any additional needed repairs be necessary, customer will be advised and an additional estimate will be prepared and authorized by the customer before being done

**Parts Required**

Quantity	Part Number	Description	Price
1	Spec 1	Rotation bearing, bolts, washers, and nuts	\$ 2441.52
1	Spec 2	Seal kits for the lift cylinders and auger motor/gear box	\$ 134.36
1	Spec 3	Pressure and return hose and fittings	\$ 475.00
1	Spec 4	Decal kits for handle racks (both sides)	\$ 91.48
1	Spec 5	Replace return filter and lube unit	\$ 189.07
		Dielectric test	\$ 175.00
		<b>Parts / Dielectric Test</b>	<b>\$ 3506.43</b>
		<b>Labor / Drive Time (2 techs---66 hrs total for both)</b>	<b>\$ 6138.00</b>
		<b>Freight</b>	<b>\$ 275.00</b>
		<b>Supplies ( Misc. Shop Supplies)</b>	<b>\$ 50.00</b>
		<b>Surcharge 10 % Fuel And Environmental Fee</b>	<b>\$ 250.00</b>
		<b>GRAND TOTAL</b>	<b>\$ 10,219.43</b>



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Above estimate is for stated repairs only. If during the repair cycle other items are found needing attention, the customer will be advised of costs BEFORE ADDITIONAL WORK IS PERFORMED.

Above estimated prices are good for thirty (30) days from the date of this proposal.

Price does not include any applicable taxes, shipping, and handling charges.

Payment Terms: Net 10 days.

\*\*SPECIAL NOTE: All replacement parts supplied are the original manufacturer's approved replacement parts.\*\*



Proposal Number: 08SR-352

## TEREX UTILITIES WARRANTY Aftermarket Parts and Service

### PARTS WARRANTY

#### WHAT IS COVERED

TEREX UTILITIES warrants to owners of new TEREX UTILITIES parts and attachments to be defect free for a period of **TWELVE (12) MONTHS** after first retail purchase. This warranty is conditioned upon the part or attachment claimed to be defective being delivered to the dealer. TEREX UTILITIES will repair or replace, at TEREX UTILITIES sole option, at its plant any parts and attachments which shall, within **TWELVE (12) MONTHS** after delivery to the original customer, be returned to TEREX UTILITIES plant and be found by TEREX UTILITIES to have been defective at the time of original shipment from TEREX UTILITIES.

#### WHAT IS NOT COVERED

This warranty does not cover:

- Conditions which, in the reasonable judgment of TEREX UTILITIES, arise from misuse, overloading, negligence, alteration, accident, or lack of performance of necessary maintenance services;
- Normal maintenance services or the replacement of service items (such as filters and brake linings) made in connection with normal maintenance services;
- Diagnostic, removal, repair, installation, or any other labor charges
- Claims for loss of time, inconvenience, loss of use of the machine or other consequential damages.

#### OWNER RESPONSIBILITY

The owner is responsible for:

- The performance of regular maintenance service as specified in the operator's handbook and preventative maintenance manual applicable to each TEREX UTILITIES machine in which a part or attachment is used;
- The dealer's normal charge for labor incident to the performance of warranty repairs; and
- Delivering the part or attachment to the TEREX UTILITIES dealer.

### SERVICING WARRANTY

TEREX UTILITIES warrants to owners workmanship for all servicing repairs performed by TEREX UTILITIES for a period of **THIRTY (30) DAYS**. Any repairs required within the warranty period due to defective workmanship on behalf of TEREX UTILITIES will be made by TEREX UTILITIES at no charge to the owner.

**DISCLAIMER:** THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND IS ALSO IN LIEU OF ANY OTHER OBLIGATIONS ON THE PART OF TEREX UTILITIES. No agent, employee or representative of TEREX UTILITIES is authorized to bind TEREX UTILITIES to any other warranty.

This Warranty shall not apply with respect to any claimed defect which in TEREX UTILITIES sole judgment has arisen from repair or alteration or from damage during shipment, accident, negligence, overloading, or misuse, including, but not limited to, operator's failure to follow any of the instructions issued with the equipment.

