



AGENDA
CITY OF LAKE WORTH
ELECTRIC UTILITY ADVISORY BOARD MEETING
CITY HALL CONFERENCE ROOM
WEDNESDAY, JULY 06, 2016 6:00 PM

1. ROLL CALL:
2. PLEDGE OF ALLEGIANCE:
3. AGENDA - Additions/Deletions/Reordering:
4. PRESENTATIONS: (There is no public comment on Presentation items)
5. BOARD COMMENTS
6. PUBLIC PARTICIPATION OF NON-AGENDAED ITEMS:
7. APPROVAL OF MINUTES:
 - A. EUAB 06.01.16 Minutes
8. UNFINISHED BUSINESS:
 - A. Willdan Financial Services - Economic & Financial Valuation Update
9. NEW BUSINESS:
 - A. Purchase Agreement with Circuit Breakers Sales & Service
 - B. Professional Services Agreement with Ametek Solidstate Controls
 - C. Purchase of digital radios with Radio One
 - D. Prepaid Account Management System, Software and Implementation with Exceleron Software, LLC
 - E. Purchase three phase cable and materials for the Generator GT-1

10. BOARD LIASON REPORTS AND COMMENTS:

11. ADJOURNMENT:

If a person decides to appeal any decision made by the board, agency or commission with respect to any matter considered at such meeting or hearing, he or she will need a record of the proceedings, and that, for such purpose, he or she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based. (F.S. 286.0105)

NOTE:ONE OR MORE MEMBERS OF ANY BOARD, AUTHORITY OR COMMISSION MAY ATTEND AND SPEAK AT ANY MEETING OF ANOTHER CITY BOARD, AUTHORITY OR COMMISSION.

**MINUTES
CITY OF LAKE WORTH
ELECTRIC UTILITY ADVISORY BOARD
MEETING
June 1, 2016 – 6:00 PM**

The meeting was called to order by Lisa Maxwell on the above date at 6:00 PM in the City Hall Conference Room, located at 7 North Dixie Highway, Lake Worth, Florida.

1. ROLL CALL:

Present were members: Lisa Maxwell, Ibrahim Chalhoub, Caroline Clore, Peggy Fisher, and Roger St. Martin.

Noah Tennyson was absent for the roll call. Noah Tennyson joined the meeting at 6:05 p.m.

John Borsch, the Electric Utility Director and Board Liaison, was also present.

2. PLEDGE OF ALLEGIANCE:

The pledge of allegiance was led by Peggy Fisher.

3. AGENDA – Additions/Deletions/Reordering:

There were no additions, deletions or reordering on the agenda.

4. PRESENTATIONS:

Staff introduced John Ragone to the Board by stating he is a business consultant hired to create an RFQ to attract qualifying companies that will help develop a five year (5) business plan for Electric Utility.

John Ragone has been in business for over 25 years and held many roles as Business and Lead Developer, Project Manager, Director of Business Development to now owning a family business. His business helps provide development and financial services to the power industry. He has negotiated major projects agreements, developed financial models to secure long-term institutional financing, marketing plan for a solar firm, evaluated gas pipeline contracts to support assets, amongst other major projects. Mr. Ragone stated that he met with John Borsch and the City Manager earlier today and had a better understanding of the scope of work to complete the RFQ for the Electric Utility business plan.

A lengthy discussion ensued.

Peggy Fischer asked staff what is Electric Utility's most current need in the RFQ process, especially now that the City's purchasing power agreement with Orlando Utilities Commission will expire.

John Borsch responded Electric Utility still has a one year extension for purchase power agreement with Orlando Utilities Commission and Walter Gill is developing a three year purchase power agreement with two optional years of extension. Staff also mentioned that the purchase power agreement is another opportunity that will be develop further in the business plan.

EUAB asked John Ragone to provide an overall idea of the scope of work.

John Ragone responded that once provided with the information on City's current asset, any mini-business plan the City may have, along with other information staff provides, the basis for the scope of work can be developed and may help the City decide whether to build or sell.

Caroline Clore asked about Staff's thought on the use of the City's natural gas line.

Staff responded anything the City owns is an asset with a value and can be used in number of different ways to benefit the City and this will be explored further in the business plan. Staff is currently reviewing contract with Florida Public Utilities for the use of gas line.

EUAB requested copy of the contract between the Florida Public Utilities and the City of Lake Worth to discuss in the next EUAB meeting.

EUAB asked John Ragone what is the time frame for the Business Plan.

John Ragone stated it will take about sixty days (60) days to have an internal business plan and scope of work.

BOARD COMMENTS:

A. The Board complimented John Borsch on article written about the street lights in the Palm Beach Post, and that the article was very informative and that many residents had also compliment John Borsch for the street lights.

Caroline Clore participated in the prepaid program staff meeting. The Board member stated this is a positive tool for residential and business customers in maintaining the electric bill cost down.

EUAB asked about the 26kV conversion.

Staff responded presentation has been submitted to City Manager and is waiting for City Manager to add to the Commission Agenda. Staff is working on adding the 26kV on the June or July agenda.

5. **PUBLIC PARTICIPATION OF NON-AGENDAED ITEMS:**

There was no public participation of non-agendaed items.

6. **APPROVAL OF MINUTES:**

A. EUAB Minutes 05.04.16

Action: The motion was made by Peggy Fisher to approve the minutes and seconded by Ibrahim Chalhoub.

Vote: Unanimous

7. **UNFINISHED BUSINESS:**

A. Willdan Financial Services - Economic & Financial Valuation Update

Staff stated Willdan Financial Services committed to having the report completed by the end of the month. Staff together with Willdan will review report and provide copy of report to EUAB in the next meeting.

8. **NEW BUSINESS:**

A. Purchase of four (4) new 55' trucks for Electric Utility

John Borsch reported currently the Transmission & Distribution division have three trucks that have been red tagged due to safety issues. The cost to repair would exceed the value of the vehicle.

The four (4) new 55' bucket material handling trucks will be purchased through the National Joint Powers Alliance's [NJPA] competitive solicitation process and purchase agreement with Altec Industries, Inc. at a price \$220,453 each not to exceed \$881,812.

A lengthy discussion ensued.

Action: The motion was made by Roger St. Martin to recommend the purchase of four (4) new 55' material handling bucket trucks from Altec Industries each costing \$220,453 for a total amount of \$881,812 and seconded by Peggy Fischer.

Vote: Unanimous

9. **BOARD LIAISON REPORTS AND COMMENTS:**

- A. John Borsch will attend the Village of Palm Springs next council meeting scheduled June 9th to provide an update of current capital improvement projects.
- B. Staff announced the Power Plant Manager, David Mulvay retired after 33 years of service with City and temporary replacement will be hired to assist staff while a new Power Plant Manager is hired for Tom G. Smith Power Plant.

10. ADJOURNMENT:

The meeting was adjourned at 7:07 pm.

Lisa Maxwell, Chairperson

ATTEST:

Sugey Moreno, Executive Secretary

Minutes Approved: June 1, 2016

A digital audio recording of this meeting will be available in the Office of the City Clerk.



AGENDA DATE: July 6, 2016

DEPARTMENT: Electric Utility

EXECUTIVE BRIEF

TITLE:

Agreement to purchase and install one (1) new General Electric PVVL-13.8-750-12 circuit breaker in the amount of \$23,150. A trade-in credit of \$850 is applied for the return of one (1) used circuit breaker to Circuit Breaker Sales & Service.

BACKGROUND AND JUSTIFICATION:

Quotes were solicited for the purchase and installation of a new circuit breaker for the Power Plant. The following vendors responded:

- Circuit Breaker Sales & Service - \$24,000 minus \$850 trade-in credit = \$23,150;
- Siemens - \$25,245;
- Schneider Electric - \$24,839.78; and
- ABB - \$26,620.

Quotes were reviewed by George Guirguis, Engineer, and Robert Kahant, Chief Electrician. Staff recommends purchasing the circuit breaker from Circuit Breaker Sales & Service in amount of \$23,150. The circuit breaker is compatible with the current switchgear, and both are manufactured by General Electric.

Type	Vendor	Cost	Total
CIP 401-6031-531-64-40	Circuit Breaker Sales & Service	\$23,150	\$23,150
		Total	\$23,150

MOTION:

I recommend/ do not recommend the agreement with Circuit Breaker Sales & Service for the purchase and installation of one (1) new General Electric PVVL-13.8-750-12 circuit breaker in amount of \$23,150 with a return of one (1) used circuit breaker.

ATTACHMENT(S):

Fiscal Impact Analysis
 Recap Sheet
 Quote from Circuit Breaker Sales & Service
 Quote from Siemens
 Quote from Schneider Electric
 Quote from ABB

FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	2016	2017	2018	2019	2020
Capital Expenditures	\$23,150	0	0	0	0
Operating Expenditures	0	0	0	0	
External Revenues	0	0	0	0	0
Program Income	0	0	0	0	0
In-kind Match	0	0	0	0	0
Net Fiscal Impact	\$23,150	0	0	0	0
No. of Addn'l Full-Time Employee Positions	0	0	0	0	0

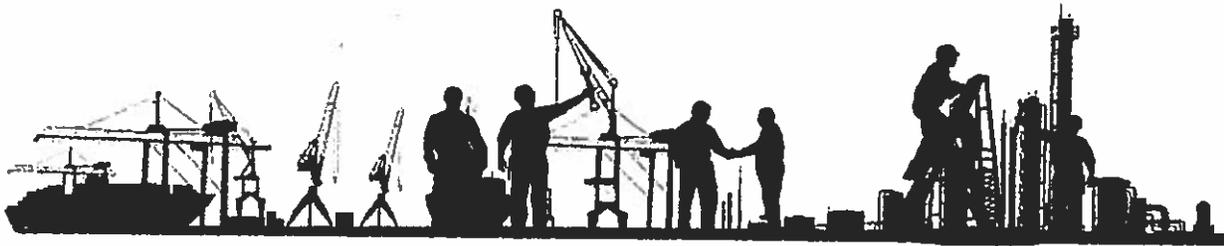
B. Recommended Sources of Funds/Summary of Fiscal Impact:

Utilities /Electric						
Account Number	Account Description	Project #	FY2016 Budget	Current Balance	Agenda Item Expenditures	Remaining Balance
401-6031-531-64-40	Other Contractual Services	N/A	\$24,000	\$24,000	\$23,150	\$850

C. Department Fiscal Review: John Borsch, Electric Utility Director

Medium Voltage Service

Quotation for MV RIR



To: City of Lake Worth
C/O: Stephen Scala

ABB Quotation Number:

16Q2861259

Submitted on January 6, 2016 by:

Garry Ankrom
843-992-7417
garry.ankrom@us.abb.com
Business Development Manager

Robert Streett
843-413-4762
robert.streett@us.abb.com
Inside Sales

January 6, 2016

ABB Quotation Number: 16Q2861259

Dear Valued Customer:

Attached is a quotation from ABB Inc., per your request.

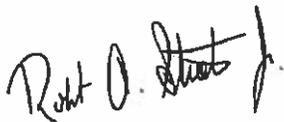
The opportunity to provide these items to you is greatly appreciated, and this offering is intended to meet your highest expectations.

With over 100 years of experience in the design, development, manufacturing and through-life service support of medium and low voltage switchgear, we have established a wealth of technical solutions to meet your specific electrical network reliability needs. ABB has one of the largest installed bases of any switchgear manufacturer in the United States. We support our products through a comprehensive range of services that ensure optimum performance throughout the product life.

ABB Inc. stands ready to work with you to supplement this offering with technical application experts and additional services intended to keep your electrical equipment operating properly and safely.

We look forward to your consideration of this offering, and will be pleased to answer any questions you may have.

Kind Regards,



Robert Streett

Medium Voltage Service

TABLE OF CONTENTS

SCOPE OF SUPPLY AND PRICING 4

COMMENTS / CONTRACT DOCUMENTS..... 8

CLARIFICATIONS / EXCEPTIONS..... 9

“SHIPMENT CLOCK” WILL NOT BEGIN UNTIL RECEIPT OF ALL REQUIRED TECHNICAL INFORMATION FROM CUSTOMER
AND COMPLETION OF ANY REQUIRED SITE VISIT FOR ENGINEERING MEASUREMENTS 10

CUSTOMER WILL PROVIDE 11

SAFETY 12

TECHNICAL SERVICES..... 14

GENERAL TERMS AND CONDITIONS..... 17

ABB INC. GENERAL TERMS AND CONDITIONS OF SALE 17

SCOPE OF SUPPLY AND PRICING

Roll in Replacement

1. **ABB Roll in Replacement Circuit Breaker** – ABB uses vacuum circuit breakers with spring (ADVAC/VD4) or magnetic (AMVAC/VM1) actuated drive.
 - a. The ADVAC/VD4 series are a complete line of ANSI-rated vacuum circuit breakers offering an accessible operating mechanism with easy access to lubrication points, trip/close coils, charging motor, anti-pump relay and auxiliary switch.
 - b. The AMVAC circuit breaker combines maintenance-free epoxy encapsulated vacuum interrupters, with an ultra-low maintenance magnetic actuator mechanism, and a maintenance-free electronic controller. The electronic controller not only maintains the charge in the long life capacitors used for open/close operations, but also controls the open, close, and anti-pump functions. The AMVAC breaker requires the least maintenance of all medium voltage vacuum circuit breaker designs in the market today.
2. **Breaker Carriage and Interlocks** – A rugged steel frame with mechanical and electrical interlock safety features to fit your existing switchgear cell with little or no modifications.
3. **All new components** – The breaker element, breaker frame, interlocks, primary bushing, secondary disconnects and wiring are all completely new.
4. **Non-hygroscopic Bushings** – All circuit breaker bushings will be new and feature track resistant, non-hygroscopic epoxy construction.
5. **Design Testing** – ABB roll-in replacement circuit breakers solutions conform to the applicable portions of ANSI C37.59, C37.04, and C37.06.

Production Testing - Production testing of the roll-in replacement elements is in accordance with the applicable portions of ANSI C37.09. Objective evidence of that testing is provided with each circuit breaker upon request.

Installation and Commissioning - Roll in Replacement

- On-site installation and commissioning or supervision provided by ABB personnel consists of
- o On site testing of circuit breaker (contact resistance, insulation resistance, Hi-Pot)
 - o Providing technical assistance to customer personnel to verify that all safety interlocks operate as designed with the corresponding cell.
 - o Performing verification of open, close and motor charging operations and

- o Performing activities to verify that breakers rack into and out of the switchgear compartment cell.

As switchgear cells may vary and/or been modified over the years of service, adjustments may be necessary to insure a proper fit and operation of the new replacement breaker. Because of this, ABB requires that supervision or installation and commissioning be performed only by factory trained ABB personnel. Fitting issues due to necessary repairs (broken parts, major misalignments) on the switchgear are not part of the quoted Installation & Commissioning and will be invoiced at actual costs.

Since Installation and Commissioning is purchased in conjunction with the quoted breakers, an additional (1) year extended warranty will apply and will include both parts and service, when the equipment is subjected to normal operating conditions and is properly maintained by the customer.

ABB is not responsible for any damages resulting from improper installations performed by third parties that result in damage or miss-operation of the equipment.

Item	Item Description	Lead time	Quantity	Unit Price [USD]	Total Price [USD]
20	1VAFR4204130010 Roll In Replacement for GE AM-13.8-750, 1200A, equipped with AMVAC / VM1, 15kV, 1200A, 40kA (K-Factor = 1). Special features of circuit breaker: None This RIR solution has a MOC and TOC included.	18 weeks	2	\$20,300	\$40,600
	Warranty: 12 month Internal codes: Product Code: [9AAF400373] - Circuit Breakers / Service / Extension, Upgrades and Retrofits / Retrofits Source Location: [9AAE300864] - US - Florence - 3442 MV Service				
30	MV INSTALL SUPPORT MV INSTALLATION AND COMMISSIONING SUPPORT	18 weeks	1	\$6,320	\$6,320

(1) FIELD TECH
 (1) DAY ON SITE
 (1) MOBILIZATION

REQUIRED

*** WHEN ORDERING ANY RIR CIRCUIT BREAKER INSTALLATION AND COMMISSIONING and/or SUPERVISION MUST BE PERFORMED BY ABB CERTIFIED PERSONNEL AND ORDERED IN CONJUNCTION WITH RIR BREAKERS.**

PART NUMBER MUST APPEAR ON PURCHASE ORDER AS A SEPARATE LINE ITEM.

Scope of work:

Ø Removal of existing breakers and set aside for storage or removal by the customer

Ø Prepare switchgear cubical to accept the new RIR breakers and make upgrade recommendations where required.

Ø Identify all electrical and mechanical connections that may be in place at each mounting position during the disassembly process of existing circuit breakers.

Ø Safety Interlock verification

Ø Functional operation

Ø Operations training for (2) customer facility technicians

Note:

An outage will be required to perform this service.

Internal codes:

Product Code: [9AAF400357] - Medium Voltage / Circuit Breakers / Service / Installation and Commissioning

Source Location: [9AAE315463] - US - Nashville - 3442 MV Service

Total

Total Scope

\$46,920

COMMENTS / CONTRACT DOCUMENTS

- This quote is valid for 60 days from the date of issue
- Any delays beyond ABB's control will be billed at the applicable rate(s) per ABB's Field Service Commercial Rate Schedule.
- Additional services and components not part of the quote which are necessary to complete the service will be quoted separately
- F.O.B. point of shipment for material, freight prepaid and added as expense.
- Only for field service on-site jobs: a 2hrs on-site safety training is included in this quotation. Additional safety training time and waiting time will be billed per ABB's Field Service Rate Sheet.

CLARIFICATIONS / EXCEPTIONS

Roll in Replacement – General

In order to insure proper fit and tolerances, ABB may recommend a customer site visit after receipt of order to verify design requirements. If verification is necessary, a short outage will be required for this purpose. Customer will be notified of this requirement immediately upon receipt of order and all required technical information

As Installation and Commissioning is purchased in conjunction with the quoted breakers, an additional (1) year extended warranty will apply and will include both parts and service, when the equipment is subjected to normal operating conditions and is properly maintained by the customer.

ABB is not responsible for any damages resulting from improper installations performed by third parties that result in damage or miss-operation of the equipment.

Roll in Replacement - New Circuit Breaker Design

If new Circuit breaker design is required of ABB per Customer Specifications - ABB will request Customer's Approval and Sign off prior to manufacturing new breaker. Shipment schedules will be determined from the date of ABB Engineering and Customer Approval acceptance.

If ABB determines a prototype is required for new design; ABB will require a customer site visit for test fitting and measurements. A complete bus outage is required for said site visit. Customer will be notified of this requirement immediately.

For existing designs prototypes are not be required.

Roll in Replacement - Customer responsibilities

- Customer is responsible for providing ABB Inc. with an accurate control wiring drawing for breaker and cubicle so that ABB Inc. can ensure secondary contacts correctly match the existing switchgear control scheme.
- Four weeks (4) after order acceptance – submittal of Wiring Diagrams. Project schedule will be placed on hold if the Wiring Diagrams are not received within the requested time frame.
- Free and clear access to switchgear for inspection.
- Customer has to schedule required outage for Installation / Commissioning or Installation / Commissioning Supervision.
- Disposal of old breaker(s)
- For order entry acceptance - completion of attached Specification Worksheet is required (see attachment at end of quotation letter).

Roll in Replacement - Delivery

- Quoted lead times are based on current production levels.
- Actual lead times are dependent on available production space at time of order entry and/or release to manufacturing.

"SHIPMENT CLOCK" WILL NOT BEGIN UNTIL RECEIPT OF ALL REQUIRED TECHNICAL INFORMATION FROM CUSTOMER AND COMPLETION OF ANY REQUIRED SITE VISIT FOR ENGINEERING MEASUREMENTS

CUSTOMER WILL PROVIDE

- Drawings and wiring diagrams as required.
- Customer must put quote number on Purchase Order before being accepted or acknowledged as an order.
- Switching and outages as required with safe lock out and tag out of equipment being worked upon.
- Free and clear access and egress to the worksite.
- Power for tools, lighting, and measurement equipment.
- Communication and sanitation facilities.
- Equipment must be in a "ready to work on" condition. Additional waiting time will be billed per ABB's Field Service Rate Sheet.

SAFETY

ABB's primary focus is safety. ABB personnel will perform all work in accordance with applicable OSHA safety standards, customer requirements, as well as ABB's Safety Manual Guidelines.

The ABB Medium Voltage Service Safety Manual states that any ABB employee shall NOT work on energized equipment. This requirement also applies to situations where an ABB Field Service Engineer is overseeing and supervising the work of others.

Although ABB understands each customer has their own safety plan in place, it is our recommendation that all work on switchgear be performed with the bus de-energized.

Under no circumstance shall an ABB representative rack a breaker into an energized cell. When an ABB representative is observing the racking process, he/she shall not be within the flash protection boundary. If the flash protection boundary has not been calculated, then the ABB representative shall exit the area/building until the racking process is completed.

CUSTOMER ACCEPTANCE

ABB Incorporated has been requested to perform above noted services. This work authorization, per subject terms & conditions provided with this document, forms the basis of contract with ABB, Inc. unless previously agreed terms are existent

Upon acceptance please email or fax a signed copy of this page, along with a copy of your purchase order to the following:

Karen Smith: karen.smith@us.abb.com
Charlotte Reaves: charlotte.a.reaves@us.abb.com
Patti Cribb: patti.m.cribb@us.abb.com

Fax: 1-843-413-4851

ABB Quote Number: 16Q2861259

Authorization/Purchase Order Number:

Billing Address:

Customer Signature:

Note: ABB Order Entry Personnel – Please reference the internal order codes in the Scope of Supply section.

TECHNICAL SERVICES

ABB Inc. maintains a complete staff of trained field engineers and technicians who are available to provide advisory assistance, installation, inspection, commissioning, testing, troubleshooting, start up, engineering studies, maintenance and repair services of electrical apparatus. Field engineers and technicians are classified into categories dependent upon the degree of expertise and complexity of the service required.

Class I – Service Engineer or Technical Specialist

The service engineer or technical specialist has specialized educational and factory training and experience in design, assembly, installation, and testing. This person is required for special diagnosis, repairs, inspection, failure analysis, engineering evaluations, and training of customer personnel.

Class II – Lead Service Technician

The lead service technician has specialized factory training and experience. This person can act as a consultant for customer's personnel with respect to correct installation, testing, maintenance, or service requirements consistent with ABB guidelines.

Class III – General Service Technician

The service technician has craft trade training along with factory training. The specialist will engage in performance of routine maintenance, installation and service activities.

Specialist Rates

Classification	Daily Rate (1)	Daily Rate with Per Diem	Hourly Overtime Rate (2)	Hourly Sunday, Standby & Holiday Rate (3)
Transformer Services				
Class I	\$2400	\$2700	\$450	\$600
Class II	\$1600	\$1900	\$300	\$400
Class III	\$1280	\$1580	\$240	\$320
Emergency	25% surcharge added to above rates			
HV, MV, & LV Circuit Breaker Services Protection & Control Equipment Services				
Class I	\$1760	\$2080	\$330	\$440
Class II	\$1440	\$1740	\$270	\$360
Class III	\$1040	\$1340	\$195	\$260
Emergency	\$2240	\$2540	\$420	\$560
Gas Insulated Substation (GIS) Services Generator Circuit Breaker (GCB) Services				
Class I GIS	\$2000	\$2300	\$375	\$500
Class I GCB	\$1800	\$2100	\$338	\$450
Emergency	\$2240	\$2540	\$420	\$560

1. Daily rate applies to all time worked or traveled during a normal eight hour work day. The shift is defined as any consecutive eight hour period (Monday - Friday, excluding holidays) with an allowance for lunch.

2. Overtime rate applies to all hours worked or traveled in excess of eight hours on weekdays and the first eight hours worked or traveled on Saturday.

3. Sunday and Holiday rate applies to all hours work or traveled on Sundays, holidays, and in excess of eight hours on Saturday.

ABB policy is a maximum of (12) twelve working hours per day per person including travel time. Under special circumstances and with prior ABB Business Unit approval, the maximum work hours can be extended to (16) sixteen working hours per day per person including travel time.

Hourly and daily rates are exclusive of all travel and living costs.

Charges for travel and living expenses will be billed at cost plus a 25% handling charge.

Per Diem

Where purchasers specify or require daily rates for field services inclusive of local traveling and living expenses, a flat charge will be billed for all time worked or traveled per eight hour weekday or fraction thereof (Monday through Friday). All hours worked or traveled in excess of eight hours per weekday and all hours on Saturdays, Sundays, and holidays will be billed at the applicable hourly overtime rates. Per diem rates exclude the cost of airfare to/from the job site and home base.

Traveling Time

The billing for traveling time will be at the applicable rate for the actual time traveled. Traveling time and expenses for each specialist / technician will include leaving and returning to the employee's home base.

Minimum Billing

A minimum billing for one day's service will be charged for each day or fraction thereof that a specialist / technician spends on the customer's premises.

Standby Time

When specialists / technicians are on the customer's premises but are unable to perform the services requested because of circumstances beyond the control of ABB Inc., the purchaser will be charged at the applicable rate.

Preparation / Post Work Time

When a specialist / technician works on a customer's project prior to the start of the field work and/or after the field work, the purchaser will be charged for all hours worked at the applicable rate.

Other Charges

The following charges will be in addition to the service rates stated previously:

- **Purchased Material**
When the job requires the purchase of materials or services from subcontractors or other vendors or expendable tools, such items will be billed at cost plus a service charge not to exceed 30%.
- **Special Tools and Equipment Furnished by ABB**
A rental charge shall be made for all specialized tools, equipment, and instruments. Refer to ABB Inc. Field Service Equipment Rental Rate Schedule.
- **Company Vehicle Mileage Rate**
The cost of mileage for company vehicles to travel to and from the standard job site will be billed at a rate of \$0.75 per mile and \$200 per day.
- **Oil Processing Trailer**
The daily rate for an oil processing trailer will be billed at \$2,500 per day, if required. Mobilization and demobilization charges will be billed at a rate of \$3.50 per mile each way. The usage of an oil processing trailer requires at least four service personnel (2 of the four must be ABB personnel)

TERMS OF PAYMENT

Net 30 days

GENERAL TERMS AND CONDITIONS

ABB INC. GENERAL TERMS AND CONDITIONS OF SALE

1. Conditions. Except as otherwise noted herein, the attached ABB Inc. General Terms and Conditions of Sale shall apply to this quotation and subsequent purchase order or contract.

2. General. The terms and conditions contained herein, together with any additional or different terms contained in ABB's Proposal, if any, submitted to Purchaser (which Proposal shall control over any conflicting terms), constitute the entire agreement (the "Agreement") between the parties with respect to the order and supersede all prior communications and agreements regarding the order. Acceptance by ABB of the order, or Purchaser's acceptance of ABB's Proposal, is expressly limited to and conditioned upon Purchaser's acceptance of these terms and conditions, payment for or acceptance of any performance by ABB being acceptance. These terms and conditions may not be changed or superseded by any different or additional terms and conditions proposed by Purchaser to which terms ABB hereby objects. Unless the context otherwise requires, the term "Equipment" as used herein means all of the equipment, parts, accessories sold, and all software and software documentation, if any, licensed to Purchaser by ABB ("Software") under the order. Unless the context otherwise requires, the term "Services" as used herein means all labor, supervisory, technical and engineering, installation, repair, consulting or other services provided by ABB under the order. As used herein, the term "Purchaser" shall include the initial end user of the Equipment and/or services; provided, however, that Paragraph 13(a) shall apply exclusively to the initial end user.

3. Prices.

(a) Unless otherwise specified in writing, all Proposals expire thirty (30) days from the date thereof.

(b) Unless otherwise stated herein, Services prices are based on normal business hours (8 a.m. to 5 p.m. Monday through Friday). Overtime and Saturday hours will be billed at one and one-half (1 1/2) times the hourly rate; and Sunday hours will be billed at two (2) times the hourly rate; holiday hours will be billed at three (3) times the hourly rate. If a Services rate sheet is attached hereto, the applicable Services rates shall be those set forth in the rate sheet. Rates are subject to change without notice.

(c) The price does not include any federal, state or local property, license, privilege, sales, use, excise, gross receipts, or other like taxes which may now or hereafter be applicable. Purchaser agrees to pay or reimburse any such taxes which ABB or its suppliers are required to pay or collect. If Purchaser is exempt from the payment of any tax or holds a direct payment permit, Purchaser shall, upon order placement, provide ABB a copy, acceptable to the relevant governmental authorities of any such certificate or permit.

(d) The price includes customs duties and other importation or exportation fees, if any, at the rates in effect on the date of ABB's Proposal. Any change after that date in such duties, fees, or rates, shall increase the price by ABB's additional cost.

4. Payment.

(a) Unless specified to the contrary in writing by ABB, payment terms are net cash, payable without offset, in United States Dollars, 30 days from date of invoice by wire transfer to the account designated by ABB in the Proposal.

(b) If in the judgment of ABB the financial condition of Purchaser at any time prior to delivery does not justify the terms of payment specified, ABB may require payment in advance, payment security satisfactory to ABB, or may terminate the order, whereupon ABB shall be entitled to receive reasonable cancellation charges. If delivery is delayed by Purchaser, payment shall be due on the date ABB is prepared to make delivery. Delays in delivery or nonconformities in any installments delivered shall not relieve Purchaser of its obligation to accept and pay for remaining installments.

(c) Purchaser shall pay, in addition to the overdue payment, a late charge equal to the lesser of 1 1/2% per month or any part thereof or the highest applicable rate allowed by law on all such overdue amounts plus ABB's attorneys' fees and court costs incurred in connection with collection.

5. Changes.

(a) Any changes requested by Purchaser affecting the ordered scope of work must be accepted by ABB and resulting adjustments to affected provisions, including price, schedule, and guarantees mutually agreed in writing prior to implementation of the change.

(b) ABB may, at its expense, make such changes in the Equipment or Services as it deems necessary, in its sole discretion, to conform the Equipment or Services to the applicable specifications. If Purchaser objects to any such changes, ABB shall be relieved of its obligation to conform to the applicable specifications to the extent that conformance may be affected by such objection.

6. Delivery.

(a) All Equipment manufactured, assembled or warehoused in the continental United States is delivered F.O.B. point of shipment. Equipment shipped from outside the continental United States is delivered F.O.B. United States port of entry. Purchaser shall be responsible for any and all demurrage or detention charges.

(b) If the scheduled delivery of Equipment is delayed by Purchaser or by Force Majeure, ABB may move the Equipment to storage for the account of and at the risk of Purchaser whereupon it shall be deemed to be delivered.

(c) Shipping and delivery dates are contingent upon Purchaser's timely approvals and delivery by Purchaser of any documentation required for ABB's performance hereunder.

(d) Claims for shortages or other errors in delivery must be made in writing to ABB within ten days of delivery. Equipment may not be returned except with the prior written consent of and subject to terms specified by ABB. Claims for damage after delivery shall be made directly by Purchaser with the common carrier.

7. Title & Risk of Loss. Except with respect to Software (for which title shall not pass, use being licensed) title to Equipment shall remain in ABB until fully paid for. Notwithstanding any agreement with respect to delivery terms or payment of transportation charges, risk of loss or damage shall pass to Purchaser upon delivery.

8. Inspection, Testing and Acceptance.

(a) Any inspection by Purchaser of Equipment on ABB's premises shall be scheduled in advance to be performed during normal working hours.

(b) If the order provides for factory acceptance testing, ABB shall notify Purchaser when ABB will conduct such testing prior to shipment. Unless Purchaser states specific objections in writing within ten (10) days after completion of factory acceptance testing, completion of the acceptance test constitutes Purchaser's factory acceptance of the Equipment and its authorization for shipment.

(c) If the order provides for site acceptance testing, testing will be performed by ABB personnel to verify that the Equipment has arrived at site complete, without physical damage, and in good operating condition. Completion of site acceptance testing constitutes full and final acceptance of the Equipment. If, through no fault of ABB, acceptance testing is not completed within thirty (30) days after arrival of the Equipment at the site, the site acceptance test shall be deemed completed and the Equipment shall be deemed accepted.

9. Warranties and Remedies.

(a) Equipment and Services Warranty. ABB warrants that Equipment (excluding Software, which is warranted as specified in paragraph (d) below) shall be delivered free of defects in material and workmanship and that Services shall be free of defects in workmanship. The Warranty Remedy Period for Equipment (excluding Software, Spare Parts and Refurbished or Repaired Parts) shall end twelve (12) months after installation or eighteen (18) months after date of shipment, whichever first occurs. The Warranty Remedy Period for new spare parts shall end twelve (12) months after date of shipment. The Warranty Remedy Period for refurbished or repaired parts shall end ninety (90) days after date of shipment. The Warranty Remedy Period for Services shall end ninety (90) days after the date of completion of Services.

(b) Equipment and Services Remedy. If a nonconformity to the foregoing warranty is discovered in the Equipment or Services during the applicable Warranty Remedy Period, as specified above, under normal and proper use and provided the Equipment has been properly stored, installed, operated and maintained and written notice of such nonconformity is provided to ABB promptly after such discovery and within the applicable Warranty Remedy Period, ABB shall, at its option, either (i) repair or replace the nonconforming portion of the Equipment or re-perform the nonconforming Services or (ii) refund the portion of the price applicable to the nonconforming portion of Equipment or Services. If any portion of the Equipment or Services so repaired, replaced or re-performed fails to conform to the foregoing warranty, and written notice of such nonconformity is provided to ABB promptly after discovery and within the original Warranty Remedy Period applicable to such Equipment or Services or 30 days from completion of such repair, replacement or re-performance, whichever is later, ABB will repair or replace such nonconforming Equipment or re-perform the nonconforming Services. The original Warranty Remedy Period shall not otherwise be extended.

(c) Exceptions. ABB shall not be responsible for providing working access to the nonconforming Equipment, including disassembly and re-assembly of non-ABB supplied equipment, or for providing transportation to or from any repair facility, all of which shall be at Purchaser's risk and expense. ABB shall have no obligation hereunder with respect to any Equipment which (i) has been improperly repaired or altered; (ii)

has been subjected to misuse, negligence or accident; (iii) has been used in a manner contrary to ABB's instructions; (iv) is comprised of materials provided by or a design specified by Purchaser; or (v) has failed as a result of ordinary wear and tear. Equipment supplied by ABB but manufactured by others is warranted only to the extent of the manufacturer's warranty, and only the remedies, if any, provided by the manufacturer will be allowed.

(d) Software Warranty and Remedies. ABB warrants that, except as specified below, the Software will, when properly installed, execute in accordance with ABB's published specification. If a nonconformity to the foregoing warranty is discovered during the period ending one (1) year after the date of shipment and written notice of such nonconformity is provided to ABB promptly after such discovery and within that period, including a description of the nonconformity and complete information about the manner of its discovery, ABB shall correct the nonconformity by, at its option, either (i) modifying or making available to the Purchaser instructions for modifying the Software; or (ii) making available at ABB's facility necessary corrected or replacement programs. ABB shall have no obligation with respect to any nonconformities resulting from (i) unauthorized modification of the Software or (ii) Purchaser-supplied software or interfacing. ABB does not warrant that the functions contained in the software will operate in combinations which may be selected for use by the Purchaser, or that the software products are free from errors in the nature of what is commonly categorized by the computer industry as "bugs".

(e) The foregoing warranties are exclusive and in lieu of all other warranties of quality and performance, whether written, oral or implied, and all other warranties including any implied warranties of merchantability or fitness for a particular purpose or usage of trade are hereby disclaimed. The remedies stated herein constitute purchaser's exclusive remedies and ABB's entire liability for any breach of warranty.

10. Patent Indemnity.

(a) ABB shall defend at its own expense any action brought against Purchaser alleging that the Equipment or the use of the Equipment to practice any process for which such Equipment is specified by ABB (a "Process") directly infringes any claim of a patent of the United States of America and to pay all damages and costs finally awarded in any such action, provided that Purchaser has given ABB prompt written notice of such action, all necessary assistance in the defense thereof and the right to control all aspects of the defense thereof including the right to settle or otherwise terminate such action in behalf of Purchaser.

(b) ABB shall have no obligation hereunder and this provision shall not apply to: (i) any other equipment or processes, including Equipment or Processes which have been modified or combined with other equipment or process not supplied by ABB; (ii) any Equipment or Process supplied according to a design, other than an ABB design, required by Purchaser; (iii) any products manufactured by the Equipment or Process; (iv) any patent issued after the date hereof; or (v) any action settled or otherwise terminated without the prior written consent of ABB.

(c) If, in any such action, the Equipment is held to constitute an infringement, or the practice of any Process using the Equipment is finally enjoined, ABB shall, at its option and its own expense, procure for Purchaser the right to continue using said Equipment; or modify or replace it with non-infringing equipment or, with Purchaser's assistance, modify the Process so that it becomes non-infringing; or remove it and refund the portion of the price allocable to the infringing Equipment. The foregoing paragraphs state the entire liability of ABB and equipment manufacturer for any patent infringement.

(d) To the extent that said Equipment or any part thereof is modified by Purchaser, or combined by Purchaser with equipment or processes not furnished hereunder (except to the extent that ABB is a contributory infringer) or said Equipment or any part thereof is used by Purchaser to perform a process not furnished hereunder by ABB or to produce an article, and by reason of said modification, combination, performance or production, an action is brought against ABB, Purchaser shall defend and indemnify ABB in the same manner and to the same extent that ABB would be obligated to indemnify Purchaser under this "Patent Indemnity" provision.

11. Limitation of Liability.

(a) In no event shall ABB, its suppliers or subcontractors be liable for special, indirect, incidental or consequential damages, whether in contract, warranty, tort, negligence, strict liability or otherwise, including, but not limited to, loss of profits or revenue, loss of use of the Equipment or any associated equipment, cost of capital, cost of substitute equipment, facilities or services, downtime costs, delays, and claims of customers of the Purchaser or other third parties for any damages. ABB's liability for any claim whether in contract, warranty, tort, negligence, strict liability, or otherwise for any loss or damage arising out of, connected with, or resulting from this Agreement or the performance or breach thereof, or from the design, manufacture, sale, delivery, resale, repair, replacement, installation, technical direction of installation, inspection, operation or use of any equipment covered by or furnished under this Agreement, or from any services rendered in connection therewith, shall in no case (except as provided in the section entitled "Patent Indemnity") exceed one-half (1/2) of the purchase price allocable to the Equipment or part thereof or Services which gives rise to the claim.

(b) All causes of action against ABB arising out of or relating to this Agreement or the performance or breach hereof shall expire unless brought within one year of the time of accrual thereof.

(c) In no event, regardless of cause, shall ABB be liable for penalties or penalty clauses of any description or for Indemnification of Purchaser or others for costs, damages, or expenses arising out of or related to the Equipment and/Services.

12. **Laws and Regulations.** ABB does not assume any responsibility for compliance with federal, state or local laws and regulations, except as expressly set forth herein, and compliance with any laws and regulations relating to the operation or use of the Equipment or Software is the sole responsibility of the Purchaser. All laws and regulations referenced herein shall be those in effect as of the Proposal date. In the event of any subsequent revisions or changes thereto, ABB assumes no responsibility for compliance therewith. If Purchaser desires a modification as a result of any such change or revision, it shall be treated as a change per Article 4. Nothing contained herein shall be construed as imposing responsibility or liability upon ABB for obtaining any permits, licenses or approvals from any agency required in connection with the supply, erection or operation of the Equipment. This Agreement shall be governed by the laws of the State of New York, but excluding the provisions of the United Nations Convention on Contracts for the International Sale of Goods and excluding New York law with respect to conflicts of law. Purchaser agrees that all causes of action against ABB under this Agreement shall be brought in the State Courts of the State of New York, or the U.S. District Court for the Southern District of New York. If any provision hereof, partly or completely, shall be held invalid or unenforceable, such invalidity or unenforceability shall not affect any other provision or portion hereof and these terms shall be construed as if such invalid or unenforceable provision or portion thereof had never existed.

13. **OSHA.** ABB warrants that the Equipment will comply with the relevant standards of the Occupational Safety and Health Act of 1970 ("OSHA") and the regulations promulgated thereunder as of the date of the Proposal. Upon prompt written notice from the Purchaser of a breach of this warranty, ABB will replace the affected part or modify it so that it conforms to such standard or regulation. ABB's obligation shall be limited to such replacement or modification. In no event shall ABB be responsible for liability arising out of the violation of any OSHA standards relating to or caused by Purchaser's design, location, operation, or maintenance of the Equipment, its use in association with other equipment of Purchaser, or the alteration of the Equipment by any party other than ABB.

14. **Software License.**

(a) ABB owns all rights in or has the right to sublicense all of the Software, if any, to be delivered to Purchaser under this Agreement. As part of the sale made hereunder Purchaser hereby obtains a limited license to use the Software, subject to the following: (i) The Software may be used only in conjunction with equipment specified by ABB; (ii) The Software shall be kept strictly confidential; (iii) The Software shall not be copied, reverse engineered, or modified; (iv) The Purchaser's right to use the Software shall terminate immediately when the specified equipment is no longer used by the Purchaser or when otherwise terminated, e.g. for breach, hereunder; and (v) the rights to use the Software are non-exclusive and non-transferable, except with ABB's prior written consent.

(b) Nothing in this Agreement shall be deemed to convey to Purchaser any title to or ownership in the Software or the intellectual property contained therein in whole or in part, nor to designate the Software a "work made for hire" under the Copyright Act, nor to confer upon any person who is not a named party to this Agreement any right or remedy under or by reason of this Agreement. In the event of termination of this License, Purchaser shall immediately cease using the Software and, without retaining any copies, notes or excerpts thereof, return to ABB the Software and all copies thereof and shall remove all machine readable Software from all of Purchaser's storage media.

15. **Inventions and Information.** Unless otherwise agreed in writing by ABB and Purchaser, all right, title and interest in any inventions, developments, improvements or modifications of or for Equipment and Services shall remain with ABB. Any design, manufacturing drawings or other information submitted to the Purchaser remains the exclusive property of ABB. Purchaser shall not, without ABB's prior written consent, copy or disclose such information to a third party. Such information shall be used solely for the operation or maintenance of the Equipment and not for any other purpose, including the duplication thereof in whole or in part.

16. **Force Majeure.** ABB shall neither be liable for loss, damage, detention or delay nor be deemed to be in default for failure to perform when prevented from doing so by causes beyond its reasonable control including but not limited to acts of war (declared or undeclared), Acts of God, fire, strike, labor difficulties, acts or omissions of any governmental authority or of Purchaser, compliance with government regulations, insurrection or riot, embargo, delays or shortages in transportation or inability to obtain necessary labor, materials, or manufacturing facilities from usual sources or from defects or delays in the performance of its suppliers or subcontractors due to any of the foregoing enumerated causes. In the event of delay due to any such cause, the date of delivery will be extended by period equal to the delay plus a reasonable time to resume production, and the price will be adjusted to compensate ABB for such delay.

17. Cancellation. Any order may be cancelled by Purchaser only upon prior written notice and payment of termination charges, including but not limited to, all costs identified to the order incurred prior to the effective date of notice of termination and all expenses incurred by ABB attributable to the termination, plus a fixed sum of ten (10) percent of the final total price to compensate for disruption in scheduling, planned production and other indirect costs.

18. Termination. No termination by Purchaser for default shall be effective unless, within fifteen (15) days after receipt by ABB of Purchaser's written notice specifying such default, ABB shall have failed to initiate and pursue with due diligence correction of such specified default.

19. Export Control.

(a) Purchaser represents and warrants that the Equipment and Services provided hereunder and the "direct product" thereof are intended for civil use only and will not be used, directly or indirectly, for the production of chemical or biological weapons or of precursor chemicals for such weapons, or for any direct or indirect nuclear end use. Purchaser agrees not to disclose, use, export or re-export, directly or indirectly, any information provided by ABB or the "direct product" thereof as defined in the Export Control Regulations of the United States Department of Commerce, except in compliance with such Regulations.

(b) If applicable, ABB shall file for a U.S. export license, but only after appropriate documentation for the license application has been provided by Purchaser. Purchaser shall furnish such documentation within a reasonable time after order acceptance. Any delay in obtaining such license shall suspend performance of this Agreement by ABB. If an export license is not granted or, if once granted, is thereafter revoked or modified by the appropriate authorities, this Agreement may be canceled by ABB without liability for damages of any kind resulting from such cancellation. At ABB's request, Purchaser shall provide to ABB a Letter of Assurance and End-User Statement in a form reasonably satisfactory to ABB.

20. Assignment. Any assignment of this Agreement or of any rights or obligations under the Agreement without prior written consent of ABB shall be void.

21. Nuclear Insurance – Indemnity. For applications in nuclear projects, the Purchaser and/or its end user customer shall have complete insurance protection against liability and property damage resulting from a nuclear incident to and shall indemnify ABB, its subcontractors, suppliers and vendors against all claims resulting from a nuclear incident.

22. Resale. If Purchaser resells any of the Equipment, the sale terms shall limit ABB's liability to the buyer to the same extent that ABB's liability to Purchaser is limited hereunder.

23. Entire Agreement. This Agreement constitutes the entire agreement between ABB and Purchaser. There are no agreements, understandings, restrictions, warranties, or representations between ABB and Purchaser other than those set forth herein or herein provided.