**LIMITATION OF LIABILITY:** TEREX UTILITIES LIABILITY FOR ANY LOSSES AND DAMAGES RESULTING FROM ANY CAUSE WHATSOEVER, INCLUDING WITHOUT LIMITATION TEREX UTILITIES'S NEGLIGENCE OR FROM DAMAGED OR DEFECTIVE EQUIPMENT, IRRESPECTIVE OF WHETHER SUCH DEFECTS ARE DISCOVERABLE OR LATENT, SHALL IN NO EVENT EXCEED THE PURCHASE PRICE OF THE PARTICULAR EQUIPMENT TO WHICH LOSSES OR DAMAGES ARE CLAIMED, OR, AT THE ELECTION OF TEREX UTILITIES, THE REPAIR OR REPLACEMENT OF THE



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DEFECTIVE OR DAMAGED EQUIPMENT. IN NO EVENT SHALL TEREX UTILITIES BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING WITHOUT LIMITATION COMMERCIAL LOSSES OR COSTS OF ANY KIND OR FOR ANY DAMAGES FOR WHICH BUYER MAY BE LIABLE TO OTHER PERSONS.

There are no express or implied warranties, including the WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, covering components, parts or accessories manufactured by someone else other than TEREX UTILITIES. Such warranties as may be furnished to TEREX UTILITIES by the manufacturer of such items will be extended to buyer by TEREX UTILITIES.

TEREX UTILITIES reserves the right to make changes in design or construction of its equipment at any time without obligating itself to make such changes on equipment previously manufactured.

In the event any provision of the warranty is for any reason held ineffective, the remaining provisions shall remain in full force and effect.

**1. Terms and Conditions.** This Terms and Conditions of Sale cancels and supersedes any and all terms of sale and/or any work order previously issued by Seller to Buyer and is subject to change without advance notice. The prices, hourly labor rates, charges, discounts, terms of sale and other provisions referred to or contained herein shall apply to any parts or service provided by Seller on and after October 1, 2005, and shall remain in effect unless and until superseded in writing by Seller. Buyer's acceptance of any work order issued by Seller shall be deemed to constitute a binding agreement between the parties pursuant to the terms and conditions contained herein and Buyer agrees that said work order may not thereafter be cancelled, countermanded or otherwise changed without the prior written consent of Seller. Buyer agrees to pay to Seller, under the terms of payment provided hereunder, all amounts set forth on the face of the work order. This agreement supersedes any prior agreements, representations, or other communications between the parties relating to the subject matter set forth herein. No other terms and conditions shall apply including the terms of any purchase order submitted to Seller by Buyer, whether or not such terms are inconsistent or conflict with or are in addition to the terms and conditions set forth herein. Seller's acceptance of Buyer's purchase order is conditional upon Buyer's acceptance of all the terms and conditions contained in this agreement. Any communication construed as an offer by Seller and acceptance thereof is expressly limited to the terms and conditions set forth herein.

**2. Terms of Payment.** Payment for any goods or service provided by Seller shall be made in accordance with either of the following terms unless other payment arrangements are expressly approved by Seller in writing: (1) cash in advance; or (2) credit account purchases for which payment will be due and payable on net thirty (30) day terms, plus service and other charges applicable to past due amounts in accordance with Seller's written notices. All prices quoted are U.S. DOLLARS unless otherwise specified. Seller shall charge interest on all amounts not paid when due and Buyer agrees to pay such interest calculated on a daily basis, from the date that payment was due until the Seller receives payment in full, at the rate of 1.5% per month or the maximum rate permitted by applicable law.

**3. Taxes and Duties.** Prices quoted do not include taxes or duties of any kind or nature. Buyer agrees that it will be responsible for filing all tax returns and paying applicable tax resulting from the purchase of goods or services hereunder. In addition, in the event any other similar tax is determined to apply to Buyer's purchase of goods or services hereunder, Buyer agrees to indemnify and hold Seller harmless from and against any and all such other similar taxes, duties and fees.

**4. Delay; Limitation of Liability.** Seller shall not be liable for any delay in performance of this agreement, or for any damages suffered by Buyer by reason of delay, when the delay is caused, directly or indirectly, by fire, flood, accident, riot, acts of God, war, governmental interference, strikes, embargoes, labor difficulties, shortage of labor, fuel, power, materials or supplies, transportation, or any other causes beyond Seller's control. **THE SELLER SHALL NOT BE LIABLE FOR ANY LOSS OF USE OR FOR ANY OTHER INDIRECT, CONSEQUENTIAL, INCIDENTAL OR OTHER DAMAGES OR LOSSES DUE TO DELAY IN SCHEDULED DELIVERY OR PERFORMANCE OF WORK OR SERVICE.**

**5. Cancellation.** Prior to completion, a work order may be cancelled only with Seller's prior written consent and upon terms indemnifying Seller from all resulting losses and damages. Seller shall have the right to cancel and refuse to complete a work order if any term and/or condition governing this



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agreement is not complied with by Buyer. In the event of cancellation by Seller, or in the event Seller consents to a request by Buyer to stop work or to cancel the whole or any part of any work order, Buyer shall make reimbursement to Seller, as follows: for work in progress and any materials and supplies procured or for which definite commitments have been made by Seller in connection with the order, Buyer shall pay such sums as may be required to fully compensate Seller for actual costs incurred, plus fifteen percent (15%).