AB

B Medium Voltage Service

Medium Voltage Replacement Circuit Breaker Specification Worksheet

Complete one set of forms for each type or breaker to be replaced

For Technical Support, please contact:							
Nolan Mikell 843-413-4743 Nolan.mikell@us.abb.com				or	William Welshuhn 843-413-4772 William.h.weishuhn@us.abb.com		
Date:		Customer Name:					
ABB Contact:		Account No.:					
Location:		Contact Name:					
Phone No.:		Location:					
Fax No.:		Phone No.:					
Comments:		Fax No.:					
		RFQ. No.:					
QUANTITY: <input type="text" value="3"/>		Due Date:		Close Date:			
Original Breaker							
Original Breaker Manufacturer	A=ABB/BBB/ITE/Gould	C=Cutler Hammer	S=Siemens/Allis Chalmers				
	F=Federal Pacific	G=General Electric	M=McGraw Edison				
	W=Westinghouse	P=Powell					
Original Breaker Style	For above selection A:	K=HK	G=GHK	V=VHK	H=HV		
	For above selection C:	V=VCPW					
	For above selection S:	A=AM	D=DZ	F=FA/FB/FC/FS			
		C=MC	G=GMI	H=H2	M=MA		
	For above selection F:	D=DST	2=DST2				
	For above selection G:	A=AM	H=AMH	D=AM (Double Coupler)			
		V=VH	F=FH/FK	P=PowerVac (VB)			
	For above selection M:	P=PSD	W=WSA				
For above selection W:	B=B	C=CA	D=DH	P=DHP			
For above selection P:	P=Powl-Vac						
Replacement Type	M=RMVAC (AMVAC)	A=RADVAC (ADVAC)		V=RVAC (5VKB-R)			
	D=Dummy	G=Gnd & Test Dev.		O=Other			
Voltage	1=4.76kV	2=8.25kV	3=15kV	4=27kV	5=38kV		
Amps	6=600A	1=1200A	2=2000A	5=2500A	3=3000A	4=4000 A	
Original breaker kA / MVA Rating	For 4.76kV	A=50 MVA @ K=1.36		B=75 MVA @ K=1.36			
	C=150 MVA @ K=1.36	D=250 MVA @ K=1.24		E=350 MVA @ K=1.19			
	3=31.5 kA @ K=1	4=40 kA @ K=1		5=50kA @ K=1			

Replacement breaker kA / MVA Rating	For 8.25kV		F=250 MVA @ K=1.25	G=500 MVA @ K=1.25
	4=40 kA @ K=1		5=50 kA @ K=1	
	For 15kV		H=150 MVA @ K=1.3	J=250 MVA @ K=1.3
	K=500 MVA @ K=1.3		L=750 MVA @ K=1.3	M=1000 MVA @ K=1.3
	N=1500 MVA @ K=1.3		1=20 kA @ K=1	2=25 kA @ K=1
	3=31.5 kA @ K=1		4=40 kA @ K=1	5=50 kA @ K=1
	6=63 kA @ K=1		7=16kA @ K=1.0	
	For 27kV		7=16kA @ K=1.0	1=25kA @ K=1.0
	For 38kV		P=1500 MVA @ K=1.65	R=2500 MVA @ K=1
	S=2500 MVA @ K=1.6		7=16 kA @ K=1	2=25 kA @ K=1
	3=31.5 kA @ K=1		4=40 kA @ K=1	

Replacement breaker kA / MVA Rating	For 4.76kV		A=50 MVA @ K=1.36	B=75 MVA @ K=1.36
	C=150 MVA @ K=1.36		D=250 MVA @ K=1.24	E=350 MVA @ K=1.19
	3=31.5 kA @ K=1		4=40 kA @ K=1	5=50kA @ K=1
	For 8.25kV		F=250 MVA @ K=1.25	G=500 MVA @ K=1.25
	4=40 kA @ K=1		5=50 kA @ K=1	
	For 15kV		H=150 MVA @ K=1.3	J=250 MVA @ K=1.3
	K=500 MVA @ K=1.3		L=750 MVA @ K=1.3	M=1000 MVA @ K=1.3
	N=1500 MVA @ K=1.3		1=20 kA @ K=1	2=25 kA @ K=1
	3=31.5 kA @ K=1		4=40 kA @ K=1	5=50 kA @ K=1
	6=63 kA @ K=1		7=16kA @ K=1.0	
	For 27kV		7=16kA @ K=1.0	1=25kA @ K=1.0
	For 38kV		P=1500 MVA @ K=1.65	R=2500 MVA @ K=1
S=2500 MVA @ K=1.6		7=16 kA @ K=1	2=25 kA @ K=1	
3=31.5 kA @ K=1		4=40 kA @ K=1		

Control Volt. Charge	1=120 VAC	2=240 VAC	5=24 VDC	6=48 VDC	7=125 VDC
	8=250 VDC	Z=Special			

Control Volt. Close	1=120 VAC	2=240 VAC	5=24 VDC	6=48 VDC	7=125 VDC
	8=250 VDC	Z=Special			

Control Volt. Trip	1=120 VAC	2=240 VAC	5=24 VDC	6=48 VDC	7=125 VDC
	8=250 VDC	Z=Special			

MOC Option	0=None	1=Standard	2=Electrical	
------------	--------	------------	--------------	--

Push-Button Option	R=Reverse Color Close / Green is Open) (Red is		S=Standard Color (Red is Open / Green is Close)
	0=None	C=Cover over manual close and charge	G=Generator Breaker (C37.013)
Breaker Options (as needed)	K=Kirk Key interlock provisions		P=Definite Purpose Cap. Switching (Specify in Notes)
	R=Racking extension (mostly for ITE HK only)		S=Second shunt trip (Specify Voltage in notes)
	Z=Special (Other, Specify in notes)		

Qualifications		0=None	1=UL	2=CSA	3=UL & CSA	Z=Special
Reports		W=Customer Witness			P=Certified Production Reports	
		C=Certificate of Conformance			4=Witness&Production	
		5=Witness&Conformance			6=Production&Conformance	
		7=Witness, Prod&Conformance			Z=Special	



Estimate of Costs

Address PO Box 6130
Lakeland, FL 33807
USA

Created Date 3/29/2016
Quote Number 00035915

Prepared By Walt Dinse
Phone (863) 646-5099
Email wdinse@cbsales.com
Fax (863) 646-8250

Contact Name Robert Kahant
Phone (561) 722-9905
Email rkahant@lakeworth.org

Bill To Name Lake Worth Power Plant
Bill To 117 S. College St.
Lake Worth, FL 33460
USA

Ship To Name Lake Worth Power Plant
Ship To 117 S. College St.
Lake Worth, FL 33460
USA

Condition	Manufacturer	Product	Product Description	Line Item Description	Quantity	Sales Price	Total Price	Lead Time
Factory New	CBS MaxiVac	AMVR13.8-750-12	MaxiVac Roll in Vacuum Replacement for GE AM13.8-750-5H, 1200 amp, new breaker to be physically and electrically identical to existing air breaker requiring no cell modifications, 120vAC or 125vDC stored energy operator	- fully tested - 24 month warranty	3.00	\$22,500.00	\$67,500.00	8-12 weeks
Unused/Surplus	General Electric	PVVL-13.8-750-12	PVVL Factory Vacuum Replacement for AM13.8-750 1200 amp Magneblast Air Circuit Breaker - new vacuum breaker to be fully interchangeable with original M36 drawout breaker and will have a 120vAC or 125vDC stored energy operator (specify at order time) and MOC operator	- subject to prior sale - fully tested 12 month warranty	3.00	\$20,500.00	\$61,500.00	2-4 weeks <i>breaker</i>
Cleaned/Tested	CBSN	Breaker transport	Services to remove and re-install breakers for maintenance throughout outage.	To deliver replacement breakers, removed old breakers and install and test replacement breakers	2.00	\$3,500.00	\$7,000.00	4 weeks <i>installation</i>
As Is	CBS	Trade-in customer's ACB	Credit for customers used circuit breaker	Trade in for old AM breaker - value per each breaker	2.00	(\$850.00)	(\$1,700.00)	On Site <i>trade-in</i>



Estimate of Costs

Warranty 12 Months
Ships From Gainesville, TX - 76240

Freight Terms Prepaid & Allowed
Subtotal \$134,300.00

All quotations are confidential information for the benefit of the party they are issued too. Quotations are for immediate acceptance and all stocked products are subject to prior sale. Prices quoted are estimated based on the information provided at time of quote.

We reserve the right to amend the price and/or delivery upon additional or conflicting information. All orders are pending subject to our standard Terms and Conditions and formal Order Acknowledgment. Thank you for trusting Circuit Breaker Sales. (800) 232-5809

Standard Commercial Terms: \$ US Dollars at time of shipment.

All customers are welcome to visit and inspect their goods prior to payment. We accept cash, American Express, VISA, LOC, Wire Transfer and Paypal. Some orders may require a deposit or other arrangement if production costs or third party material is involved.

Open Accounts are available with Approved Credit. Call your local office to get an application. All International Orders must be settled prior to products leaving USA.



Quotation

Q2C Number: 38116884

Quote Number: 1

Revision Number: 0

Project Name: MV MAG AM13.8-750-1200-5H Low Profile

Project Location: CITY OF LAKE WORTH

Quote Name: MAGNUM REPLACEMENT BREAKER

Bid Date: 4/5/2016

Sales Representative: RAFAEL BEATO

Terms & Conditions

This Quotation is subject to Square D's published Terms and Conditions

Payment Terms: STANDARD

Currency: US DOLLARS

Quote Markings

Q2C Number: 38118884

Quote Number: 1

Revision Number: 0

Project Name **MV MAG AM13.8-750-1200-5H Low Profile**Quote Name: **MAGNUM REPLACEMENT BREAKER**

Item No.	Qty.	Catalog Number / Details	Extended List Price
----------	------	--------------------------	---------------------

001	1	SQG SERVICEWARE EQUIPMENT+SERVICES BY SQG	
-----	---	--	--

002	1	WORKSCOPE: MAGNUM REPLACEMENT BREAKER	
-----	---	---------------------------------------	--

1. Schneider Electric USA, Inc. - Services (SEUSA) will supply and install (1) Magnum direct replacement circuit breaker for the GE AM 13.8-750-1200-5H low profile circuit breaker.

2. The customer will be responsible for supplying the following:

- Submittals, Plan Check, and City Permits if required.
- Cost and scheduling of power shut downs.
- All existing electrical drawings of their system.
- Taxes and Tariffs.

DETAILED BOM

MAGNUM DIRECT REPLACEMENT MV CIRCUIT BREAKER CONSISTING OF Replacement for General Electric Circuit Breaker
 OEM # AM13.8-750-1200A Low Profile
 15KV Voltage Class
 750 MVA Original MVA Rating
 750 MVA New MVA Rating
 Vacuum Element
 MOC Operator
 Secondary Voltages
 Charge Voltage: TBD
 Close Voltage: TBD
 Trip Voltage: TBD
 Special Features
 No Undervoltage Trip
 Single Coupler

CLARIFICATIONS

1. The Scope Of Work and Bill Of Material provided in this quotation are strictly and specifically as stated. Any changes or additions may require the quotation to be revised, which may result in a price change.
2. Customer and/or Contractor is responsible for all handling and rigging necessary for gear placement.
3. Installation labor is based upon straight time labor hours of 8:00AM to 5:00PM, Monday thru Friday, Saturdays, Sundays and Holiday are excluded.

Q2C Number: 38116884

Quote Number: 1

Revision Number: 0

Project Name MV MAG AM13.8-750-1200-5H Low Profile

Quote Name: MAGNUM REPLACEMENT BREAKER

Item No.	Qty.	Catalog Number / Details	Extended List Price
----------	------	--------------------------	---------------------

4. Pricing is valid for 30 days from date of this proposal. Standard Schneider Electric Services Terms & Conditions apply.

DELIVERY

1. 12-14 Weeks After Receipt of Order
2. F.O.B West Chester, OH Plant
3. Freight: Pre-paid and Add

Total Net**24,839.78***includes installation*

Robert Kahant

From: George Guirguis
Sent: Tuesday, April 05, 2016 5:52 PM
To: Robert Kahant
Subject: Fwd: Siemens Quote for replacement Breaker
Attachments: 18494381404_15kV_GER_Outline.pdf; ATT00001.htm; 6-GER&GEH.PDF; ATT00002.htm; SGIM-9978E_GER.PDF; ATT00003.htm; Terms and Conditions.pdf; ATT00004.htm

Begin forwarded message:

From: "Joe Liberto" <Jliberto@rssales.net>
To: "George Guirguis" <GGuirguis@LakeWorth.org>
Cc: "Vickie Crouch" <vcrouch@rssales.net>
Subject: Siemens Quote for replacement Breaker

George,

Please see below for the Siemens quotation to replace your GE breaker. We have attached product literature and outline drawings as well. Let me know if questions!

Joe



Your Siemens Quote # SF16987635

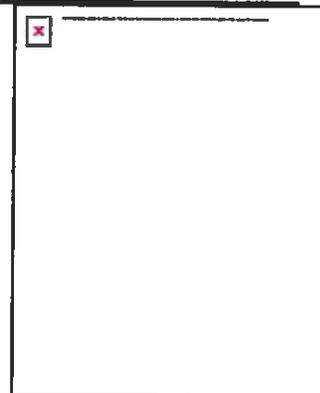
Dear George,
City of Lake Worth Utilities

Siemens Parts Quotation#: SF16987635
Customer RFQ #: 15GER-750-1200-58

Total amount: **USD 25,245.00**
Estimated lead time: 14 - 16 weeks
Pricing valid until: 6/30/2016

**Pricing does not include FAT witness testing, GUL labels or inspection.
These items are an additional charge and must be quoted if required**

Minimum Order: \$100.00 (Excluding shipping charges)



We are pleased to quote you the following:

Item 1, Qty: (1), 15GER-750-1200-58 Vacuum Replacement Breaker priced @ \$25,245.00 each.

Direct roll in replacement for GE type AM-13.8-750, 1200A.
125VDC control voltage.

Please provide a copy of the original breaker schematic wiring diagram at time of order to match up wiring on the new vacuum replacement breaker.

Please make Purchase Order out to:

Siemens Industry, Inc.
7000 Siemens Road
Wendell, NC 27591

**Purchase Order must reference Siemens
Parts Quotation #: SF16987635**

Please Email to: jliberto@rssales.net

SII Affiliate PC-PS00331950

If you are a first-time customer, for faster processing, please also provide a copy of your W-9 and a copy of your tax exemption certificate, if applicable.

SIEMENS INDUSTRY, INC. STANDARD TERMS & CONDITIONS OF SALE APPLY TO THIS QUOTATION (ATTACHED).

**UNLESS OTHERWISE NOTED, QUOTE IS VALID FOR 60 DAYS.
ALL PRICES ARE IN USD.**

GROUND FREIGHT: PREPAID AND ADD (UNLESS OTHERWISE INDICATED). STANDARD DOMESTIC FREIGHT ONLY. ALL SPECIAL SHIPMENTS INCLUDING AIR AND EXPORT WILL BE SHIPPING AND HANDLING PRE-PAID AND ADD OR COLLECT.

TERMS OF PAYMENT: NET 30 DAYS FROM THE DATE OF INVOICE ON EACH PARTIAL SHIPMENT AND PROGRESS PAYMENT ELEMENT, SUBJECT TO CREDIT APPROVAL.

FOR CREDIT CARD ORDERS, CHARGES WILL BE PROCESSED UPON SHIPMENT. PLEASE BE ADVISED THAT THE CUSTOMER'S CREDIT CARD WILL BE AUTHORIZED AT THE AMOUNT OF THE ORDER PLUS 10% TO COVER ANY APPLICABLE TAXES AND SPECIAL SHIPMENTS. ONLY ACTUAL CHARGES, HOWEVER, WILL BE PROCESSED UPON SHIPMENT.

QUOTED LEAD TIME & ORDER ENTRY ACKNOWLEDGEMENT DATE ARE OUR BEST ESTIMATE OF THE PROCUREMENT CYCLE. HOWEVER, THIS DATE SHOULD NOT BE USED TO SCHEDULE MAINTENANCE OUTAGES WITHOUT CHECKING WITH SIEMENS T&D SERVICE SOLUTIONS, SO WE CAN VERIFY DATE CAN BE MET.

INCOTERMS FOB ORIGIN (UNLESS OTHERWISE INDICATED).

PRICE DOES NOT INCLUDE ANY DRAWINGS OR DOCUMENTATION BEING SUPPLIED BY SIEMENS. IF DRAWINGS ARE REQUIRED, THEY WILL BE QUOTED AS A SEPARATE ITEM UPON REQUEST AND PROVIDED ELECTRONICALLY.

ALL PRICES AND DELIVERIES ARE QUOTED SUBJECT TO AVAILABILITY OF USEABLE TOOLING, PATTERNS, AND MATERIALS FROM USUAL SOURCES.

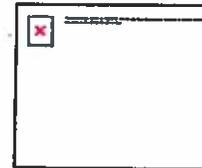
EXPEDITED SHIPPING POLICY: STOCK EMERGENCY ORDERS WHERE SHIPMENT IS MADE SAME DAY, AN EXPEDITING

CHARGE (\$100 MINIMUM) PLUS APPLICABLE FREIGHT CHARGES WILL BE ADDED. CREDIT CARD AUTHORIZATION OR PURCHASE ORDER MUST BE RECEIVED AT SIEMENS T&D SERVICE SOLUTIONS BY 1PM EST TO BE ABLE TO SHIP SAME DAY.

RESTOCKING FEE: A 35% RESTOCKING CHARGE WILL APPLY IN THE EVENT OF A RETURN FOR COMMON, STOCKED PARTS. CUSTOMER MUST REQUEST A RMA FROM SIEMENS WITHIN 90 DAYS OF THE DATE OF INVOICE, AND SIEMENS MUST RECEIVE THE RETURNED PARTS THEREAFTER WITHIN 15 DAYS. CUSTOMER IS RESPONSIBLE FOR ALL RETURN SHIPPING COSTS.

This proposal, including all of its attachments, exhibits, appendices, etc. ("Proposal"), is provided "as-is" for your evaluation of Siemens Industry, Inc. ("Siemens") as the provider of work discussed therein and contains information that is confidential to and solely owned by Siemens. Your acceptance, viewing or storage of this Proposal is an acknowledgment of a confidential relationship between you and Siemens. We require that this Proposal be returned or destroyed when no longer required for the purpose identified herein. This Proposal and any information obtained from this Proposal may not be re-produced, transmitted, disclosed or otherwise used, in whole or in part, without the prior written authorization of Siemens.

The above terms supersede any click-wrap or other terms not expressly set forth in a signed agreement between the parties covering the Proposal. All such click-wrap or other terms are expressly rejected by Siemens.



From: George Guirguis [<mailto:GGuirguis@LakeWorth.org>]
Sent: Thursday, March 31, 2016 2:19 PM
To: Joe Liberto
Subject: RE: Quote for replacement Breaker

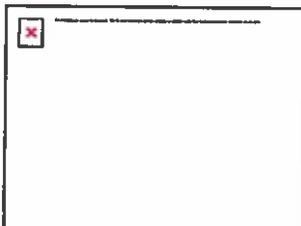
We will need a firm quote for Qty. 1 (one) breaker for this fiscal year. The intent is to order 2 for next fiscal year.

Thank you,

George M. Guirguis
Electrical Engineer

City of Lake Worth Utilities
1900 2nd Avenue North
Lake Worth, FL 33461
Office: (561)586-1792
Mobile: (561)719-9037

gguirguis@lakeworth.org



From: Joe Liberto [<mailto:jliberto@rssales.net>]
Sent: Thursday, March 31, 2016 2:18 PM
To: George Guirguis <GGuirguis@LakeWorth.org>
Subject: RE: Quote for replacement Breaker

George,

I confirmed we definitely have a replacement Siemens breakers, but as I suspected Siemens does not have a trade in program.

Do you want budgetary quote or firm quote?

Joe

Sent from [Outlook Mobile](#)

From: George Guirguis
Sent: Thursday, March 31, 1:49 PM
Subject: RE: Quote for replacement Breaker
To: Joe Liberto

Still no decision has been made...

Thank you,

George M. Guirguis

Electrical Engineer

City of Lake Worth Utilities

1900 2nd Avenue North

Lake Worth, FL 33461

Office: (561)586-1792

Mobile: (561)719-9037

gguirguis@lakeworth.org

From: Joe Liberto [<mailto:Jliberto@rssales.net>]
Sent: Thursday, March 31, 2016 1:49 PM
To: George Guirguis <GGuirguis@LakeWorth.org>
Subject: RE: Quote for replacement Breaker

Ok we will inquire.

Did you guys decide on anything with voltage regulators ?

Joe

From: George Guirguis [<mailto:GGuirguis@LakeWorth.org>]
Sent: Thursday, March 31, 2016 12:28 PM
To: Joe Liberto
Cc: Vickie Crouch
Subject: RE: Quote for replacement Breaker

Can you also check if you can offer a trade-in value for the old breaker.

Thank you,

George M. Guirguis

Electrical Engineer

City of Lake Worth Utilities

1900 2nd Avenue North

Lake Worth, FL 33461

Office: (561)586-1792

Mobile: (561)719-9037

gguirguis@lakeworth.org

From: George Guirguis
Sent: Thursday, March 31, 2016 12:20 PM
To: 'Joe Liberto' <Jliberto@rssales.net>
Cc: Vickie Crouch <vcrouch@rssales.net>
Subject: RE: Quote for replacement Breaker

Hi Joe,

We will need a firm price for Qty. 1 (one) breaker for this fiscal year. The intent is to order 2 for next fiscal year.

Thank you,

George M. Guirguis

Electrical Engineer

City of Lake Worth Utilities

1900 2nd Avenue North

Lake Worth, FL 33461

Office: (561)586-1792

Mobile: (561)719-9037

gguirguis@lakeworth.org

From: Joe Liberto [<mailto:Jliberto@rssales.net>]
Sent: Thursday, March 31, 2016 12:16 PM
To: George Guirguis <GGuirguis@LakeWorth.org>
Cc: Vickie Crouch <vcrouch@rssales.net>
Subject: Re: Quote for replacement Breaker

Pretty sure answer is yes..checking to confirm first then I'll proceed with quote. Are you needing firm or budgetary at this point?

Joe

Sent from [Outlook Mobile](#)

On Thu, Mar 31, 2016 at 9:04 AM -0700, "George Guirguis" <GGuirguis@LakeWorth.org> wrote:

Good afternoon Joe,

Does Siemens make a replacement breaker with the following specifications:

- GE AM13.8-750-5H
- 1200 amp
- New vacuum breaker to be physically and electrically identical to existing air breaker requiring no cell modifications
- 125 VDC stored energy operator
- See attached images

If so, please quote. Let me know if you have any further questions.

Thank you,

George M. Guirguis

Electrical Engineer

City of Lake Worth Utilities

1900 2nd Avenue North

Lake Worth, FL 33461

Office: (561)586-1792

Mobile: (561)719-9037

gguirguis@lakeworth.org

Lake Worth Power Plant
Circuit Breaker Purchase and Installation
Recap Sheet

1. Circuit Breaker Sales & Service

Quote #35915	G.E. Circuit Beaker	\$20,500.00
	Installation	\$ 3,500.00
	Trade-In Credit	\$ 850.00
	Total Amount	\$23,150.00

2. Siemens

Quote #SF16987635	Siemens Breaker	\$25,245.00
	No Installation Quoted	\$ 0
	Total Amount	\$25,245.00

3. Schneider Electric

Quote #38116884	Magnum Breaker	\$24,839.78
	Includes Installation	\$ 0
	Total Amount	\$24,839.78

4. ABB

Quote #16Q2861259	ABB Breaker	\$20,300.00
	Installation	\$ 6,320.00
	Total Amount	\$26,620.00



AGENDA DATE: July 6, 2016

DEPARTMENT: Electric Utility

EXECUTIVE BRIEF

TITLE: Professional Services Agreement with Ametek Solidstate Controls for the purchase of P³ Solutions Shield, a Proactive, Predictive and Maintenance (PM), for S-4 inverter for the Tom G. Smith Power Plant.

SUMMARY: Staff recommends a Professional Services Agreement with Ametek Solidstate Controls for the purchase of the P³ Solutions Shield, a Proactive, Predictive and Maintenance (PM) in the amount of \$23,750.

BACKGROUND AND JUSTIFICATION:

The Ametek Solidstate Controls P³ Solutions Shield Service Plan is designed to assure the highest performance and optimum system reliability for the life of the Uninterrupted Power Supply (UPS). Performing recommended Proactive & Preventive Maintenance (PM) on an annual basis will minimize plant downtime or unscheduled maintenance caused by adverse environmental conditions and equipment malfunction due to failed or aging components.

The S-4 inverter manufacture date is February 19, 1993. The unit was last serviced on August 14, 2003. The manufacturer recommends that preventive maintenance needs to be done every 10 years.

The quote was reviewed by Robert Kahant, Chief Electrician.

Type	Vendor	Cost	Total
Operational 401-6031-531-34-50	Ametek Solidstate Controls	\$23,750	\$23,750
		Total	\$23,750

MOTION:

I move to approve / not approve a Professional Services Agreement with Ametek Solidstate Controls for the purchase of P³ Solutions Shield, a Proactive, Predictive and Maintenance (PM), for S-4 inverter in the amount of \$23,750.

ATTACHMENT(S):

Fiscal Impact Analysis

Quote from Ametek Solidstate Controls

Letter recommending Ametek trained and certified technical engineer service the equipment

FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	2016	2017	2018	2019	2020
Capital Expenditures	0	0	0	0	0
Operating Expenditures	23,750	0	0	0	0
External Revenues	0	0	0	0	0
Program Income	0	0	0	0	0
In-kind Match	0	0	0	0	0
Net Fiscal Impact	0	0	0	0	0
No. of Addn'l Full-Time Employee Positions	0	0	0	0	0

B. Recommended Sources of Funds/Summary of Fiscal Impact:

Utilities /Electric						
Account Number	Account Description	Project #	FY2016 Budget	Current Balance	Agenda Item Expenditures	Remaining Balance
401-6031-531-34-50	Other Contractual Services	N/A	\$23,750	\$52,103	\$23,750	\$28,353

C. Department Fiscal Review: John Borsch, Electric Utility Director



SOLIDSTATE CONTROLS

875 Dearborn Drive, Columbus, OH, USA 43085
Telephone: 614-846-7500 Fax: 614-785-7062

P³ Solutions Shield
PROACTIVE, PREDICTIVE & MAINTENANCE (PM)

DATE:	4/29/2016	QUOTE NO.:	RL2397-PM-2
TO:	Robert Kahant	MODEL NO.:	SS12150N
COMPANY:	City of Lake Worth/Tom G Smith Power Plant	SERIAL NO.:	56959-0111
PHONE:	(561) 533-7350	SITE ID:	Location S-4
FAX:		FOB:	Ship Point
EMAIL:	RKahant@LakeWorth.org	AVAILABILITY:	2-4 weeks
FROM:	Roi Leeser	VALIDITY:	90 days
EMAIL:	Roi.leeser@ametek.com	SHIPPING & HANDLING:	pre-paid and add
PAGES:	7	TERMS:	Net 30
		REP:	N

The AMETEK Solidstate Controls (ASC) **P³ Solutions Shield** Service Plan proposed is designed to assure you the highest performance and optimum system reliability for the life of your UPS system. Performing the recommended **Proactive, Predictive & Preventive Maintenance (PM)** on an annual basis will minimize plant downtime or unscheduled maintenance caused by adverse environmental conditions, equipment malfunction due to failed or aging components, or operator/maintenance training issues.

The **P³ Solutions Shield** Plan is the most economic approach to PM based on the equipment age, service history, environment, and your operational objectives. During the PM visit each system will be inspected, cleaned, tested and aligned by an ASC Power Consultant. Parts scheduled for replacement are included and will be replaced during the PM visit. Operational issues discovered prior to or during the visit will be analyzed and reviewed with the Client. Upon completion of the PM the ASC Power Consultant will debrief with the Client and provide a detailed report with analysis and performance improvement recommendations. During the debriefing the ASC Power Consultant will review system operation with plant personnel and address other operator training considerations. An in-depth Technical Training seminar is available for an additional fee and can be scheduled in conjunction with the PM if requested.

Our proposal includes parts, labor and travel/living expenses to perform PM on the system(s) specified above. All work will be coordinated with the Client and scheduled during our normal business hours, Monday through Friday between the hours of 0700 and 1800. This proposal does not include shipping/handling charges, overtime/off-hours labor or work outside the scope the PM Agreement. Additional details regarding site requirements, PM scope, limitations and Terms & Conditions can be found in Sections I to IV of this proposal.

Extended Service Coverage is included in the cost of the PM. The Extended Service Coverage provides parts and labor (during our normal business hours) to return the system to good working order for 12 months after the system PM has been completed and system performance verified. If the system was not covered prior to the PM, then any remedial work discovered during the PM must be completed prior to the Extended Service Coverage taking effect. For additional information, refer to Section V.

Battery Discharge Testing (CapTest), Battery Replacement, and System AC Load Testing are available for an additional fee. These **PM Agreement Enhancements** (described in Section VI) are highly recommended and will provide additional assurance the critical power system and associated equipment on the critical bus are operating within tolerance at optimum performance and reliability.

We trust you will find our proposal satisfactory. Thank you for considering AMETEK Solidstate Controls for all of your critical power protection requirements. Feel free to contact us if we can be of further service.

Quote # RL2397-PM

Our Pricing is valid for ninety (90) days.

Date: 4/29/2016

Model #	Serial #	Site ID	Date Mfr	KVA or Amp	Annual PPM PM1	5th Year PPM PM5	10th Year PPM PM10 (Schedule B)	PC Board Replacement PCBR (Schedule C)	Emergency Hardware Spare Parts Kit
SS12150N	56959-0111	Location S-4	2/19/1993	15	Due in 2017	Due in 2021	\$12,600.00	\$11,150.00	\$0.00
TOTAL RECOMMENDED SERVICES: \$23,750.00									

Notes:

1. The service proposed is all inclusive of parts, labor, travel expenses and one year (12 month) Extended Service Coverage - see section V of this proposal. Our pricing does not include shipping/handling, overtime labor or work outside the scope of our Agreement.
2. Pricing is based on a single site visit trip to complete all services identified above. If multiple site visits are needed, pricing will be adjusted to reflect the number of trips required.

The Emergency Hardware Spare Parts Kit consists at a minimum the following parts: 2 of each semiconductor, 2 of each fuse, 1 of each muffin style fan. All kits are custom created to provide parts specific for the customer's equipment. Some kits may contain additional parts in excess of the items listed above.

REQUIREMENTS, SCOPE, CONDITIONS, WARRANTY, & ENHANCEMENTS

I. JOB-SITE REQUIREMENTS

Clients entering into a PM Agreement will allow reasonable time and safe access to all equipment to be serviced. In addition the Client will be required to provide the following:

1. Two (2) to four (4) weeks to schedule work and to mobilize ASC personnel and material to the site after the PM Agreement is negotiated and accepted.
2. Provide all site specific Safety training, security clearances, and/or escorts.
3. Provide all special personal protective equipment including but not limited to hard hats, respirators, FRC Clothing, or chemical suits, etc.
4. Provide additional personnel as required for assistance, safety and power up/down of equipment.
5. Provide all Equipment manuals and print packages. If necessary, ASC will provide the documents and add the cost (\$250 per system) to the invoice.
6. Other provisions not listed in the Agreement, as dictated by site specific conditions, will be discussed with the Client prior to the commencement of the work.

II. SCOPE

As a minimum, the Scope of the PM Proposed will include labor and material to complete the work described in items A through G. The PM Enhancements listed in Section VI are recommended and available for an additional cost or as quoted herein:

A. Pre-Inspection Interview

Review system performance and observations by plant personnel with the Client to determine if abnormal operations or conditions have occurred. Abnormal conditions or operation discovered will be considered during the inspection and testing, and addressed during the final report to the Client with recommendations for remedial action if necessary.

B. System Cleaning

The entire system will be cleaned in order to remove dust and other contaminants that may lead to system malfunction, improve heat dissipation to reduce heat related stress, reduce aging, and improve system reliability. At times, we may ask the site to provide some equipment to perform these tasks such as a vacuum if necessary.

C. System Inspection and Verification

The system will be inspected for evidence of wear, heat related stress, damaged, loose, or failed components due to aging, vibration, or other environmental conditions. Abnormal conditions will either be corrected during the PPM or noted for remedial action and scheduled for repair after review with the Client.

All electrical connections will be checked for integrity, tightness, or corrosion at circuit boards, transformers, and electrical/electronic components. Defective connections will be corrected as necessary during the PPM (Excludes battery connection refurbishment and Client field connections).

Component electrical performance will be verified to ensure against time-related wear. Measurements of components will be compared to factory standards and parts showing wear or in weakened condition will either be corrected during the PPM or noted for remedial action and scheduled for repair after review with the Client

D. Scheduled Parts Replacement

Through our own testing, field experience, and recommendations from our suppliers we have determined a recommended replacement schedule for critical components subject to aging or wear. To assure optimum performance and reliability of the UPS system, ASC recommends replacement of critical components as indicated in **Schedules B & C** (attached). Adverse operating conditions may require accelerating some of the time intervals to fit a particular site's needs. The PM price quoted in this proposal includes parts and labor to replace recommended components. Additional parts found to be marginal or failed during the PM are not included and will be provided at ASC list price. Our standard Technical Service Rates will apply for any additional labor required. (See Limitations for more details).

E. System Operational and Functional Testing

Measure and record all critical system parameters including input/output voltages and currents for control circuits, alternate and primary power sources, charger, inverter, and static switch output. Abnormal conditions will either be repaired during the PM or noted for remedial action and scheduled for repair after review with the Client. With the Client's permission, the following functional tests will be performed:

Battery Chargers -Float/Equalize functions, load share function and alarm functions.

Inverter/Static Switches - Static Switch automatic transfer function, alarm function, manual bypass transfer function, and any other functional test deemed necessary by the service engineer to verify proper operation.

F. Annual Battery Inspection and Continuity Test

1. Annual Battery Inspection (AIP):

A battery inspection with report and recommendations will be completed in accordance with applicable ANSI/IEEE and the battery manufacturer recommendations. Critical parameters will be measured and recorded per the attached scope of work described in **Schedule A**.

2. Continuity test:

With the Clients permission, a battery continuity test will be performed (battery charger disconnected and battery allowed to discharge into the inverter or site load momentarily) and the results recorded. Proper charge voltage at the battery terminal will be measured and adjusted as necessary per manufacturer and site requirements. Site safety equipment and battery room environment conditions will be inspected and noted for abnormalities.

G. Post Inspection Interviews

Upon completion of the PM, the results will be presented and all issues discovered prior to or during the PM will be reviewed with the Client. The following actions may be taken to remedy any abnormal conditions discovered:

1. Corrective actions can be performed during the PM visit provided the Client authorizes and extends the purchase order to cover any additional charges for labor, material and expenses.
2. Corrective actions may be scheduled for a later time with written authorization and purchase order from the Client to cover additional charges labor, material and expenses.
3. The Client can decide not to take the recommended corrective actions at this time.

Note that Extended Service Coverage (see Section V) does not take effect until all recommended corrective actions are completed.

III. LIMITATIONS

1. **ADDITIONAL WORK:** Services or testing performed outside the scope of the Agreement will be charged at the prevailing Technical Service Rates (**Schedule E**, contact ASC for current prevailing Technical Service Rates) and must be authorized by the Client in writing prior to the additional work commencing.

2. **LABOR DIFFERENTIAL RATE:** The PM Agreement includes labor for services performed during **normal business hours** (First 8 hours between 0700 and 1800 Monday through Friday, excluding ASC Holidays). Labor for services performed outside normal business hours as defined above will be added to the cost of the PM at a labor differential rate equal to the difference between the prevailing applicable Premium or Overtime Rate and our prevailing Standard Rate as shown in **Schedule E** (contact ASC for current prevailing Technical Service Rates).

REQUIREMENTS, SCOPE, CONDITIONS, WARRANTY, & ENHANCEMENTS

3. **STANDBY TIME** defined as additional labor costs incurred by ASC due to delays caused by site conditions, procedures, permitting, or other site related complications which adversely impact completing the scheduled PM in a timely manner as defined herein. Standby time will be invoiced at the prevailing Technical Service Rates in **Schedule E** (contact ASC for current prevailing Technical Service Rates).
4. **ADDITIONAL COSTS OR EXPENSES:** Customary travel and living expenses such as transportation, lodging, and meals are included in the basic Agreement price. Shipping and handling, taxes, custom duties, legalized documents are not included and will be added to the invoice.
5. **COMMERCIAL GRADE COMPONENTS:** Our Pricing is based on standard commercial grade components normally used by ASC. Unusual or custom items may not be included.
6. **INSURANCE or CERTIFICATIONS:** Additional charges for special insurance, certifications or documentation may apply and will be quoted separately.
7. **CANCELLATION / RESCHEDULING:** ASC works closely with our Clients to ensure timely response and availability of qualified technical personnel. We recognize schedules change from time to time and we will make every effort to be flexible and coordinate our personnel to adjust to site conditions. However, trips cancelled or rescheduled within 48 hours of the scheduled date will incur, as a minimum, a cancellation charge equal to one days labor plus the cost of restocking material, freight, and any travel related charges. Trips rescheduled after parts/materials have shipped to site may result in partial invoicing of parts/materials and shipping/handling charges immediately and invoicing of labor and other charges once the trip is completed.
8. **EMERGENCY SERVICE RESPONSE:** ASC will make every effort to respond to requests for emergency repair service immediately after receipt of the request. On site response will be by the next business day or sooner if circumstances allow it. Off-hours work is not included and additional charges may apply.

IV. PAYMENT TERMS & CONDITIONS

Payment Terms: Net 30 Days OAC; F O B: Ship point, Freight: Prepaid and Added to the invoice, Currency: All prices are in US Dollars and do not include applicable taxes. Seller reserves the right to invoice up to 80% of PM package price for the material portion upon shipment of the material and remaining 20% for labor portion upon completion of the service.

V. EXTENDED SERVICE COVERAGE

ASC will provide Extended Service Coverage for 12 months following completion of the PM. The Extended Service Coverage provides parts (including Shipping & Handling) and labor for 12 months after the system PM has been completed and system performance verified. If the system was not covered prior to the PM then any remedial work/corrective actions discovered during the PM must be completed prior to the Extended Service Coverage taking effect.

The Extended Service Coverage is limited to parts (including Shipping & Handling) and labor to return the system to good working order during our normal business hours (First 8 hours between 0700 and 1800 Monday through Friday, excluding ASC Holidays). Labor for services performed outside normal business hours as defined above will be invoiced at a labor differential rate equal to the difference between the prevailing applicable Premium or Overtime Rate and our prevailing Standard Rate as shown in **Schedule E** (contact ASC for current prevailing Technical Service Rates).

Travel and living expenses are not included and will be billed at cost.

Contact the ASC Client Service Department within a reasonable length of time when requesting service. ASC reserves the right to inspect any or all items covered under such a claim. ASC's obligation under the Extended Service Coverage is limited to

providing services in a timely and workmanlike manner, and to the replacement of defective components.

ASC SHALL NOT BE LIABLE, IN ANY EVENT TO THE CLIENT OR ANY PARTY, FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES UNDER ANY CIRCUMSTANCES.

ASC reserves the right to refuse service for any requirement that is directly or indirectly related to circumstances beyond the control of ASC including but not limited to abuse, neglect, acts of war, fire, flood, epidemic, strike, civil disturbance, freight embargo, weather, or other acts of God.

Exclusions:

The Extended Service Coverage is only valid if the customer buys the PM level that is recommended by the manufacturer and per age/service history of the system. The connected battery bank is NOT included. Testing, Repairs or replacement of the battery will be quoted separately. See Schedule "D".

Replacement cost of major magnetics including input transformers, bypass transformers, and Constant Voltage Transformer (CVT) is excluded. The replacement cost will be prorated against a new unit list price over an expected 20-year service life.

VI. PM AGREEMENT ENHANCEMENTS

1. Printed Circuit Board Replacement (PCBR)

Schedule C lists the recommended replacement schedule of the critical printed circuit boards. If the PCBR Enhancement is purchased with the PM Agreement; then the cost of the PC Boards listed in **Schedule C** and labor to install and setup will be included

2. BATTERY SERVICE TEST (CapTest)

Battery discharge testing is the only definitive way to determine the condition and state of health of the entire battery system. The ASC Battery Service Test (CapTest) provides the user the highest degree of assurance the battery can sustain the load as designed and the critical power system will function reliably in the event of a power outage. The CapTest will test the battery against published manufacturer discharge curves and verify both the electrical and chemical integrity of the battery bank. Battery discharge performance is temperature compensated to IEEE standards and a detailed, comprehensive battery report including individual cell profile, performance analysis, final results and conclusions will be provided to the Client. Rental batteries are available for critical applications requiring a temporary or transition battery during the battery isolation and discharge test process. Refer to **Schedule D** for battery test frequency recommendations.

3. SYSTEM AC LOAD TESTING (ACL)

System AC load testing provides the user a complete performance test of the critical power system including Static Switch, Inverter, Charger, and Battery and other connected power distribution equipment.

4. BATTERY REPLACEMENT (BR)

Storage batteries have a finite cycle and service life. The reliable service life of any battery will be degraded by use, lack of maintenance, and environmental conditions. **Schedule D** provides our recommendations for replacement cycles for a variety of storage battery technologies typically found in our applications. ASC can provide a full "Turn Key" Service to de-commission, install, commission, acceptance test, and dispose of the scrap. Battery replacement will be quoted separately.

SCHEDULE 'A'

ANNUAL BATTERY INSPECTION (AIP)

Scope of Work & Check List

Proper battery inspections, testing and maintenance are required by the equipment manufacturer and will assist the user in determining the overall battery condition, prolong battery life, improve reliability and assure it is capable of satisfying your operational requirements.

During the Preventive and Predictive Maintenance (PPM) process ASC will perform the following battery checks and inspections in accordance with the applicable manufacturers and ANSI/IEEE recommendations.

- ❑ Inspect battery, rack, and room for corrosion, and cleanliness.
- ❑ Verify proper battery room safety equipment is in place and operational (PPE, eye wash, spill kit, fire extinguisher)
- ❑ Check battery accessibility and room ventilation for proper operation
- ❑ Perform a detailed visual inspection of each cell and record terminal post and plate condition
- ❑ Check individual jars for cracks cell, cover, or case, and leakage of electrolyte
- ❑ Check electrolyte levels (Flooded Cells only). Note if topping up is required.
- ❑ Check for unintentional battery grounds.
- ❑ Measure and record the battery room ambient temperature
- ❑ Measure and record the overall float voltage at the battery terminal
- ❑ Measure and record charger output current and voltage
- ❑ Measure and record battery AC ripple voltage and current
- ❑ Measure and record the individual cell/jar voltage with charger on float
- ❑ If there is degradation from the initial base line readings, then note the corrective action required. Schedule remedial work after approval from Client.

RECOMMENDED PARTS REPLACEMENT SCHEDULES

SCHEDULE "B" PPM Parts List and Replacement Cycle

Description	Recommended Replacement Cycle	Included In PPM
Critical PC Board Relays	Annually	PM1, PM5, PM10
Pilot Lights Neon/Incandescent	Annually	PM1, PM5, PM10
Pilot Lights/LED	Every 5 years	PM5, PM10
Fuse	Every 5 years	PM5, PM10
Fans	Every 5 years	PM5, PM10
Alarm & System Relays	Every 5 years	PM5, PM10
Variable Resistors	Every 10 years	PM10
System Capacitors	Every 10 years	PM10

SCHEDULE "C" Printed Circuit Board Replacement (PCBR) Enhancement Parts List and Recommended Replacement Cycle

Description	Replacement Cycle
Inverter/Static Switch Control Board	10 – 12 years
Alarm Display Board	10 – 12 years
Static Switch Interface Board	10 – 12 years
Supervisory Board	10 – 12 Years
Oscillator Board	10 – 12 Years
Gate Drive Board	10 – 12 Years
Synchronizing Board	10 – 12 Years
Noise Suppression Board(s)	10 – 12 Years
Static Switch Board(s)	10 – 12 Years
Auto-Retransfer Board	10 – 12 Years
Charger/Rectifier Control Board	10 – 12 Years
Current Sense Board	10 – 12 Years
Volt Sense Board(s)	10 – 12 Years

SCHEDULE "D" STORAGE BATTERY RECOMMENDED TESTING & REPLACEMENT CYCLE

Description	Recommended IEEE CapTest (Within 1 year of installation, then:)	Estimated Reliable Service Life and Recommended Replacement Cycle
5/10 Year Valve Regulated lead Acid (VRLA)	Annually	2 – 5 years
20 year VRLA/Stackable Type	Annually	8 to 12 years
20 year Flooded	Every 5 years or sooner based on age or previous performance	12 to 17 years

NOTE: Our recommendations are based on the typical application with normal environment controls, outside testing, manufacturer recommendations, and historical field service data. In some cases adverse environmental conditions may reduce service life and accelerate the replacement cycles. In those instances we may recommend replacing parts prior to the normal cycle to enhance system performance and reliability. Recommendations to replace parts that show abnormal wear or dysfunction will be reported during a PPM inspection. Some components may not be applicable to specific Uninterruptible Power Supply Systems.

SCHEDULE "E" Standard Commercial Hourly Rates

Effective August 1, 2014

The rates below apply for dispatching of an AMETEK Solidstate Controls factory trained service engineer for repair, consulting, and other on-site services for customers and equipment under contract with AMETEK Solidstate Controls. AMETEK Solidstate Controls offers Preventive Maintenance Programs (PPM) and Comprehensive Service Agreements (CSA) that offer a more economical approach to proactively maintain critical power systems. Contact your Regional Service Manager for information about PM programs, contracts, training, and other services or, visit our website at <http://www.solidstatecontrolsinc.com/Services/emergency-repair.aspx>

TECHNICAL SERVICES HOURLY RATES	
EMERGENCY SERVICE FEE A flat fee of \$1500.00 will be charged for each emergency repair site service trip (on-site within 10 business days of request). The ESF is in addition to any travel, labor, expenses, and parts charges incurred for the site service or, any Minimum Site Time Billing. *Does not apply to PM or Comprehensive Service Agreement Repairs	\$1,500
STANDARD LABOR (Mon – Fri up to first 8 hrs)	\$ 300
PREMIUM LABOR (over 8 hrs Mon - Fri and all day Sat, Sun, & Holidays)	\$ 400
STANDARD TRAVEL & STANDBY (Mon – Fri up to first 8 hrs)	\$ 220
PREMIUM TRAVEL & STANDBY (over 8 hrs Mon- Fri and all day Sat, Sun, & Holiday)	\$ 300
Minimum Site Time Billing: Regardless of the amount of time actually used to correct a problem at site, or if the site visit is for an emergency repair service or a scheduled repair service, a minimum of eight (8) total hours will be charged for <u>any</u> site repair service. Travel time, expenses, and parts used will be billed in addition to the Minimum Site Time Billing. Premium rates will be applied to the Minimum Site Time Billing if applicable. *Does not apply to PM or Comprehensive Service Agreement Repairs	

TERMS & CONDITIONS:

- All rates are portal to portal.
- Customary travel and living expenses are not included and will be billed at cost. This may include but is not limited to airfare, hotel, rental car, meals, tolls, and parking.
- Mileage Charge for Company Owned Vehicle: \$ 0.935 per mile. (no per diem).
- Equipment manuals: If not available on site will be provided at a cost of \$350.00 per manual.
- Site repairs often require the replacement of components and parts due to age-related degradation. If repair parts or kits are requested by buyer to be sent to site, these parts will be considered to be purchased by buyer unless returned to seller within 5 business days after the repair service completion. Seller reserves right to charge 50% restocking fee (based on list price) for returned unused parts. All parts purchased will be invoiced at the prevailing list price.
- Time associated for site entry requirements such as site-specific, off site training, drug testing, or other special requirements will be charged at the prevailing hourly labor rate plus any associated costs or fees are passed back on to the buyer.
- Trip cancellation within 7 days of scheduled date – Minimum Billing: Eight (8) hours Standby time plus re-stocking, freight and travel related charges.
- Telephone Technical Support – Outside Warranty - First 30 minutes will be provided at No Charge. Afterward telephone support will be charged at \$250. Per hour billed to the nearest half-hour.
- Payment Terms: Net 30 Days OAC, LC, TT, Visa or Master Card.
- All work is FOB Origin; time is charged portal to portal. Shipping and handling will be added at the time of invoice.
- All rates are subject to change without notice. Contact Client Services for current prevailing Technical Service Rates.