**6. Warranty.** Seller warrants any parts and services provided hereunder to be free from defects in manufacture or materials for a period of thirty (30) days. **THIS WARRANTY IS EXPRESSLY IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES, EXPRESS OR IMPLIED (INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) AND ALL OTHER OBLIGATIONS OR LIABILITY ON SELLER'S PART. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE LIMITED WARRANTY CONTAINED HEREIN.**

**7. Remedies for Breach.** IN THE EVENT OF ANY BREACH OF THE WARRANTY BY SELLER, THE PARTIES AGREE THAT SELLER'S LIABILITY SHALL BE LIMITED EXCLUSIVELY TO THE REMEDIES OF REPAIR OR REPLACEMENT. IN NO EVENT SHALL SELLER, OR ANY SUBSIDIARY OR DIVISION THEREOF BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR OTHER DAMAGES OR LOSSES RESULTING FROM A BREACH OF WARRANTY including, without limitation, labor costs, loss of use of other equipment, third party repairs, personal injury, emotional or mental distress, improper performance or work, penalties of any kind, loss of service of personnel, or failure of equipment to comply with any federal, state or local laws.

**8. Limitation of Actions.** Any action for breach of this agreement must be commenced within one (1) year after the cause of action has accrued.

**9. Insurance.** Until the purchase price for the parts and service provided hereunder is paid in full, the Buyer shall provide and maintain insurance against customary casualties and risks; including, but not limited to fire and explosion, and shall also insure against liability for accidents and injuries to the public or to employees, in the names of Seller and Buyer as their interest may appear, and in an amount satisfactory to Seller. If the Buyer fails to provide such insurance, it then becomes the Buyer's responsibility to notify the Seller so that the Seller may provide same; and the cost thereof shall be added to the contract price. All loss resulting from the failure to affect such insurance shall be assumed by the Buyer.

**10. Security Interest.** Buyer grants Seller a security interest in the parts and equipment described on the face of the work order. The security interest shall continue until payment in full of the purchase price and payment and performance by Buyer of all of its other obligations hereunder. Seller is entitled to all remedies of a secured party after default under the Delaware Uniform Commercial Code in addition to all other rights provided by contract and by operation of law. Buyer agrees to pay to Seller, in addition to the interest on overdue sums due, reasonable attorney fees, court costs and other expenses of Seller incurred in enforcing Seller's rights. Buyer agrees to execute any instrument or document considered necessary by Seller to perfect its security interest in the vehicle including, but not limited to, financing statements, chattel mortgages, deeds of trust, deeds to secure debt, mortgages or other security instruments.

**11. Default and Seller's Remedies.** In the event of default by Buyer, all unpaid sums and installments owed to Seller, shall, at the Seller's sole option, become immediately due and payable without notice of any kind to Buyer. In addition to its right of acceleration, Seller may pursue any and all remedies allowed by law or in equity, including but not limited to any and all remedies available to it under the Delaware Uniform Commercial Code. In addition to the foregoing, and not in limitation thereof, Seller shall have the right to set off any credits or amounts owed to Buyer against any amounts owed by Buyer to Seller.

**12. Indemnification by Buyer.** Buyer hereby agrees to indemnify, release, defend and hold harmless Seller, its directors, officers, employees, agents, representatives, successors, and assigns against any and all suits, actions or proceedings at law or in equity (including the costs, expenses and reasonable attorney's fees incurred in connection with the defense of any such matter) and from any and all claims, demands, losses, judgments, damages, costs, expenses or liabilities, to any person whatsoever (including Buyer's and Seller's employees or any third party), or damage to any property (including Buyer's property) arising out of or in any way connected with the performance or the furnishing of services or parts under this agreement, regardless of whether any act, omission, or negligence of Seller, its directors, officers, employees, agents, representatives, successors or assigns contributed thereto. If Buyer fails to fulfill any of its obligations under this paragraph or this agreement, Buyer agrees to pay Seller all costs, expenses and attorney's



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fees incurred by Seller to establish or enforce Seller's rights under this paragraph or this agreement. The provisions of this paragraph are in addition to any other rights or obligations set forth in this agreement.