SOLIDSTATE CONTROLS

875 Dearborn Drive
Columbus, OH 43085
Telephone: 1-614-846-7500 1-800-635-7300
Fax: 1-614-885-3990



June 14, 2016

City of Lake Worth
Tom G. Smith Power Plant
117 College Street
Lake Worth, FL 33460

RE: AMETEK Solidstate Controls - Uninterruptible Power Supply and Service Provider

To Whom I May Concern:

AMETEK Solidstate Controls is the OEM of Uninterruptible Power Supply equipment, providing UPS maintenance, repair, commissioning and training. AMETEK Solidstate Controls only uses direct employees for their field operation. The AMETEK Solidstate Controls' Technical Engineers are specialists in the electronic field of work. They are educated, trained and qualified in all aspects to repair and maintain the Solidstate Controls' Uninterruptible Power Supply (UPS) equipment. The services performed require the individual to have expert knowledge of electronics and electronics theory and possess the ability to make sound judgments of workmanship, design adequacy and compatibility with your equipment.

Due to the custom design of our systems, it is recommended that only an AMETEK Solidstate Controls' factory trained and certified technical engineer service the equipment.

Please do not hesitate to contact me at 614-410-6230 or via email at jean.falor@ametek.com, if you have questions or I may be of further assistance.

Regards,

AMETEK Solidstate Controls

Jean M. Falor
Service Operations Manager



The Power to Keep Businesses in Business
An ISO Certified Company



AGENDA DATE: June 21, 2016, Regular Meeting

DEPARTMENT: City Manager's Office

EXECUTIVE BRIEF

TITLE:

Purchase radios and all required materials to complete the radio upgrade project in the electric utility

SUMMARY:

Authorize the purchase of radios from Radio One and all materials to complete the radio upgrade project in the electric utility in the amount of \$65,926.05. Radio One is a sole source provider of this equipment

BACKGROUND AND JUSTIFICATION:

The Electric Utility is currently using an analog radio communication system that has been in service for close to 10 years and has surpassed its end of life support. The proposed two way radio system will include the MOTOROLA Linked Capacity Plus digital system, which provides a reliable and efficient radio; network functionality and two way radio communication system for the Electric Utility. . This will accommodate all communications between all departments, services, and security.

New Features will include:

- **Voice Quality**
Background noise cancelling technology and automatic error correction will maintain the clarity of the voice.
- **Increased Coverage**
Digital radios have built-in error correction to eliminate static and make sure greater range voice calls are clear.
- **Increased Capacity**
Existing analog repeaters are limited to one simultaneous conversation. The Motorola solution will allow four simultaneous conversations.
- **Battery Life**
Digital technology is much more energy-efficient than analog reducing battery drain and improving talk time. Battery life has been lasting up to 40% longer when using a digital radio versus analog.

- Encryption
Basic Privacy is a simple feature that helps keep third party monitoring of your voice and data calls. This helps keep voice transmissions confidential without impacting system performance.

MOTION:

I recommend/ do not recommend the purchase of radios from Radio One in the amount of not to exceed \$65,925.06.

ATTACHMENT(S):

Fiscal Impact Analysis
Quote
Motorola Sole Source Provider Letter

FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	2016	2017	2018	2019	2020
Capital Expenditures	0	0	0	0	0
Operating Expenditures	0	0	0	0	0
External Revenues	0	0	0	0	0
Program Income	0	0	0	0	0
In-kind Match	0	0	0	0	0
Net Fiscal Impact	65,926.05	0	0	0	0
No. of Addn'l Full-Time Employee Positions	0	0	0	0	0

B. Recommended Sources of Funds/Summary of Fiscal Impact:

Electric		Palm Beach County				
Account Number (s)	Account Description	Project #	FY 2016 Budget	Available Balance	Agenda Expense	Balance
401-6034-531-6410	Radio Equipment	N/A	65,926.05	76,634	(65,926.05)	10,707

C. Department Fiscal Review: John Borsch, Electric Utility Director

BACKGROUND AND JUSTIFICATION

The Electric Utility is currently using an analog radio communication system that has been in service for close to 10 years and has surpassed its end of life support. The proposed two way radio system will include the MOTOROLA Linked Capacity Plus digital system, which provides a reliable and efficient radio; network functionality and two way radio communication system for the Electric Utility. This will accommodate all communications between all departments, services, and security.

New Features

Voice Quality

Background noise cancelling technology and automatic error correction will maintain the clarity of the voice.

Increased Coverage

Digital radios have built-in error correction to eliminate static and make sure greater range voice calls are clear.

Increased Capacity

Existing analog repeaters are limited to one simultaneous conversation. The Motorola solution will allow four simultaneous conversations.

Battery Life

Digital technology is much more energy-efficient than analog reducing battery drain and improving talk time. Battery life has been lasting up to 40% longer when using a digital radio versus analog.

Encryption

Basic Privacy is a simple feature that helps keep third party monitoring of your voice and data calls. This helps keep voice transmissions confidential without impacting system performance.



MOTOROLA SOLUTIONS

August 20th, 2015

Lake Worth Utilities
1900 2nd Ave N
Lake Worth, FL 33461

Subject: Sole Source Letter – Communications System

To Whom It May Concern:

Motorola Solutions, Inc. is a manufacturer of two-way radios and infrastructure equipment with corporate offices located in Schaumburg, IL. Motorola has been providing two-way radio communications systems to private enterprise and public safety agencies for over 80 years.

Our radio solutions partner, Radio One Communications with offices in Orlando, Clearwater, Daytona, Boca Raton and Miami, has been a Motorola Authorized Channel Partner since 1991. This letter will confirm that Radio One is a reseller in good standing with Motorola and your source for the equipment you are seeking to purchase.

If you have any questions about any Motorola manufactured products or systems, please feel free to contact me at 727-240-7005. I look forward to working with Radio One to provide the Lake Worth Utilities with a state of the art MOTOTRBO Digital Communications System.

Sincerely,
MOTOROLA SOLUTIONS, INC.

A handwritten signature in black ink, appearing to read 'Ross Jackson', with a long horizontal flourish extending to the right.

Ross Jackson
Channel Account Manager



FINAL



**Lake Worth Utilities
Motorola CapacityPlus UHF "ENABLED" Digital Radios**

Customer: Lake Worth Utilities
1900 2nd Ave N
Lake Worth, FL 33461
Attn: Diego Perez
Phone: 561-533-7302
Cell: 561-662-8926
Email: DPerez@LakeWorth.org

Ship to: Same
Attn: Same

Rep # 640
Date: 5/3/2016
Acct.Rep: Brennan Wartmann
Good Thru: 5/31/2016
Delivery: TBD

Lake County School Board Contract #3990DB

Quantity	Model #	Description	Unit Price	3990DB	Unit/DSC	Total	
27	AAH56RDN9RA1 N	MOTOROLA XPR™ 7550e UHF Digital "ENABLED" Portable	\$1,290.67	30% DSC	\$903.47	\$24,393.66	
	STDBAT0871	Standard Battery - IMPRES Li Ion IP68 3000mAh, Submersible	Included				
2	STDCHG0871	Standard Charger - IMPRES Single Unit Charger	Included				
25	H951	Ornit Standard Charger	-\$20.00				(\$500.00)
	QA02304	UHF Slim Whip Antenna 403-527 MHz	Included				
	STDRSA0871	Standard 2-Year Warranty + 1-Year Service from the Start LITE	Included				
OPTIONAL							
27	HKVN4413 RORD	MOTOTRBO License Capacity Plus (Single Site) REQUIRED	Included				
27	HKVN4381	MOTOTRBO LicenseWi-Fi	Included				
27	HKVN4249	Bluetooth Voice, Programming, Data and Discoverable Mode	Included				
27	HKVN4373	Single Input Noise Cancellation Upgrade (SINC+)	\$3.50	15% DSC	\$2.98	\$80.33	
27	HKVN4179	Built In Man Down	\$70.00	15% DSC	\$59.50	\$1,606.50	
27	HKVN4281	Text to Speech for Channels, Zones, Text Messages etc.	\$10.00	15% DSC	\$8.50	\$229.50	
5	WPLN4212	IMPRES Multi Unit Charger	\$495.00	15% DSC	\$420.75	\$2,103.75	
6	AAH81TCN9TA2AN	MOTOROLA SL 7550e UHF Digital "ENABLED" Portable 3 watts	\$1,290.67	30% DSC	\$903.47	\$5,420.81	
	STDBAT0682	Standard Battery - BT100x 2300T mAh Li-Ion Battery	Included				
	STDCHG0682	Standard Charger - Micro USB Charger	Included				
6	QA02813	SL Series Tri-Unit Charger	\$71.00	15% DSC	\$60.35	\$362.10	
	STDBLT0682	Standard Carry Holder - Carry Holder	Included				
	STDWAR0682	Standard 2-Year Warranty + 1-Year Service from the Start LITE	Included				
6	PMNN4468	B100x 2300T Li-Ion Battery.	\$35.00	15% DSC	\$29.75	\$178.50	
31	AAM28TRN9RA1 N	MOTOROLA XPR™ 5550e UHF Digital "ENABLED" Mobile	\$1,105.50	30% DSC	\$773.85	\$23,989.35	
26	STDMIC0511	Standard Compact Microphone for VHF & UHF	Included				
3	B7	Ornit Microphone	-\$10.00				(\$30.00)
31	STDBKT0511	Standard Mounting Bracket for VHF & UHF	Included				
31	STDCBL0511	Standard Power Cable for VHF & UHF	Included				
	STDRSA0511	Standard 2 Year Warranty + 1 Year Service from the Start -LITE	included				
OPTIONAL							
31	HKVN4413 RORD	MOTOTRBO License Capacity Plus (Single Site) REQUIRED	Included				
31	HKVN4381	MOTOTRBO LicenseWi-Fi	Included				
31	HKVN4249	Bluetooth Voice, Programming, Data and Discoverable Mode	Included				
31	HKVN4281	Text to Speech for Channels, Zones, Text Messages etc.	\$10.00	15% DSC	\$8.50	\$263.50	
26	HAE6019	GPS/UHF 450 527 MHz 2dB Gain	\$157.00	15% DSC	\$133.45	\$3,736.60	
28	HKVN4281	Text to Speech for Channels, Zones, Text Messages etc.	\$10.00	15% DSC	\$8.50	\$238.00	
3	T572268	Desktop Housing with Power Supply	\$158.00	15% DSC	\$134.30	\$402.90	
3	RMN5050	Desktop Microphone	\$120.00	15% DSC	\$102.00	\$306.00	
3	T80245	Laird FG4500 omnidirectional antenna	\$141.00	15% DSC	\$119.85	\$359.55	
2	0112004B04	N Type Male to N Type Male 24"	\$100.00	15% DSC	\$85.00	\$170.00	
1	R-1 Installation	Vehicle Installation and Programming					\$4,296.00
1	R-1 PARTS	Installation parts					\$977.00
1	Teldio	R2R Recording Core Software and implementation					\$3,942.00
3	MOTO-PRCMO	Save \$1200 on 10 units XPR/SL 7000 Series with Trade-in	-\$1,200.00				(\$3,600.00)
3	R1 PRCMO	Save \$1000 on 10 units XPR/SL 7000 EXPIRES 5/31/16	-\$1,000.00				(\$3,000.00)

Cancelled orders subject to a 20% restocking fee.

EQUIPMENT TOTAL	\$65,926.05
TRANSPORTATION	Included
Sales Tax	Exempt
TOTAL	\$65,926.05

Terms: NET 30
Approved By: _____
DATE: _____



The Motorola Solutions Empower Circle Award recognizes Radio One as one of the top 50 Motorola Solutions partners worldwide.

RADIO ONE brennanw@radio1inc.com
1700 North Dixie Hwy., Suite 125
Boca Raton, FL 33432
Cell: 561-951-7140
Office: 954-358-5791
Fax: 561-431-4664



AGENDA DATE: July 6, 2016

DEPARTMENT: Electric Utility

EXECUTIVE BRIEF

TITLE: Contract agreement with Exceleron Software, LLC for a Prepaid Account Management System, Software and Implementation for utilities services in the amount of \$95,000 over three years.

SUMMARY:

The City is in need of prepaid billing system software for utilities services. The City desires to piggy back off of the City of Ocala's contract with the vendor.

BACKGROUND AND JUSTIFICATION:

The Exceleron's prepaid account management system software will allow residents to pre pay for their Electric, Water & Sewer usage. The software will also help customers who can't afford large deposits to still move into the City of Lake Worth's service area.

The City of Lake Worth desires to piggy back off of the City of Ocala's contract with the vendor.

The City of Ocala, FL solicited competitive proposals for the purchase of a prepaid billing software (RFP 11-009). And on April 5, 2011, Ocala entered into an agreement with the vendor to provide a prepaid billing solution. The Exceleron Software LLC authorized other public agencies to piggy back the services provided under the RFP 11-009 subsection 1.22(e).

The City of Lake Worth agreement will be for the next 36 months. For the first year FY 15-16, the implementation fee of \$15,000 will be charged to the Transmission & Distribution professional services account of the Electric Department. Thereafter, the City will be responsible for a monthly maintenance fee of \$3,000. The maintenance fee will be charged to the Meters' professional services in the consecutive years.

With this software program, customers are also able to monitor account usage/balance on a daily basis and make payments as needed to keep their account in good standing. This program will eliminate the need for staff to collect large utility deposits as well as help many of City's customers pay off past due utilities' balances. Customers that sign up for the Pre-Paid system no longer receive a paper bill or a final notice letter. This alone results in an annual savings. In addition, customers are no longer a risk to the City for incurring bad debt and write-offs.

This software is a tool to assist bring more residents into our City to help further our economic growth.

MOTION:

I recommend/do not recommend the purchase of a prepaid billing software from Exceleron Software, LLC in the amount of 123,000 over the next 3 years.

ATTACHMENT(S):

Fiscal Impact Analysis
Contract
Proposal

FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	2016	2017	2018	2019	2020
Capital Expenditures	15,000	36,000	36,000	36,000	0
Operating Expenditures	0	0	0	0	0
External Revenues	0	0	0	0	0
Program Income	0	0	0	0	0
In-kind Match	0	0	0	0	0
Net Fiscal Impact	15,000	36,000	36,000	36,000	0
No. of Addn'l Full-Time Employee Positions	0	0	0	0	0

B. Recommended Sources of Funds/Summary of Fiscal Impact:

Electric		Exceleron Software, LLC				
Account Number (s)	Account Description	Project #	FY 2016 Budget	Available Balance	Agenda Expense	Balance
401-6034-531-3190	Professional Services	N/A	173,487	87,857	15,000	72,857

Electric		Exceleron Software, LLC				
Account Number	Account Description	Project #	FY 2017 Budget	Available Balance	Agenda Expense	Balance
401-6035-531-3190	Professional Services	N/A	0	36,000	36,000	0

C. Department Fiscal Review: John E. Borsch, Electric Utility Director

**AGREEMENT LICENSE OF EXCELERON SOFTWARE, LLC, PREPAID ACCOUNT
MANAGEMENT SYSTEM, SOFTWARE AND IMPLEMENTATION**

THIS AGREEMENT ("Agreement" hereafter) is made as of the _____ day of _____, 2016, by and between the City of Lake Worth, a municipal corporation organized and existing under the laws of the State of Florida ("CITY" hereafter), and Exceleron Software, LLC, a company authorized to do business in the State of Florida ("VENDOR" hereafter).

RECITALS

WHEREAS, the CITY is in need of prepaid billing system software for utilities services; and,

WHEREAS, the City of Ocala, Florida, ("Ocala") solicited competitive proposals for the purchase of a prepaid billing software ("RFP 11-009"); and

WHEREAS, on April 5, 2011, Ocala entered into that certain agreement with Vendor to provide a prepaid billing solution as amended by Amendment #1, dated February 9, 2012, and Amendment #2, dated September 4, 2012, including but not limited to Attachment D ("PAMS Software Access Agreement") (collectively, the "Ocala Contract"); and,

WHEREAS, Subsection 1.22(e) of the RFP provides that by submitting a bid, Vendor authorizes other public agencies to "piggy-back" the services provided under the RFP;

WHEREAS, City is a public agency, namely a municipality of the State of Florida, duly organized and validly existing under the laws of the State of Florida; and

WHEREAS, City desires to piggy-back off of the Contract and use the prepaid billing solution for license of Vendor's prepaid account management system and Vendor agrees to license such solution in accordance with the rates, terms and conditions set forth in the Ocala Contract.

NOW THEREFORE, in consideration of the mutual promises set forth herein, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. Recitals. The parties agree that the recitals set forth above are true and correct and are fully incorporated herein by reference.
2. Ocala Contract. The Ocala Contract is hereby incorporated by reference, including the pricing and is hereby expressly made a part of this Agreement as if set forth at length herein. The terms and conditions of the Ocala Contract shall apply unless in conflict with the terms and conditions of this Agreement as set forth herein. The implementation fee for City will be in \$15,000 in lieu of the \$25,000 set forth in the Ocala Contract.
3. Term of Agreement. The term of this Agreement shall commence on the date this Agreement is last executed and shall expire within 36 months, unless otherwise extended by mutual written agreement (the "Term"). In the event that the Ocala Contract expires or terminates prior to the end of the Term, the Ocala Contract terms and conditions shall continue to apply to this Agreement until the expiration or termination of this Agreement. Notwithstanding the foregoing, this Agreement may be earlier terminated as stated herein.
4. Insurance Requirements. Original copies of Certificates of Insurance meeting the requirements

specified herein shall be forwarded to the CITY's Procurement Office and approved prior to the start of any work. Renewal certificates must be forwarded to the same department prior to the policy renewal date and thirty days written notice must be provided to the CITY in the event of cancellation. VENDOR shall provide complete copies of any insurance policy for required coverage within seven days of the date of request by the CITY's Procurement Office. If VENDOR utilizes any sub-contractors for the work, VENDOR shall require its sub-contractor to provide and maintain the same type and level of insurance as required of VENDOR under this Agreement. VENDOR shall provide the insurance as required in the Ocala Contract and shall list the CITY as an additional insured.

5. Scope of Work. VENDOR shall be responsible to furnish all labor, supervision, equipment and materials to provide the requested utilities prepaid billing system software to the CITY and as set forth in the Ocala Contract, the VENDOR's Quote Sheet which is attached hereto and incorporated herein as Exhibit "A", and as set forth herein.

6. Sovereign Immunity. Nothing contained in the Ocala Contract or herein shall be construed or interpreted as consent by the CITY to be sued nor as a waiver of sovereign immunity beyond the waiver and limits set forth in Section 768.20, Fla. Stat., as amended from time to time.

7. Payment/Payment Terms. Invoices shall be submitted to the following address:
City of Lake Worth Finance Department
7 North Dixie Hwy
Lake Worth, FL 33460

8. Change Orders. Any addition(s) to the Scope of Work or to a Purchase Order that adds additional costs must be brought to the CITY's attention and approved by the Procurement Office prior to commencement of additional work, shipment of goods or the addition of unauthorized freight charges. Once approved, a Change Order will be issued to include the additional costs and work may commence and/or shipment of goods can begin. Additional costs that were not brought to the CITY's attention and did not result in a Change Order approved by the Purchasing Office will not be honored.

9. Waiver of Breach. The waiver of either parts of any breach of any provision of this Agreement shall not operate or be construed as a waiver of any subsequent breach of that same or any other provision.

10. Entire Agreement and Order of Precedence. This Agreement consists of the terms and conditions provided herein, the VENDOR's Quote Sheet, and the pricing in the Ocala Contract. To the extent that there exists a conflict between this Agreement and the remaining document, the terms, conditions, covenants, and/or provisions of this Agreement shall prevail. Wherever possible, the provisions of such documents shall be construed in such a manner as to avoid conflicts between provisions of the various documents. This Agreement supersedes any and all other Agreements, either oral or in writing, between the parties hereto with respect to the subject matter hereof, and no other Agreement, statement, or promise relating to the subject matter of this Agreement which is not contained herein shall be valid or binding.

11. Successors and Assigns. Subject to the provision regarding assignment, this Agreement shall be binding on the heirs, executors, administrators, successors, and assigns of the respective parties.

12. Governing Law and Remedies: The validity of this Agreement and of any of its terms or provisions, as well as the rights and duties of the parties hereunder, shall be governed by the laws of the State of Florida and venue shall be in Palm Beach County, Florida. No remedy herein conferred upon any party is intended to be exclusive of any other remedy, and each and every such remedy shall

be cumulative and shall be in addition to every other remedy given hereunder or now or hereafter existing at law or in equity or by statute or otherwise. No single or partial exercise by any party of any right, power, or remedy hereunder shall preclude any other or further exercise thereof.

13. Notices. All notices hereunder must be in writing and, unless otherwise provided herein, shall be deemed validly given on the date when personally delivered to the address indicated below; or on the third (3rd) business day following deposit, postage prepaid, using certified mail, return receipt requested, in any U.S. postal mailbox or at any U.S. Post Office; or when sent via nationally recognized overnight courier to the address indicated below. Should the CITY or VENDOR have a change of address, the other party shall immediately be notified in writing of such change, provided, however, that each address for notice must include a street address and not merely a post office box. All notices, demands or requests from the VENDOR to the CITY shall be given to the CITY address as follows:

Michael Bornstein, City Manager
City of Lake Worth
7 North Dixie Hwy
Lake Worth, Florida 33460

With a copy to the Procurement Office (same address).

All notices, demands or requests from the CITY to the VENDOR shall be given to the VENDOR address as follows:

Exceleron Software, LLC
8144 Walnut Hill Lane, Ste. 905
Dallas, TX 75231

14. Severability. Should any part, term or provision of this Agreement or any document required herein to be executed be declared invalid, void or unenforceable, all remaining parts, terms and provisions hereof shall remain in full force and effect and shall in no way be invalidated, impaired or affected thereby.

15. Counterparts. This Agreement may be executed in counterparts, each of which shall be an original, but all of which shall constitute one and the same document. Each of the parties shall sign a sufficient number of counterparts, so that each party will receive a fully executed original of this Agreement.

16. Public Entity Crimes. VENDOR acknowledges and agrees that a person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier or sub-contractor under a contract with any public entity; and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, Florida Statutes, for CATEGORY TWO for a period of 36 months following the date of being placed on the convicted vendor list. VENDOR will advise the CITY immediately if it becomes aware of any violation of this statute.

17. Preparation. This Agreement shall not be construed more strongly against either party regardless of who was more responsible for its preparation.

18. Palm Beach County IG. In accordance with Palm Beach County ordinance number 2011-009, the VENDOR acknowledges that this Agreement may be subject to investigation and/or audit by the Palm Beach County Inspector General. The VENDOR has reviewed Palm Beach County ordinance number 2011-009 and is aware of its rights and/or obligations under such ordinance.

19. Enforcement Costs. Except as required of VENDOR under paragraph 6 herein relating to the Indemnification and Hold Harmless provision, all parties shall be responsible for their own attorneys' fees, court costs and expenses if any legal action or other proceeding is brought for any dispute, disagreement, or issue of construction or interpretation arising hereunder whether relating to the Agreement's execution, validity, the obligations provided therein, or performance of this Agreement, or because of an alleged breach, default or misrepresentation in connection with any provisions of this Agreement.

20. Federal and State Tax. The CITY is exempt from payment of Florida State Sales and Use Tax. The CITY will sign an exemption certificate submitted by VENDOR; however, VENDOR shall not be exempted from paying sales tax to its suppliers for materials used to fill contractual obligations with the CITY, nor is VENDOR authorized to use the CITY'S Tax Exemption Number in securing such materials. VENDOR shall be responsible for payment of its own and its share of its employees' payroll, payroll taxes, and benefits with respect to this Agreement.

21. Availability of Funds. The CITY's performance and obligation to pay under this Agreement is contingent upon the annual appropriation of funds by the CITY Commission.

22. Independent Contractor Relationship. VENDOR is, and shall be, in the performance of all work services and activities under this Agreement, an Independent Contractor, and not an employee, agent, or servant of the CITY. All persons engaged in any of the work or services performed pursuant to this Agreement shall at all times, and in all places, be subject to VENDOR'S sole direction, supervision, and control. VENDOR shall exercise control over the means and manner in which it and its employees perform the work, and in all respects VENDOR'S relationship and the relationship of its employees to the CITY shall be that of an Independent Contractor and not as employees or agents of the CITY. VENDOR does not have the power or authority to bind the CITY in any promise, agreement or representation other than as specifically provided for in this Agreement.

23. Nondiscrimination. VENDOR warrants and represents that all of its employees are treated equally during employment without regard to race, color, religion, disability, sex, age, national origin, ancestry, political affiliation, marital status, handicap, or sexual orientation. Further, VENDOR shall not discriminate or permit discrimination against any employee or an applicant for employment on the basis of race, color, sex, religion, political affiliation, natural origin, ancestry, marital status, sexual orientation or handicap.

24. Authority to Practice. VENDOR hereby represents and warrants that it has and will continue to maintain all licenses and approvals which are legally required to conduct its business, and that it will at all times conduct its business activities in a reputable manner. Proof of such licenses and approvals shall be submitted to the CITY upon request. VENDOR shall be solely responsible for obtaining and complying with all necessary permits, licenses, approvals and authorizations required for any work done pursuant to this Agreement from any federal, state, regional, county or city agency and all applicable laws.

25. Survivability. Any provision of this Agreement which is of a continuing nature or imposes an obligation which extends beyond the term of this Agreement shall survive its expiration or earlier termination.

26. Waiver of Subrogation. VENDOR hereby waives any and all rights to Subrogation against the CITY, its officers, employees and agents for each required policy. When required by the insurer, or should a policy condition not permit an insured to enter into a pre-loss agreement to waive subrogation without an endorsement, then VENDOR shall agree to notify the insurer and request the policy be endorsed with a Waiver of Transfer of Rights of Recovery Against Others, or its equivalent. This Waiver of Subrogation requirement shall not apply to any policy, which a condition to the policy specifically prohibits such an endorsement, or voids coverage should VENDOR enter into such an agreement on a pre-loss basis.

27. Public Records. The VENDOR shall comply with Florida's Public Records Act, Chapter 119, Florida Statutes, and, if determined to be acting on behalf of the CITY as provided under section 119.011(2), Florida Statutes, specifically agrees to:

- (a) Keep and maintain public records required by the CITY to perform the service.
- (b) Upon request from the CITY's custodian of public records or designee, provide the CITY with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes, or as otherwise provided by law.
- (c) Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of this Agreement and following completion of this Agreement if the VENDOR does not transfer the records to the CITY.
- (d) Upon completion of this Agreement, transfer, at no cost, to the CITY all public records in possession of the VENDOR or keep and maintain public records required by the CITY to perform the service. If the VENDOR transfers all public records to the CITY upon completion of the Agreement, the VENDOR shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the VENDOR keeps and maintains public records upon completion of the Agreement, the VENDOR shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the CITY, upon request from the CITY's custodian of public records or designee, in a format that is compatible with the information technology systems of the CITY.

IF THE VENDOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE VENDOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS OR DESIGNEE AT: ATTENTION DEBBIE ANDREA, (561) 586-1660 OR DANDREA@LAKEWORTH.ORG OR 7 NORTH DIXIE HIGHWAY, LAKE WORTH, FL 33460.

IN WITNESS WHEREOF, the CITY and VENDOR hereto have made and executed this Agreement as of the day and year first above written.

CITY OF LAKE WORTH, FLORIDA

By: Pam Triolo, Mayor

ATTEST

Pamela J. Lopez, City Clerk

Approved as to form and legal sufficiency:

Glen J. Torcivia, City Attorney

EXCELERON SOFTWARE, LLC

By: [Signature]

[Corporate Seal]

Print Name: BOB D. CRENSHAW JR

Title: PRESIDENT & CEO

STATE OF _____)
COUNTY OF _____)

The foregoing instrument was acknowledged before me this 21st day of JUNE, 2016 by BOB D. CRENSHAW JR, as PRESIDENT & CEO (title), Exceleron Software, LLC, a corporation authorized to do business in the State of Florida, and who is personally known to me or who has produced the following TX DL 123456 as identification.

[Signature]
Notary Public

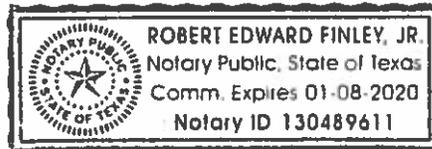


EXHIBIT "A"

EXCELERON SOFTWARE, LLC'S QUOTE SHEET



UP-FRONT INVESTMENT FOR THE CITY OF LAKE WORTH, FL.

The upfront cost for Exceleron's MyUsage Prepaid is \$15,000 for a 36 month contract. This charge includes:

- Complete integration to the Tantalus metering system and the SunGard billing system
- Training session (two days) held onsite at Lake Worth prior to going "live". Travel expenses for the trainer will be reimbursed by Lake Worth.
- Installation and system set-up
- 24/7 support
- Webinars
- New versions and features as they are released
- No transaction fees
- No custom programming charges
- Fixed pricing
- No additional integration charges
- Access to extensive resource library
- Usage Monitor application for postpaid customers
- Debt Recovery feature
- MDM (Meter Data Management) System

MONTHLY PAY AS YOU GROW PRICING

Exceleron charges a monthly fee for MyUsage based upon the number of prepaid participants in the program. This charge amounts to \$.20 per day for each prepaid participant which equates to approximately \$6.00 per month. Exceleron requires a 36 month or 60 month agreement with a monthly minimum of \$3,000.00 per month. We will provide a ramp up minimum in months three and four after the initial free pilot period in months one and two.

The only other applicable charges are for the messaging and alerts to consumers. The following charges will apply:

- Scripted Phone Messages from the IVR will be billed at \$.05 per call (inbound and outbound).
- Text messages to consumers will be billed at \$.04 per text message
- Emails are free

To date, the communications charge per prepaid consumer on the MyUsage Prepaid platform averages about \$.60 per month per enrolled prepaid customer.

PILOT PROGRAM

Exceleron will offer a 60 day risk free pilot program at no charge to Lake Worth. Full functionality of the platform will be provided at no charge for this 60 day pilot program. The utility may cancel the agreement at any time during the pilot period and incur no financial penalty. The up-front charge is not due until the pilot program has been completed and the utility elects to go forward into production mode with the MyUsage Prepaid platform.



AGENDA DATE: July 6, 2016, Regular Meeting

DEPARTMENT: City Manager's Office

EXECUTIVE BRIEF

TITLE:

Purchase of cable phases and associated materials for the Generator GT-1

SUMMARY:

One phase of cable that ties GT-1 to 138 kV transmission cable phase has failed and cannot be repaired. Electric Utility recommends to replace all the three phases of cable along with the associated materials required for cable termination in the amount of \$208,355.

BACKGROUND AND JUSTIFICATION:

Under normal circumstances, the main line at Hypoluxo location serves approximately ninety three (93) megawatts of electricity to the City. In the event of a storm, maintenance, or any circumstances that force the City to run on generation units, the City strongly relies on GT-1 generator as it supplies about one third of the total generation capacity of 88 Megawatts.

At this time one out of three transmission cable phases has failed and the GT-1 generator is out of service, the City is not capable of meeting the minimum demand load during the summer peak hours. And based on the previous experience, it is expected to see maximum load during the months of July and August as well as the afternoon storms. All of the above suggests the City electrical grid is vulnerable and needs immediate attention.

Electric Utility Engineers recommend changing all three cable phases along with the associated materials required for cable termination as the remaining two cables have long exceeded their life expectancies and are at a risk of failure. Replacing the cables one-by-one as they fail means additional spending and potential long-term limitations of the generation each time replacement is carried out. Moreover, it is a common practice in the industry to replace equipment for all three phases once one of them fails. This problem needs to be solved within next six weeks.

The itemized estimated job costs are as follows:

Product/Service	Vendor	Estimated Cost
Ground Penetrating Radar Survey of the Area	Grounds Penetrating Radar Systems, INC (GPRS)	\$3,700
Conduit Boring and installation	A.R.E Utility Construction, Inc.	\$35,823
Cable Terminations	G&W Electric Company	\$41,100
Terminations and Lighting Arrestors Installation	Service Electric Company	\$52,732

Transmission Cable (3 phases)	Wesco Distribution	\$75,000
Grand Total		\$208,355

It is estimated that the cost of acquisition of materials and labor will be in the amount of \$208,355. This is a one-time spending. The City will not spend any additional amounts to maintain this project for the 2016 fiscal year and the years to come.

MOTION:

I recommend/do not recommend the purchase of cable phases and associated materials for the Generator GT-1, in the amount of \$208,355 over one fiscal year 2016.

ATTACHMENT(S):

- Fiscal Impact Analysis
- Summary
- Overview
- A.R.E Utility Construction, Inc quote
- G&W Electric Company Quote
- G&W Field Services and Consulting Rates Schedule
- G&W Terms and Conditions
- Grounds Penetrating Radar Systems, Inc quote
- Kerite Quote
- Service Electric Company Quote (Proposal Letter)
- Wesco Distribution Quote

FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	2016	2017	2018	2019	2020
Capital Expenditures	208,355	0	0	0	
Operating Expenditures	0	0	0	0	0
External Revenues	0	0	0	0	0
Program Income	0	0	0	0	0
In-kind Match	0	0	0	0	0
Net Fiscal Impact	208,355	0	0	0	0
No. of Addn'l Full-Time Employee Positions	0	0	0	0	0

B. Recommended Sources of Funds/Summary of Fiscal Impact:

Electric		Palm Beach County				
Account Number (s)	Account Description	Project #	FY 2016 Budget	Available Balance	Agenda Expense	Balance
401-6010-531-6315	Improve Other than Build / Infrastructure	N/A	208,355	208,355	208,355	0

A budget transfer in the amount of \$208,355 from 401-6031-531-6200 Electric Utility Buildings to 401-6010-531-6315 Improve Other than Build / Infrastructure will be completed after the City Commission's approval.

C. Department Fiscal Review: John Borsch, Electric Utility Director

PROPOSAL



From: *A.R.E. Utility Construction, Inc.*
2001 N.W. 33rd Court
Pompano Beach, FL 33064

LIC #: U-17145
90-1194
369919-7

To: City of Lake Worth
Jean St. Simon
1900 2nd Ave North
Lake Worth, FL 33461

Fax: 561-586-1702

Proposal Number: 109018
P.O. Number: Signed Proposal
Job Number: 1749 3rd Ave South
Job City: Lake Worth
Location Of Work: 1749 3rd Ave S.

Date: 5/20/2016
Terms: Due on Receipt
Type: Original

LUMP SUM BID

Trench, bore and install three 6" concrete encased pvc conduits from Bay to Breaker as Shown.

LUMP SUM AMOUNT: \$35,823.00

Price includes:

Contact Sunshine One Call for locates to avoid damage.
Setup and tear down bore equipment.
Trench, back fill and complete restoration of work area.
Supply and install 6" conduit and sweeps.
Supply and install six 6" galvanized bends.
Concrete encase conduits.
Asphalt restoration.
String in conduits.

Price does not include:

Permits or permit processing.
Private utility locates / radar detection.

Proposed by:

Steve Wertheimer
A.R.E. Utility Construction, Inc.
steve@areutility.com
(954) 974-0003 Ext. 81

Acceptance of Proposal:

The prices, specifications and conditions are satisfactory and are hereby accepted. A.R.E. Utility Construction, Inc. (A.R.E.) is authorized to complete the work as specified. Payment will be made as per the specified terms. Past due balances are subject to 1.5% monthly fee.

Approved By:

Signature: _____ Print Name: _____ Title: _____ Date: _____

PLEASE RETURN BY FAX @ 954-974-0099



Customer:	City of Lake Worth
Date:	May 19, 2016
Validity:	30 Days
Quotation Number:	SQ 28630

Item: 1

Quantity: 6

G&W Catalog No. PAT140-3540G-500KA-X-NT-X-X, 1/C 145kV IEC, 138kV IEEE, 650kV BIL outdoor termination, suitable for use on 138kV aluminum conductor, EPR insulation (**Insulation O.D. between 43mm and 96.5mm [porcelain]**) to include:

- Standard Components:
 - Aluminum base plate
 - Aluminum cap plate
 - Aluminum corona shield
 - Tinned Aluminum Crimp Type connector
 - Dielectric fluid
 - Rubber Stress Cone
 - Cable preparation kit which includes:
 - Grease
 - Multiple grits of sandpaper
 - PVC tape
 - Heat shrink seal
 - Solder
 - Flux
 - Tinned copper ground braid
 - Grounding lugs
- Required Components with Multiple Options:
 - Insulator (material, color, creepage):
Porcelain, Gray, 3540mm std creepage, Code 3540G
 - Conductor size (kcmil / mm²):
500 kcmil, Code 500K
 - Conductor material:
Aluminum, Code A
 - Mounting/entrance configuration:
Mounting plate with standoff insulators (4), aluminum entrance housing and heat shrink seals, **Code X**
- Optional Components:
 - Aerial lugs:
Nema 4-hole, Copper, Code N
 - Aerial lug finish:
Tinned, Code T
 - Additional components:
No Additional Components Required, Code X
- Installation Method
 - Stress cone type:
Mechanical Shrink, Code X

Shelf life Note: Terminations with the mechanical shrink (expanded) stress cone must be installed by the customer within 6 months of the stress cone expansion date.

Net Price Each: US\$ 6,850.00

Extended Price: US\$ 41,100.00

* Attached is typical drawing for your reference.

Item: 1(Alternate)

G&W Catalog No. PAT140-3540G-500KA-X-NT-X-S is applicable if Slip-on (unexpanded, requires installation tool/ring) stress cone is required

Item: 2

Quantity: 3

G&W Catalog No. PMJ140-B-500KA-X-X, 1/C 145kV IEC, 138kV IEEE, 650kV BIL premolded rubber transmission joint, suitable for use on 145kV Aluminum conductor, EPR insulation (**Insulation O.D. between 60mm – 94mm**) to include:

- Standard Components:
 - Premolded joint body with built-in stress control
 - Tinned Aluminum Crimp Type connector
 - Heat shrink sleeves for outer protection
 - Cable preparation kit which includes:
 - Grease
 - Multiple grits of sandpaper
 - PVC tape
 - Solder
 - Flux
 - Materials for grounding connections including lugs
- Required Components with Multiple Options:
 - Shield Break Option:
 - With Shield Break, Code B
 - Conductor size (kcmil / mm²):
 - 500 kcmil, Code 500K
 - Conductor material:
 - Aluminum, Code A
 - Additional Housing Protection:
 - None, Code X
- Installation Method
 - Mechanical Shrink, Code X

Shelf life Note: Joints with the mechanical shrink (expanded) installation method must be installed by the customer within 1 year of the expansion date.

Net Price Each: US\$ 6,550.00

Extended Price: US\$ 19,650.00

*Attached is typical drawing for your reference.

Item: 3

Installation supervision service – per “Field Service and Consulting Rates” attached.

ACCESSORIES:**Item: A**

Installation tool – to ease the installation of stress cone (Insulation ring)

Net Price Each: US\$ 450.00

Commercial Terms and Conditions**Submittal drawings (if required):**

If required, submittal drawings will be issued for approval 3-4 weeks after receipt of order.

Lead time for shipment:

6-8 weeks after receipt of order and release to production.

Shipping Terms: FOB-Factory, Bolingbrook, IL USA

Freight: Prepaid and Allowed on a standard closed top trailer.

Payment: Net 30 days; Payment terms are subject to G&W Finance Department approval.

Purchase Order Submission: Purchase order should be addressed to:

G&W Electric Co.
305 W. Crossroads Parkway
Bolingbrook, IL 60440-4938

Terms & Conditions: Warranty and all other terms and conditions are as per SM-F-1 Rev 5

Addendum to Warranty:

1. Kits not installed within one (1) year of date of shipment: Warranty ends one (1) year from date of shipment.
2. Installed kits eligible for extended warranty: Warranty ends one (1) year from date of installation if the kit is installed within one (1) year of date of shipment and the installation is performed by Certified Installers (direct G&W or third-party) and the appropriately completed warranty datasheet is returned to G&W within 15 days of the date of installation.

G&W Electric Company
SALES/MARKETING PROCEDURE

EXHIBIT "A"

Field Service and Consulting Rate Schedule

Domestic Rates (Per Hour)

	Straight Time	Overtime (M-F)	Weekends	Holidays
Field Service Engineer	\$150.00	\$270.00	\$270.00	\$300.00
Consulting Engineer	\$187.50	\$337.50	\$337.50	\$375.00

International Rates (Daily)

	Straight Time	Overtime (M-F)	Weekends	Holidays
Field Service Engineer	\$1,400.00	\$2,520.00	\$2,520.00	\$2,800.00
Consulting Engineer	\$1,800.00	\$3,240.00	\$3,240.00	\$3,600.00

Business Class required for any flight over 4 hours.

Rates exclude travel and living expenses, special tools or instruments. Minimum Billing for any day that service work is performed shall be four (4) hours for 1-4 hours worked; eight (8) hours for 5-8 hours worked.

EXPLANATION OF RATES

STRAIGHT TIME is defined as time worked on a regular schedule of 8 hours between 7 A.M. and 6 P.M., Monday through Friday or for time worked on any other agreed upon schedule of 8 hours per day, Monday through Friday. Each hour of straight time shall be billed for at the straight time rate.

OVERTIME is defined as time worked in excess of 8 hours or at times other than the regular straight time schedule. Each hour of overtime shall be paid as noted; except that hours worked in excess of 16 hours per day, Monday through Friday, or excess of 8 hours on Saturday, and hours worked on Sundays and Holidays shall be paid at "Overtime/Holidays & DT" rate. A "Holiday" is any day observed as a U.S. Nationally Observed Holiday.

DT is defined as double time for additional billing to holiday and overtime rates.

STAND-BY-TIME is defined as time, up to 8 hours per day, Monday through Friday, during which the Representative during the course of this assignment is available for work, but is not working because of circumstances beyond G&W Electric's control. Each hour of stand-by-time will be paid for at the applicable rate.

TRAVEL TIME is defined as portal to portal. Paid at straight time.

TIME WORKED, TIME TRAVELED AND STAND-BY TIME occurring on the same day will each be charged at the rates and within the limitations as aforesaid.

MEAL EXPENSES at \$65 Per Diem unless quoted otherwise and excepting airfare. Public transportation, overnight accommodations, and miscellaneous expenses will be billed at cost plus 10%.

MATERIAL AND RENTAL EXPENSES will be billed at cost plus 10%.

CANCELLATION CHARGE: If a job is delayed or cancelled 3 days or less from the scheduled service, we reserve the right to assess a mobilization fee, which is not to exceed 15% of the contract value.

G&W Electric Company, Terms and Conditions For Use With Quotations

TERMS OF PAYMENT

Domestic accounts - Net 30.

International accounts - Standard terms are an irrevocable letter of credit, confirmed by a Prime U.S. bank, for the full amount of the contract, valid for at least 60 days beyond the latest quoted shipping date. Other terms may be granted upon receipt of satisfactory credit references and approval by our Finance Department. Letter of credit must be received prior to release of the order to manufacturing.

Late payment charge of 1½% per month on all past due invoices and unpaid balances. Shipments and deliveries hereunder shall at all times be subject to the judgment of Seller that the financial condition of Buyer at all times justifies continuance of shipments and deliveries hereunder. If Buyer shall fail to make any payments in accordance with the terms and provisions hereof, Seller, in addition to its rights and remedies, but not in limitation thereof, may at its option, defer shipments or deliveries hereunder, or under any other contract with the Buyer, except upon receipt of satisfactory security or of cash before shipment.

PRICE POLICY

It is G&W's policy to publish for sole use of our domestic representatives *Confidential* price lists of our Standard Products. Quoted prices are firm for 30 days (60 days international). Orders placed after 30 days (60 days international) are subject to price in effect at time of acceptance. Prices on acknowledged orders are firm for the agreed upon delivery time. Customer requests to extend originally agreed to delivery date will be subject to price escalation.

TAXES

Any taxes which the Seller may be required to pay or collect, under any existing or future law, upon or with respect to the sale, purchase, delivery, storage, processing, use or consumption of any of the material covered hereby, including taxes upon or measured by the receipts from the sale thereof, shall be for the account of the Buyer, who shall promptly pay the amount thereof to the Seller upon demand.

FREIGHT TERMS

Terms as stated in the attached quotation.

MINIMUM ORDER CHARGE

Domestic destination - \$250 Net

International destination - \$500 Net

EXPORT PACKING

Export order for all material or devices (except compound alone) - add 5% to net price of order. Export orders for compound alone -- add 50¢ per gallon.

TITLE AND INSURANCE

Seller assumes no responsibility for insuring shipments unless specifically requested by Buyer and then only at Buyer's expense and valuation. Regardless of freight payments, all risk of loss shall pass to Buyer upon delivery by Seller to carrier at F.O.B. point.

WARRANTY

EXCEPT AS OTHERWISE EXPRESSLY STATED HEREIN, SELLER MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, AS TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER MATTER WITH RESPECT TO THE GOODS SOLD HEREUNDER. Seller warrants all goods sold hereunder to be free from defects in material and workmanship under normal use and service for a period of one (1) year from the date of shipment by Seller. Seller's obligation under this warranty is limited to repair or replacing, at its option, any goods, which upon inspection by Seller shall disclose to Seller's satisfaction to have been defective in material or workmanship. Buyer must return the goods to Seller's factory, shipping charges prepaid, with complete information as to alleged defects and the installation, operation and service of the goods.