**13. Construction and Severability.** This agreement constitutes the entire agreement between the parties regarding the subject matter hereto and shall be construed and enforced in accordance with the laws of the State of Delaware. Seller shall not be bound by any agent's, employee's or dealer's representation or by any other representation, promise or inducement not set forth herein. The invalidity or unenforceability of any provisions of this agreement shall not affect any other provision and this agreement shall be construed in all respects as if such invalid or unenforceable provision were omitted.

**14. Jurisdiction.** The parties agree that the proper and exclusive forum and venue in all legal actions brought to enforce or construe any of the provisions of this agreement shall be in the state and federal courts of the State of Delaware.

**15. No Assignment.** This agreement may not be assigned by the Buyer unless expressly agreed to in writing by the Seller.

**16. Miscellaneous.** Buyer represents that: (i) it is solvent and has the financial ability to pay for the parts and services purchased hereunder and (ii) it has all requisite right, power and authority to perform its obligations under this agreement.

Offer made by Terex Utilities:

Accepted by:

Sign:

PO No. \_\_\_\_\_

Print:

Sign: \_\_\_\_\_

Date:

Print: \_\_\_\_\_

Date: \_\_\_\_\_



San Antonio 210-476-7777  
 Sacramento 916-929-2620  
 Phoenix 602-256-0162

Wildwood 352-330-4044  
 Seattle 206-764-5025  
 Ontario 909-947-9771

Charlotte 704-599-4660  
 North Little Rock 501-945-6100  
 Las Vegas 801-973-9066  
 TOLL FREE 888-TEREX-77

Ulen Allen 804-752-2811  
 Ft. Worth 817-698-8005  
 Spokane 509-928-9573  
 Denver 303-202-0304

W.O.# 164612 Location 92 Y Field=F  Field=F  Shop=S  Non-Billable/Rew=N  Installation=Br.# TEL 11 - 217

Date 2 10 11 Customer Freebans Municipal  Parts=P  Equip. Serial# TEL 11 - 217

Contact Ron Distefano  Warranty (inhouse)=T  Customer Spec=C Telephone II

Address 412 W Hisk St  Rental=R  Warranty (Vendor)=V  Service=S Chassis VIN

Freebans IL  Internal=I  Rental rep/maint=G FF8258MVA3301

State IL P.O.# \_\_\_\_\_ Contract# \_\_\_\_\_ Chassis Model 91 Load 15

Phone 618 531-5876 Crew# \_\_\_\_\_ Odometer 21747

Fax 530-0677 COD \_\_\_\_\_ Charge \_\_\_\_\_ Miles \_\_\_\_\_ PTO Hours \_\_\_\_\_

Travel Hrs \_\_\_\_\_ Truck# 15

Seg/PH. No.	Description	Labor	Parts	Other
	Customer Had Outside Vendor Perform Inspection			
	Inspection Company Reporting Rotative Bas Excessive Play			
	Did A Spot Inspection On Unit			
	Will Quote Thr. Following			
	Rotative Bas Replacement w/ D.I. Seal, T.T.			
	L111 Cyl Repair			
	Auger Hoss. Replacement			
	Rotative Motor Seal (Believe same Pen & M. too)			
	Living Insects, M. Sings			
	Inspection R. Hing / Oil + 17 Cyl (Black Hoss.)			
	<b>Total</b>			
	<b>Invoice Total</b>			

**DISPOSITION OF USED PARTS** RETURN:  DISCARD:  REPAIR PER PROPOSAL:

Customer hereby authorizes the repair work described above (including all necessary parts and labor in the amounts and at such hourly rates as may be set forth above) to be performed by Terex Utilities, Inc., Terex Utilities South, Inc. and/or Utility Equipment, Inc. (each a "Seller") and agrees that each such Seller is not responsible for any damage or loss to the vehicle or any personal property left in the vehicle in the case of fire, theft, or any other cause beyond such Seller's control or for any delays caused by unavailability of parts shipments by the supplier or transporter. Customer hereby grants Seller and Seller's employees permission to operate the above described vehicle on streets, highways or elsewhere for the purpose of testing and/or inspection. Customer grants Seller a security interest and lien in the parts and equipment described above until such time as the amounts set forth above are paid in full by Customer to Seller. Customer has read and agrees to all of the terms and conditions set forth on the reverse side of this form.

Customer's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Seller's Representative: \_\_\_\_\_ Date: \_\_\_\_\_