LIMITS OF LIABILITY

Seller shall not be liable for, and Buyer shall indemnify the Seller from liability arising from injury or damage to property or persons caused in any manner by the operation, possession or use of the goods sold hereunder. The liability of Seller arising out of the supplying of any goods, or their use, whether on warranties or claim of negligence or otherwise, shall not in any case exceed the cost of correcting defects in the goods as herein provided. Seller shall not in any event be liable for any labor expended by Buyer on any defective goods or for any special direct, indirect or consequential damages arising out of or in connection with the use or performance of the goods. Seller assumes no responsibility with respect to the capacity of Seller's goods to function as components in other products. Buyer assumes full responsibility for specifications and design of any product in which Seller's goods may become components and shall indemnify Seller against any liability attributed to any inadequacy in such specifications or design. Seller shall not be liable for misoperation or misapplication of goods sold or supplied due to unusual or abnormal electrical system disturbances. **Important Notice:** User shall determine the suitability of the products for intended use, and assume all risk and liability in connection therewith.

DELAY

Shipping dates are approximate and are based upon prompt receipt of all necessary information. The Seller shall not be liable for delays in delivery or failure to manufacture or deliver due to acts of God, war, riot, embargoes, acts of civil or military authorities, priorities, allocations, fires, floods, epidemics, accidents, quarantine restrictions, mill conditions, strikes, differences with workmen, delays in transportation, shortage of cars, fuel, labor, manufacturing facilities, components or materials, acts of the Buyer, or any other cause beyond the reasonable control of the Seller. In the event of any such delay, the date of delivery shall be extended for a period equal to the time lost by reason of the delay.

PATENTS

Seller will defend at its own expense any action brought against Buyer, to the extent that it is based on a claim that the goods furnished by Seller infringe a U.S. patent, and Seller will pay those costs and damages finally awarded against Buyer in any such action which are attributable to any such claim, but such defense and payments are conditioned on the following: (a) that Seller shall be notified promptly in writing by Buyer of any notice of such claim; and (b) that Seller shall have sole control of the defense of any action on such claim and all negotiations for its settlement or compromise; and (c) should the goods become or in Seller's opinion be likely to become the subject of a claim of infringement of a U.S. patent, that Buyer shall permit Seller at its option and expense either to procure for Buyer the right to continue using the goods or to replace or modify the same so that it becomes noninfringing. The foregoing states the entire liability of Seller with respect to infringement of patents by the goods or any part thereof. Buyer shall hold Seller harmless against any expense, judgment or loss on account of any actual or alleged infringement of any patents, copyrights or trademarks which result from Seller's compliance with Buyer's designs, specifications or instructions.

PATTERNS AND TOOLS

Any patterns and tools heretofore or hereafter acquired specially to produce goods for Buyer shall become the property of the Seller. If Buyer does not order goods produced with such property for a period of two years, Seller may dispose of such property.

ORDER CANCELLATION

Non-Engineered Products

A. Standard catalogued items not yet through complete order entry, no charge.

B. Standard catalogued items through order entry but not yet in production - \$250.00 domestic; \$500 international.

Engineered Products

A. Orders through order entry but not yet in engineering process - \$250.00 domestic; \$500 international.

B. Orders in engineering process - 25% of order value plus any vendor charges levied against G&W for advanced ordered materials.

C. Approval drawings furnished and materials advanced ordered - 35% of order value plus cost of materials ordered.

D. Order released for production - up to 100% of order value.

STORAGE

Equipment on which manufacture or delivery is delayed, due to any cause within the Buyer's control, may be placed in storage by Seller, for Buyer's account and risk, and regular charges therefore and expenses in connection therewith shall be paid by Buyer, but if, in Seller's opinion, it is unable to obtain, or continue with such storage, Buyer will, on request, provide or arrange for suitable storage facilities and assume all costs and risks in connection therewith.

RETURN OF MATERIAL

No material shall be returned without first having secured approval and terms for return, along with necessary returned goods forms, from G&W Electric Co. Final acceptance of authorized returns will be made when the material is received at the factory.

COMPLIANCE WITH LAWS

Seller certifies that the goods sold hereunder were produced in compliance with all applicable requirements of sections 6, 7 and 12 of the Fair Labor Standards Act of 1938 amended and of regulations and orders of the United States Department of Labor issued under section 14 thereof.

GENERAL

A valid agreement binding upon Seller will only come into being as of the time a formal written acknowledgement of a purchase order is sent to Buyer by Seller. Such agreement is not assignable by Buyer without written approval of Seller. Such agreement will be governed by the laws of the State of Illinois. Waiver by Seller of a breach of any of the Terms and Conditions of this or any other agreement with Buyer shall not be construed as a waiver of any other breach.

ENTIRE AGREEMENT

These Terms and Conditions constitute the entire agreement between Seller and Buyer, and such agreement may not be modified or amended except by a writing executed after the date hereof by an authorized officer of Seller. Seller shall not be bound by any terms of Buyer's purchase order forms or other documents which attempt to impose conditions at variance with Seller's Terms and Conditions of Sale set forth herein unless the same shall be specifically agreed to in writing by an authorized officer of Seller. Seller's failure to object to the provisions contained in any of Buyer's forms shall not be deemed a waiver of the provisions of these Terms and Conditions which shall constitute the entire agreement between the parties.

INSTALLATION, SERVICING OR ERECTION

Installation, erection or servicing of the equipment or supervision thereof by Seller, if specified or requested by Buyer, is available. Contact Factory for terms and conditions.



GROUND PENETRATING RADAR SYSTEMS INC
 7540 New West Rd
 Toledo OH 43617
 (419)843-9804
 ar@gp-radar.com
 www.gp-radar.com

Invoice # 123096
 Date 6/15/16
 Page 1 of 1

Bill To

35587
 The City of Lake Worth Utilities
 1900 2nd ave
 North Lake Worth, FL 33461

Job Site

117 College St
 Lake Worth, FL

PO Number	Tech Name	Customer Job #	Contact Name	Contact Number	Payment Terms
	MIC FUSCO		Khrystsina Navume	(561)800-7248	Upon Receipt

Description	Ext Price
<p>Radar Inspection</p> <p>Client wants an invoice. Scanned two potential trenches using 400 MHz antenna and RD. Penetration depth was between 5' and 6' in most areas. Some surface obstructions were present which prevented full scans. In some areas due to the presence of transformers and other high voltage structures the RD was ineffective, limiting the scanning to solely the 400 MHz antenna. Marked all findings on surface with paint and flags. Explained all findings, markings and equipment limitations with site contact.</p> <p style="text-align: center;">RECEIVED</p> <p style="text-align: center;">JUN 20 2016</p> <p style="text-align: center;">Utilities Administration</p> <p>AN 18% APR WILL BE ADDED TO ALL PAST DUE INVOICES. IF YOUR CHECK IS DISHONORED OR RETURNED FOR ANY REASON, WE RESERVE THE RIGHT TO CHARGE YOU FOR THE AMT OF THE CHECK PLUS A PROCESSING FEE OF \$25 (OR LEGAL LIMIT).</p> <p>***ALL MAJOR CREDIT CARDS ACCEPTED***</p> <p>You can now download W-9 copies directly from our website, www.gp-radar.com <http://www.gp-radar.com/forms.html>. Click on the W-9 and insurance forms under the "Resources" tab.</p> <p>You can also print insurance certificates and request customized certificates on www.gp-radar.com <http://www.gp-radar.com/forms.html>. Please call our office with any questions you may have at 419-843-9804..</p> <p>Terms & Conditions</p> <p>1. GPRS provides Ground Penetrating Radar (GP) services. While a good percentage of our work does deal with assisting in the detection of underground utility location, we are not a utility locating company. GPRS, Inc. provides utility location services in accordance with ASCE Standard 38-02, Quality Level "B" that includes Ground Penetrating Radar (GPR) Services. GPR is a GREAT tool for utility locating; however, it is not without its limitations. In general, our maximum depth penetration is 3-7' deep, however, this depth is completely dependent on the composition of soils in the area being surveyed. Customer fully understands that for every foot in depth penetration with the GPR equipment, the pipe/utility must be a least 1" in diameter to be located. For example, at 4 feet in depth, the pipe/utility must be 4" or larger to be detected. Some types of pipes are very difficult to locate, such as clay or concrete pipes, and empty pvc type pipes. Given these factors, GPRS, Inc. CANNOT guarantee we will be able to locate ALL utilities on site. This same principal applies with concrete, in terms of its composition, reinforcement and age.</p> <p>2. Our goal is to provide you with the answers to your questions regarding what lies below the surface, and where it is located. Customer acknowledges it understands that our answers are based upon an interpretation of retrieved data and are what GPRS believes lies below the surface. The decision to proceed with cutting, coring, drilling, boring, or excavation is left entirely up to the customer.</p> <p>3. GPRS does not accept liability for an inaccurate interpretation or any other reason, and customer agrees to release and indemnify GPRS and its owners and agents from all losses and damages from all alleged negligence and/or contract claims by customer or any third party. These terms and conditions supersede any other terms and conditions either oral or written.</p> <p>4. Payment is due upon receipt of invoice.</p>	<p>3,700.00</p> <p>Total 3,700.00</p>

Invoice

Marmon Utility LLC
 49 Day Street
 Seymour CT 06484
 (203) 888-2591



QUOTE NO.
 HV-16079

QUOTE DATE
 5/12/2016

EXPIRATION DATE
 6/11/2016

PRICE TERMS: **Commodity**
 F.O.B.: **FOB Factory**
 FREIGHT PAYMENT: **Prepaid & Allowed**
 PAYMENT TERMS: **30 Days**

PROJECT NAME

SALES REPRESENTATIVE
 Electric Sales

CUSTOMER:
 Lake Worth

SHIP TO:
 TBD

ITEM	QUANTITY	PRODUCT NUMBER / DESCRIPTION		
001	3,000 FT	150A98JH100 138 kV, SPS 100%, 500 KCMIL COMPRESSED ROUND NON-FILLED ALUMINUM CONDUCTOR, PERMASHIELD CONDUCTOR SHIELD, 0.850" KERITE INSULATION, EXTRUDED THERMOSET SEMICON INSULATION SHIELD, BARE COPPER SHIELD (15 - # 12 AWG FLAT CONC. STRAPS or 5 MIL TAPE), 0.140" LLDPE JACKET.		

COMMODITY
 COPPER \$2.1829 /LB
 ALUMINUM \$0.7896 /LB

LEAD TIME 6-8 week (ARO and FINAL CUT LENGTHS)

ITEM	001
FINISHED CABLE O.D.	3.06
FINISHED CABLE WEIGHT	4.254
CABLE SHIPPING LENGTHS	1,000
CU CONTENT	0.332
AL CONTENT	0.469
CUT LENGTH TOLERANCE	-0% to +5%

SHIPPING REELS

FLANGE (in)	78
TRAVERSE (in)	45
DRUM (in)	42
O.A.W. (in)	52

REEL CHARGE \$1,650.00 PER REEL (REFUNDABLE)
 NOTE: REEL CHARGES ARE NOT INCLUDED IN THE ABOVE PRICING

SEE PAGE 2 FOR BID CLARIFICATIONS

Marmon Utility LLC
49 Day Street
Seymour CT 06484
(203) 888-2591



QUOTE NO.
HV-16079

QUOTE DATE
5/12/2016

EXPIRATION DATE
6/11/2016

PRICE TERMS: Commodity
F.O.B.: FOB Factory
FREIGHT PAYMENT: Prepaid & Allowed
PAYMENT TERMS: 30 Days

<u>PROJECT NAME</u>

BID CLARIFICATIONS

Prices furnished are based on the preceding month's average published price for MW US Transaction aluminum ingot per pound and Comex HG 1st Pos copper per pound as published each month in the McGraw Hill publication "Metals Week". In the event of changes in the base metal prices, all quoted prices will be adjusted at the time of shipment, based on the preceding month's average price, to reflect a change in the price of the finished product.

Above pricing includes a factory installed cable pulling eye on the top end of each shipping length.

PLEASE NOTE: Purchase order contingent upon credit approval by Marmon Utility Finance Department.

PLEASE NOTE: FREIGHT IS INCLUDED IN THE PER FOOT PRICE

RETURNABLE REELS - RETURN FREIGHT IS RESPONSIBILITY OF CUSTOMER

KERITE CAN PROVIDE INSTALLATION SERVICES FOR ALL CABLES WE MANUFACTURE - PLEASE CONTACT BRUCE MILLER (203.881.5324) FOR INSTALL QUOTE

Anna Boruch
Account Manager
Marmon Utility, LLC - Kerite HV & Specialty Cables
203.881.5305 Office
203.881.5384 Fax

aboruch@kerite.com



Marmon Utility LLC
49 Day Street
Seymour CT 06484
(203) 888-2591



QUOTE NO.
HV-16079

QUOTE DATE
5/12/2016

EXPIRATION DATE
6/11/2016

PRICE TERMS: Commodity
F.O.B.: FOB Factory
FREIGHT PAYMENT: Prepaid & Allowed
PAYMENT TERMS: 30 Days

PROJECT NAME

TERMS & CONDITIONS OF SALE MARMON UTILITY LLC (MARMON UTILITY)

Acceptance; Agreement. This document, including these Terms and Conditions (collectively "Agreement"), supersedes all other agreements, oral or written, and all other communications between the parties suggesting additional or different terms. It represents the final and complete understanding of the parties and may be amended or canceled only by written agreement signed by both parties. This Agreement expressly limits acceptance to these terms; no order shall have any force or effect until acknowledged in writing by Marmon Utility; and any proposal for additional or different terms or any attempt by Buyer to vary in any degree any of the terms hereof is hereby deemed material and is objected to and rejected. No terms of any document or form submitted by Buyer shall be effective to alter or add to the terms and conditions in this Agreement. Unless otherwise stated herein, Buyer's receipt of any portion of the goods ("Goods") shall constitute acceptance of this Agreement and all of its terms and conditions, unless Buyer immediately returns all such Goods.

Terms of Payment. Payment terms are net 30 days from the invoice date. All late payments will be subject to a late charge of US prime rate plus 2% annualized. Shipments and deliveries shall at all times be subject to the continuing approval of Marmon Utility Credit Department, upon whose information Marmon Utility may decline to make shipment or may require payment in advance or other arrangement to assure due payment.

Prices. Prices, including delivery terms, are subject to change without notice to reflect Marmon Utility's prices at time of shipment and increases in labor or other costs. Marmon Utility reserves the right to correct any obvious errors in specifications or prices. Minimum invoice charge is \$500. All amounts owed to Marmon Utility shall be paid without abatement, deduction or set off.

Delivery and Transportation Terms. Orders placed with a "hold for submittal approval" requirement, have a maximum 6-months period to provide a "release for manufacture" in writing. Shipments invoiced at 5,000 feet or more for cable or \$3,000 or more of accessories are sold F.O.B. shipping point, freight prepaid and allowed, where within the continental United States. Shipments of less than 5,000 feet (\$3,000 for accessories) are sold F.O.B. shipping point, with shipping and handling charges added to the invoice.

Cancellation. Acceptance by Marmon Utility of Purchaser's written order constitutes a binding contract between the parties which, except as otherwise specifically provided herein, may not be canceled or modified without the parties' mutual consent. In the event Purchaser refuses to accept goods ordered it will be liable for Marmon Utility' cancellation charges which shall not exceed the purchase price of the undeliverable goods. Cancellation by Purchaser of ordered wire and cable goods will result in cancellation charges derived from the below formulae:

- a. A minimum charge of 20% of the sales price will be paid by Purchaser for cancellation of goods scheduled for fabrication 90 days or more subsequent to the date Marmon Utility receives notice of cancellation.
- b. A minimum charge of 50% of the sales price will be paid by Purchaser for cancellation of goods scheduled for fabrication less than 90 days subsequent to the date Marmon Utility receives notice of cancellation.

In the event the above formulae are inadequate to cover costs incurred by Marmon Utility incident to fabrication and prior to its receipt of notice of cancellation, Purchaser shall reimburse Marmon Utility all such costs incurred. Additionally, completed or partially completed units fabricated pursuant to order shall be paid for by Purchaser at 100% of the per unit price.

Taxes. Prices do not include any sales, use, excise, privilege, or other taxes or assessments now or hereafter imposed or levied by or under the authority of any federal, state, or local law, rule or regulation concerning the Goods sold hereunder or the manufacture or sale thereof. If Marmon Utility pays any such taxes or assessments, Buyer shall, upon demand, reimburse Marmon Utility for such amounts.

Risk of Loss. All risk of loss or damage to Goods shipped hereunder shall pass to Buyer upon delivery thereof to Buyer, to its designated agent, or to a carrier for delivery to Buyer, whichever occurs first. Unless otherwise stated, all shipments will be made F.O.B. point of manufacture.



Marmon Utility LLC
49 Day Street
Seymour CT 06484
(203) 888-2591



QUOTE NO.
HV-16079

QUOTE DATE
5/12/2016

EXPIRATION DATE
6/11/2016

PRICE TERMS: Commodity
F.O.B.: FOB Factory
FREIGHT PAYMENT: Prepaid & Allowed
PAYMENT TERMS: 30 Days

PROJECT NAME

TERMS & CONDITIONS OF SALE MARMON UTILITY LLC (MARMON UTILITY)

Delivery. All shipping dates are estimates and are based upon prompt receipt of all necessary information. Delays in securing Buyer's approval of necessary specifications or samples of products and materials shall, if Marmon Utility so chooses, extend the date of delivery. Marmon Utility shall not be liable for any claim, loss, expense, or damage of any kind whatsoever for delays in delivery.

Warranties and Limitations on Warranties – Kerite Brand.

- a. WARRANTY - The Marmon Utility LLC ("Marmon") warrants solely to the Purchaser that any wire or cable of its own manufacture ("Product") and supplied to the Purchaser will be free from defects in material and workmanship provided the wire and cable are employed under conditions contemplated and covered by the design specifications, and provided further that the wire and cable are installed, spliced, terminated, maintained, and operated in accordance with Marmon's recommended standards and procedures.
- b. If a Product fails electrically while in service, Purchaser shall notify Marmon within (5) days of the discovery of such failure, and shall permit a representative of Marmon a reasonable opportunity to inspect the Product. If it is mutually determined by Marmon and Purchaser that the failure is the result of defective material or workmanship, Marmon's sole responsibility under this Warranty shall be to repair or replace the defective Product, the choice of which will be Marmon's option. If Marmon chooses to replace the defective Product, the new Product will be delivered free of charge to the delivery point called for in the original order.
- c. Marmon will not be responsible for any damage or failure caused by Purchaser or any third party, including without limitation, Acts of God.
- d. Marmon will not be responsible for any defects or repairs to, or replacement of, adjacent or connected equipment to which the Product may supply electrical power or from which it may take electrical power, or with which it may, in any manner, be associated. Marmon will not be responsible for any incidental or consequential damages whatsoever, either direct or indirect, resulting from a failure of the Product.
- e. THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES WHETHER WRITTEN, ORAL, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Indemnification

- a. If the Goods are manufactured in accordance with specifications or other directions provided by Buyer, Buyer shall indemnify, defend, and hold harmless Marmon Utility against all claims, losses, liabilities, and expenses (including attorneys' fees), which Marmon Utility may incur or become liable to pay with respect to such Goods, including (without limitation) claims relating to patent, trademark, copyright infringement, or unfair competition, claims of non-compliance with any federal, state, or local law or regulation, and any other claim of any third party which relates to or in any way arises out of such specifications or other directions provided by Buyer.
- b. Buyer shall also indemnify, defend, and hold harmless Marmon Utility against all claims, losses, liabilities, and expenses (including attorneys' fees), which Marmon Utility may incur or become liable to pay which relate to or in any way arise out of Goods subjected to: (i) improper installation or storage; (ii) accident, damage, abuse, or misuse; (iii) abnormal operating conditions or applications; (iv) operating conditions or applications above the rated capacity of the Goods.



Marmon Utility LLC
49 Day Street
Seymour CT 06484
(203) 888-2591



QUOTE NO.
HV-16079

QUOTE DATE
5/12/2016

EXPIRATION DATE
6/11/2016

PRICE TERMS: Commodity
F.O.B.: FOB Factory
FREIGHT PAYMENT: Prepaid & Allowed
PAYMENT TERMS: 30 Days

PROJECT NAME

TERMS & CONDITIONS OF SALE MARMON UTILITY LLC (MARMON UTILITY)

Patents. Except as provided in Section 10A with respect to Goods manufactured in accordance with specifications or directions provided by Buyer, and provided Buyer has made all payments due hereunder, Marmon Utility shall defend, at its expense, any suit or proceeding brought against Buyer based upon any claim that the Goods or any part thereof infringe any United States patent issued as of the date of Marmon Utility's quotation and shall pay any damages and costs awarded therein against Buyer, provided that Marmon Utility is notified promptly in writing of such claim and is given full authority, information and assistance by Buyer to defend or settle the suit. If the Goods or any part thereof are deemed to infringe any such patent, Marmon Utility shall, at its expense and sole option either; procure for Buyer the right to continue using said Goods or part; replace them with non-infringing Goods or parts; modify them so they become non-infringing; or remove them and refund the purchase price for them.

Force Majeure. Marmon Utility shall not be liable for any delay in or failure of performance hereunder due to any contingency beyond its reasonable control, including without limitation: an act of God; war; civil commotion; sabotage; labor dispute, explosion; fire; accident; power or equipment failure; inability to obtain suitable or sufficient labor, fuel, power, or material; delay of carrier; embargo; or any law, ordinance, rule, or regulation, whether valid or invalid, including but not limited to priority, requisition, allocation, or price control.

Default. If Buyer is in default or commits a breach of any of the provisions of this Agreement, Marmon Utility shall have the right to cease work hereunder immediately. Further, if Buyer fails to cure such default or breach within ten (10) days after written notice thereof from Marmon Utility, Marmon Utility may terminate this Agreement by written notice to Buyer. If Buyer cures such default or breach within said ten (10) day period, this Agreement shall remain in effect, except for any adjustments to price, delivery terms, or other provision hereof which are necessary or appropriate because of any permitted cessation of work by Marmon Utility.

Storage. If Buyer is unwilling to accept shipment of the Goods on the agreed shipping date, Marmon Utility may, at its option, place them in storage and bill Buyer for reasonable storage charges. In such case, risk of loss shall pass to Buyer when the Goods are placed in storage, and the date the Goods are placed in storage shall constitute the date of shipment for purposes of beginning the warranty period.

Material Return Policy. Marmon Utility reserves the right to refuse return requests of any material. All material returns must be pre-authorized by Marmon Utility, be in original re-saleable condition, and have a written "Return Authorization" issued. A minimum Restocking Fee of 25% of the original invoice amount will be charged for all returns. The returning party is responsible for all prepaid freight costs back to the Marmon Utility point of origin.

Waiver. Failure of Marmon Utility at any time to require Buyer's performance of any obligation under this Agreement shall not affect Marmon Utility's right to require performance of that obligation. Any waiver by Marmon Utility of any breach or default hereunder must be in writing and shall not be construed to be a waiver of any continuing or succeeding breach or default, a waiver or modification of this provision itself, or a waiver or modification of any right under this Agreement.

Assignment. Buyer shall not assign this Agreement or any monies due or to become due hereunder, without Marmon Utility's prior written consent, and any attempted assignment without Marmon Utility's prior written consent shall be void and, at Marmon Utility's option, grounds for termination of this agreement.

Governing Laws. This Agreement shall be construed in accordance with the laws of the jurisdiction in which is located the plant of Marmon Utility producing the Goods, as indicated on the front hereof.



Marmon Utility LLC
49 Day Street
Seymour CT 06484
(203) 888-2591



QUOTE NO.
HV-16079

QUOTE DATE
5/12/2016

EXPIRATION DATE
6/11/2016

PRICE TERMS: Commodity

F.O.B.: FOB Factory

FREIGHT PAYMENT: Prepaid & Allowed

PAYMENT TERMS: 30 Days

<u>PROJECT NAME</u>

TERMS & CONDITIONS OF SALE
MARMON UTILITY LLC (MARMON UTILITY)
Returnable Reel Policy

Where returnable reels are used, the following applies:

Full credit will be issued if the reels are returned within twelve months of the original ship date. One-half credit will be issued if the reels are returned after twelve months, but before 18 months of the original ship date. No credit will be issued if the reels are returned after 18 months of the original ship date.

Note: The above credit will be reduced for necessary repair cost.

Reels must be returned prepaid unless mutually agreed to in writing.

Prepaid returnable reels ship to location

Wooden Reels Non-Returnable

Steel Reels Marmon Utility, LLC
49 Day Street
Seymour, CT 06483

On returnable reels where it has been mutually agreed in writing that Marmon Utility, LLC will pay the freight cost, contact Michael Blaha at 800-777-7483, (203) 888-2591, extension 5327 or fax number (203) 881-5384 for shipping instruction. Reels must be shipped to the above locations.

Any questions may be directed to the Marmon Utility, LLC Customer Service Team at (203) 888-2591, or 800-777-7483, fax number (203) 881-5384.





WESCO
DISTRIBUTION®

5971 PERSHING AVE
ORLANDO FL 32822

Quotation

UNLESS THERE ARE DIFFERENT OR ADDITIONAL TERMS AND CONDITIONS CONTAINED IN A MASTER AGREEMENT THAT MODIFY WESCO'S STANDARD TERMS, BUYER AGREES THAT THIS QUOTE AND ANY RESULTING PURCHASE ORDER WILL BE GOVERNED BY WESCO'S TERMS AND CONDITIONS DATED 011107 AVAILABLE AT [HTTP://WWW.WESCO.COM/TERMS_AND_CONDITIONS_OF_SALE.PDF](http://www.wesco.com/terms_and_conditions_of_sale.pdf), WHICH TERMS ARE INCORPORATED HEREIN BY REFERENCE AND MADE PART HEREOF. PLEASE CONTACT THE SELLER IDENTIFIED ON THIS QUOTE IF YOU REQUIRE A PRINTED COPY.

To: CITY OF LAKE WORTH
P.O. BOX 818

LAKE WORTH FL 33461

Date: 05/13/16
Branch: 7848
Project Number: QUOTE
Project Name
Quoted To: TRACY BRADY
Date of Your Inquiry: 05/12/16

When ordering please refer to Quotation Number: 145937

Item	Quantity	Catalog Number and Description	Unit Price	U/M	Total Price	Rate of Cash Discount	Shipping Time (Weeks)	Customer Delivery Date
2	3000	TAPE), 0.140 KERITE***150A98JH100 6-8 WEEKS 6-8 WEEKS ***** COMMODITY PRICING. PLEASE REFER TO THE ATTACHED KERITE QUOTE FOR EXPLANATION. RJT 5-13-16	25.000	E	75000.00	0.00		07/08/16
		SUB-TOTAL			75000.00			
		TOTAL			75000.00			

F.O.B. Point of Shipment. The prices stated in this offer shall, unless renewed, automatically expire fifteen days (15) from the date of this offer.

Per:



SERVICE ELECTRIC *Company*

P.O. Box 3656
1631 East 25th Street
Chattanooga, TN 37404
Phone (423) 265-3161
FAX (423) 265-3960

June 23rd, 2016

Mr. Jean St. Simon
City of Lake Worth
1900 2nd Ave North
Lake Worth, FL 33461

Re: Terminations (Qty. 6) and replace Lightning Arrestor (Qty. 1).

Mr. St. Simon:

Thank you for the opportunity to provide pricing for the Termination Installation and Lightning Arrestor for the City of Lake Worth.

We have reviewed the work and based on the scope or work known at this time.

Our general understanding of the project scope is as follows:

We will mobilize, and install terminations on 6 insulators within the substation using 138kV 500 mcm conductor. You will have the new cable installed and run up the platform so we only will make up the terminations.

Any required outages would be daily.

SERVICE ELECTRIC *Company* warrants that the work will be performed in accordance with the plans, specifications and drawings provided by the City of Lake Worth. At the time of this bid, none were available.

Our price to complete this work is **\$52,732.00**

We estimated that the mobilization/demobilization is approximately \$10,000 each way. One mob and one demob is included in our price.

Clarifications

- a) SERVICE ELECTRIC *Company* assumes outages will be granted as needed. Any delays will be billed at time and equipment rates.
- b) Pricing DOES NOT include any MOT and none is anticipated.

- c) Any third party expense (labor/material, etc.) will be billed to at cost plus 10% against the Lump Sum pricing. We do not anticipate any of this based on current scope of work.
- d) Pricing is good for work to be started and completed in 2016.
- e) Proposal is based on the City of Lake Worth to provide lay-down yard within 10 miles of line to serve as SERVICE ELECTRIC *Company's* "show-up" yard and assumes all material needed would be provided by owner and will be delivered to the same lay-down yard.
- f) Price assumes Egress and Ingress to the Right-of-Way and Permits will be obtained by City of Lake Worth
- g) Price above are calculated based on one mobilization and one demobilization. Additional mobilizations will be subject to the extensions of the not-to-exceed pricing.
- h) Pricing does not include any mandatory night or weekend work or bonds.

If you have any questions or need additional information please do not hesitate to contact me.

Sincerely,

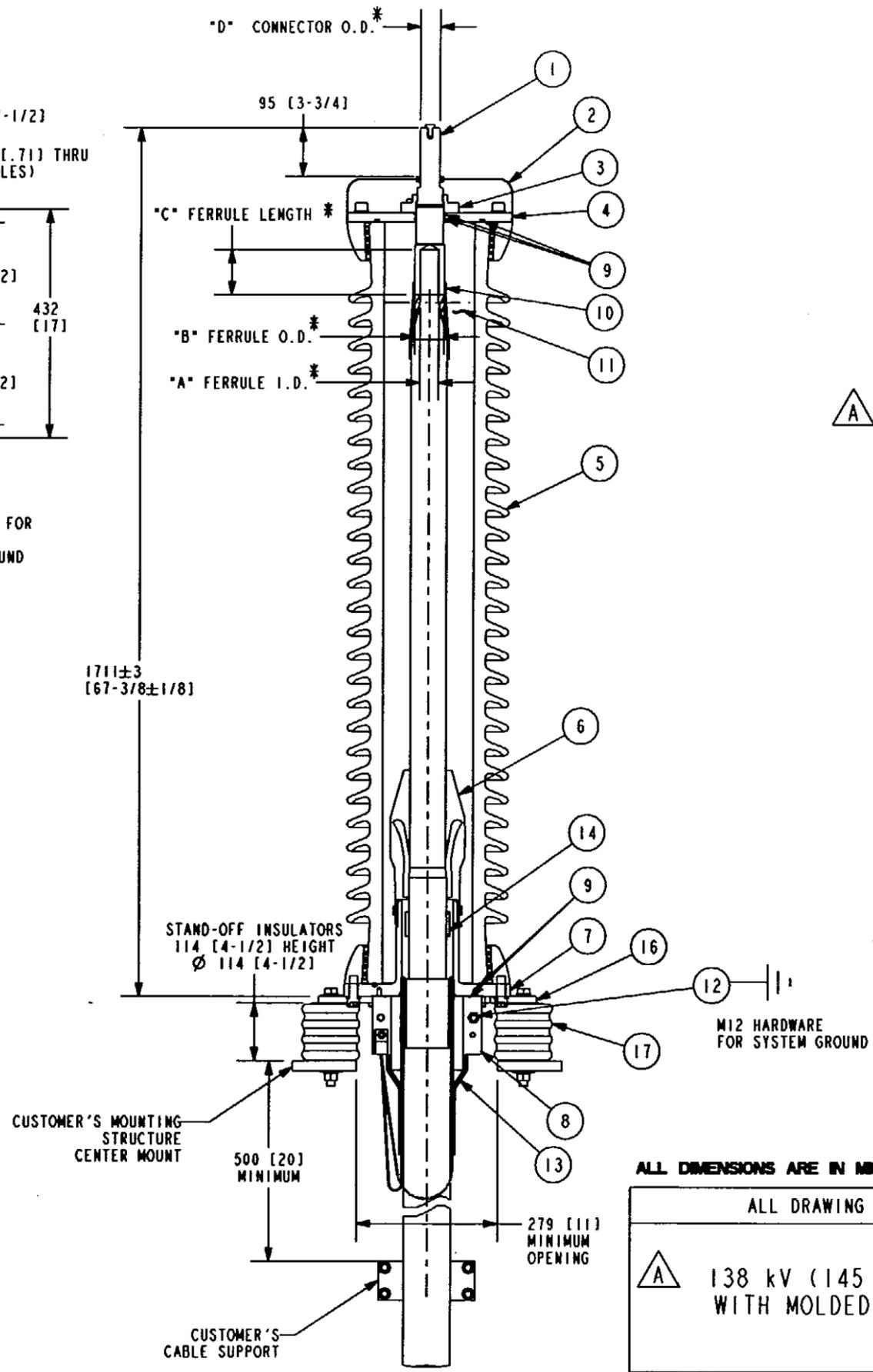
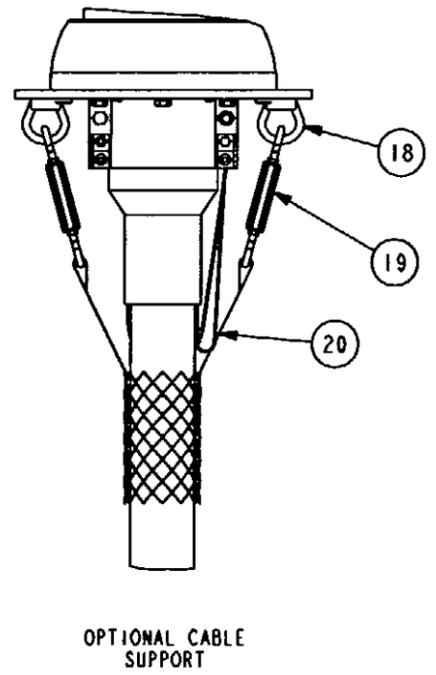
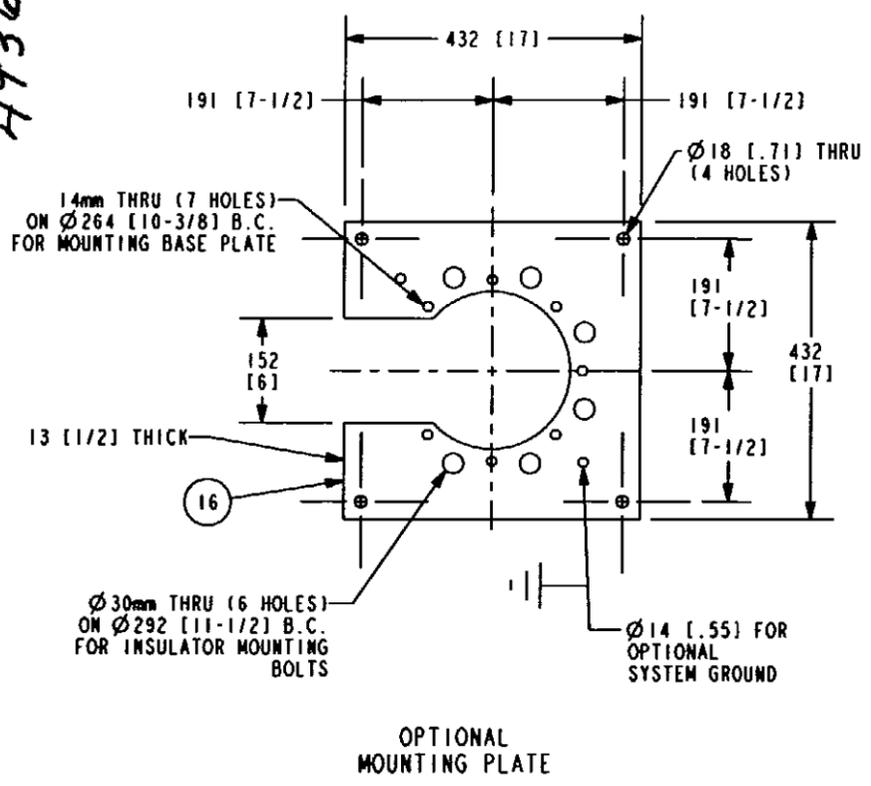


Mike Brusca
Sr. Project Manager
SERVICE ELECTRIC Company
PO Box 490420
31729 Executive Blvd.
Leesburg, FL 34748-8735
www.serviceelectricco.com
p 352-431-3648 Ext. 402
f 352-431-3657
c 941-387-6419

DWG. NO.: D7665 0062 F00
 DATE: _____
 ROUT/EST APPR: _____
 OPER NOTE: _____
 This drawing and the information thereon are and remain the property of G&W and are not to be copied, reproduced or disclosed to others without the expressed written consent of G&W.

49362

DRAWING REVIEW TEAM		REVISIONS		
REV.	CHANGE	DATE		
A	23136 LSM	03-12-03	RHA 3-12-03	



ONLY COMPONENTS CHECKED ARE SUPPLIED BY G&W

IT.	DESCRIPTION	MATERIAL	SUPPLIED BY G&W
1	THREADED CONNECTOR	SEE CONNECTOR INFORMATION BLOCK	X
2	SEALED CORONA SHIELD	ALUMINUM WITH RUBBER SEAL	X
3	THREADED HOOD	ALUMINUM	X
4	CAP	ALUMINUM	X
5	INSULATOR	PORCELAIN	X
6	STRESS CONE	SILICONE RUBBER	X
7	BASEPLATE	ALUMINUM	X
8	CABLE ENTRANCE HOUSING	ALUMINUM	X
9	O-RING	BUNA-M	X
10	CONDUCTOR SEAL	HEAT SHRINK AND TAPE	X
11	INSULATING COMPOUND	POLYBUTENE	X
12	SYSTEM GROUNDING PROVISION	M12 X 40mm HEX HEAD CAP SCREW	X
13	HEATSHRINK SEALING JACKET	POLYOLEFIN	X
14	BASEPLATE SPACER	RUBBER	X

**** OPTIONAL COMPONENTS AVAILABLE FROM G&W**

15	AERIAL LUG (NOT SHOWN)	COPPER <input type="checkbox"/> ALUMINUM <input type="checkbox"/> UNPLATED <input type="checkbox"/> PLATED <input type="checkbox"/>	<input type="checkbox"/>
16	MOUNTING PLATE	HOT DIPPED Zn GALVANIZED MILD STEEL	<input type="checkbox"/>
17	STAND-OFF INSULATORS	PORCELAIN	<input type="checkbox"/>
18	EYE WASHER	STAINLESS STEEL	<input type="checkbox"/>
19	TURNBUCKLE	STAINLESS STEEL	<input type="checkbox"/>
20	SUSPENSION GRIPS	STAINLESS STEEL (3000 lb WORK LOAD)	<input type="checkbox"/>

CONNECTOR INFORMATION

COPPER (CRIMP)	ALUMINUM		BI-METALLIC	
UNPLATED <input type="checkbox"/>	CRIMP <input type="checkbox"/>	UNPLATED <input type="checkbox"/>	CRIMP <input type="checkbox"/>	UNPLATED <input type="checkbox"/>
PLATED (Ag) <input type="checkbox"/>	MIG WELD <input type="checkbox"/>	PLATED <input type="checkbox"/>	MIG WELD <input type="checkbox"/>	PLATED <input type="checkbox"/>

INSULATOR INFORMATION

COLOR	NOM. CREEPAGE
GRAY <input type="checkbox"/>	3540 [139] <input type="checkbox"/>
BROWN <input type="checkbox"/>	5050 [199] <input type="checkbox"/>

* SEE INSTALLATION INSTRUCTIONS FOR FERRULE AND CONNECTOR DIMENSIONS

PRINT IDENTIFICATION

DATE _____ G&W NO. _____
 CUSTOMER _____
 ORDER NO. _____
 FOR RECORD ITEM NO. _____
 FOR APPROVAL NO MORE WORK TO BE DONE UNTIL APPROVAL IS RECEIVED

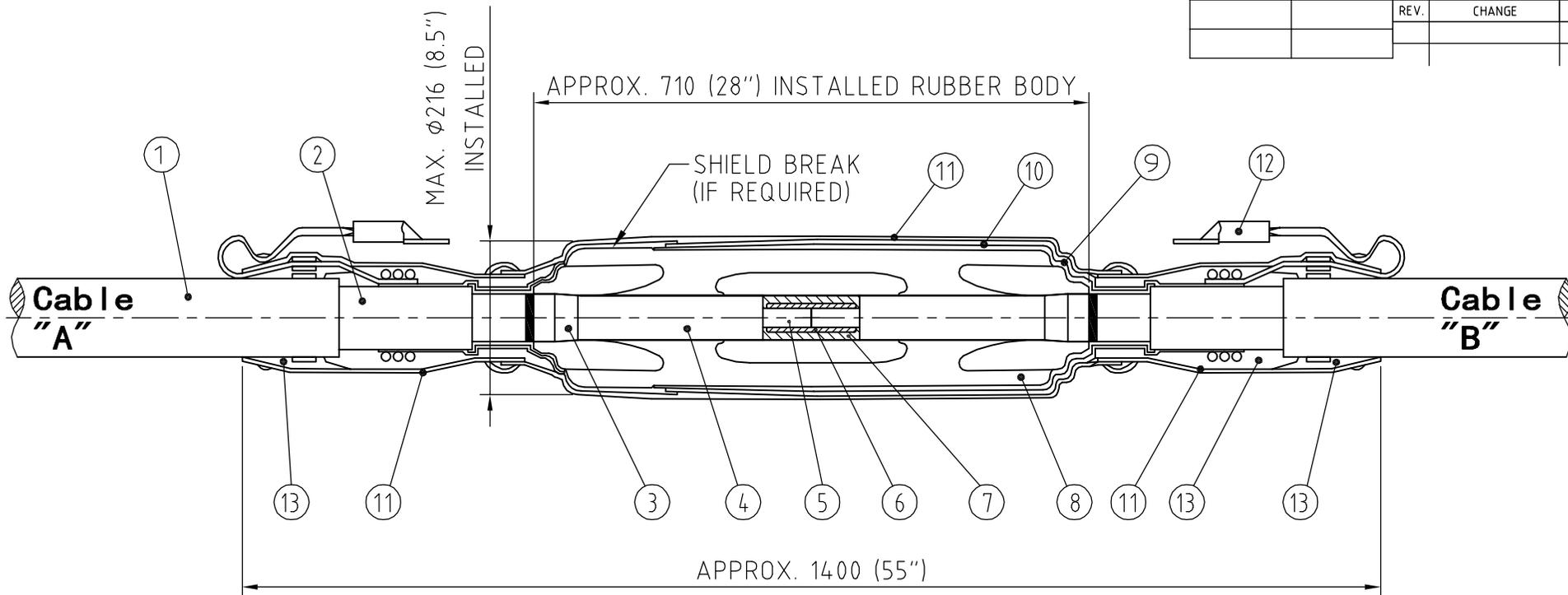
ALL DIMENSIONS ARE IN MILLIMETERS (DIMENSIONS IN BRACKETS ARE IN INCHES)
 ALL DRAWING CHANGES MUST BE MADE ON CAD. ANY MANUAL CHANGES WILL VOID DRAWING.

A 138 kV (145 kV) FIELD FILLED OUTDOOR TERMINATION WITH MOLDED STRESS CONE AND PORCELAIN INSULATOR FOR EXTRUDED CABLES

G&W
G&W ELECTRIC Co.

CAT. NO.: PAT140		DRAWING NO. D7665 0062 F00		REV. A
DRAWN BY: PRL	DATE: Jul-24-02	SCALE:		SHEET: 1 of 1
APPR BY: RHA	DATE: 7-30-02			

DRAWING REVIEW TEAM		REVISIONS		
REV.		CHANGE	DATE	



LEGEND

IT	DESCRIPTION	MATERIAL
1	CABLE JACKET	ANY
2	CABLE METAL SHIELD	ANY
3	CABLE SEMI-CON SCREEN	XLPE OR EPR
4	CABLE INSULATION	XLPE OR EPR
5	CABLE CONDUCTOR	Cu or Al
6	JOINT CONNECTOR	Cu or Al
7	SEMI-CON TAPES	RUBBER
8	RUBBER JOINT BODY	SILICONE RUBBER
9	SEMI-CON and INSULATING TAPES	RUBBER
10	Cu MESH TAPES	TINNED Cu
11	HEAT SHRINK TUBING	POLYOLEFIN
12	GROUNDING LUG(S)	COPPER
13	JOINT END CABLE SEAL	TAPES

JOINT OUTER PROTECTION
 - HEAT SHRINK TUBING - MANDATORY

OPTIONAL OUTER PROTECTION
 - CU HOUSING
 - FIBERGLASS HOUSING

SPECIFICATION:
 30 MIN AC WITHSTAND: 190kV (IEC)
 6 hour AC WITHSTAND: 200kV (IEEE)
 IMPULSE VOLTAGE (BIL): 650kV PEAK
 COMPLIES TO: IEC60840 and IEEE404

PMJ140 - □ - □□□□□ - □ - □
 TO FILL IN THE BLANKS, REFER TO CATALOG PAGE FOR G&W PREMOLDED RUBBER JOINT

PMJ140-B (INSULATING JOINT-WITH SHIELD BREAK)
 PMJ140-N (STRAIGHT JOINT-WITHOUT SHIELD BREAK)
 The same joint body is used for both insulating and straight joint (with and without shield break)

CONNECTOR:
 Cu CRIMP
 Al SHEAR BLOT

ORDER INFORMATION
 CUSTOMER: _____
 G&W NO.: _____
 ITEM NO.: _____
 DATE: _____

ALL DIMENSIONS ARE IN MILLIMETERS [DIMENSIONS IN BRACKETS ARE IN INCHES]

ALL DRAWING CHANGES MUST BE MADE ON CAD. ANY MANUAL CHANGES WILL VOID DRAWING.

138kV PREMOLDED RUBBER JOINT
 WITH HEAT SHRINK TUBING OUTER PROTECTION
 FOR EXTRUDED CABLE - MAX 2000mm² (4000 Kcmil)



CAT. NO.: PMJ140		DWG. NO.: D7665 0078 000		REV
DRAWN BY:	DATE:			
APPR. BY:	DATE:	SCALE:	SHEET: PAGE 1 OF 1	