

SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, & 30				1. REQUISITION NUMBER	PAGE 1 OF 77
2. CONTRACT NO.	3. AWARD/EFFECTIVE DATE	4. ORDER NUMBER	5. SOLICITATION NUMBER S-RB100-15-Q-0013	6. SOLICITATION ISSUE DATE August 13, 2015	
7. FOR SOLICITATION INFORMATION CALL: 		a. NAME Zoran Djordjevic	b. TELEPHONE NUMBER(No collect calls) +381-11/706-4166	8. OFFER DUE DATE/ LOCAL TIME 17:00 on September 4, 2015	
9. ISSUED BY U.S. Embassy GSO Bul. Kneza A. Karadjordjevic 92 11040 Belgrade Serbia		CODE	10. THIS ACQUISITION IS <input checked="" type="checkbox"/> UNRESTRICTED OR <input type="checkbox"/> SET ASIDE: _____ % FOR:	<input type="checkbox"/> SMALL BUSINESS <input type="checkbox"/> WOMEN-OWNED SMALL BUSINESS <input type="checkbox"/> HUBZONE SMALL BUSINESS <input type="checkbox"/> (WOSB) ELLIGIBLE UNDER THE WOMEN-OWNED SMALL BUSINESS PROGRAM NAICS: <input type="checkbox"/> SERVICE-DISABLED VETERAN-OWNED SMALL BUSINESS <input type="checkbox"/> EDWOSB <input type="checkbox"/> 8 (A) SIZE STANDARD:	
11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED <input type="checkbox"/> SEE SCHEDULE	12. DISCOUNT TERMS	<input type="checkbox"/> 13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)		13b. RATING	
15. DELIVER TO U.S. Embassy GSO/Contracting Officer Bul. Kneza A. Karadjordjevic 92 11040 Belgrade, Serbia		CODE	16. ADMINISTERED BY U.S. Embassy B&F Bul. Kneza A. Karadjordjevic 92 11040 Belgrade, Serbia		
17a. CONTRACTOR/OFFERER CODE FACILITY CODE DUNS # TELEPHONE NO.	18a. PAYMENT WILL BE MADE BY U.S. Embassy B&F Bul. Kneza A. Karadjordjevic 92 11040 Belgrade, Serbia		18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a UNLESS BLOCK BELOW IS CHECKED <input type="checkbox"/> SEE ADDENDUM		
17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER		18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a UNLESS BLOCK BELOW IS CHECKED <input type="checkbox"/> SEE ADDENDUM			
19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
1	Preventive maintenance services, Base year	1	Job		
2	Preventive maintenance services, 1 st Option year	1	Job		
3	Preventive maintenance services, 2 nd Option year	1	Job		
4	Preventive maintenance services, 3 rd Option year	1	Job		
5	Preventive maintenance services, 4 th Option year <i>(Use Reverse and/or Attach Additional Sheets as Necessary)</i>	1	Job		
25. ACCOUNTING AND APPROPRIATION DATA				26. TOTAL AWARD AMOUNT (For Govt. Use Only)	
<input checked="" type="checkbox"/> 27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4. FAR 52.212-3 AND 52.212-5 ARE ATTACHED. ADDENDA			<input checked="" type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED		
<input type="checkbox"/> 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4. FAR 52.212-5 IS ATTACHED. ADDENDA			<input type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED		
<input type="checkbox"/> 28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN _____ COPIES TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED HEREIN.			<input type="checkbox"/> 29. AWARD OF CONTRACT: REF. _____ OFFER DATED _____ YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS:		
30a. SIGNATURE OF OFFEROR/CONTRACTOR			31a. UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER)		
30b. NAME AND TITLE OF SIGNER (Type or print)		30c. DATE SIGNED	31b. NAME OF CONTRACTING OFFICER (Type or print)		31c. DATE SIGNED

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT

32a. QUANTITY IN COLUMN 21 HAS BEEN

RECEIVED INSPECTED ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED: _____

32b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE	32c. DATE	32d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
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32e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE	32f. TELEPHONE NUMBER OF AUTHORIZED GOVERNMENT REPRESENTATIVE _____ 32g. E-MAIL OF AUTHORIZED GOVERNMENT REPRESENTATIVE _____
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33. SHIP NUMBER <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL	34. VOUCHER NUMBER	35. AMOUNT VERIFIED CORRECT FOR	36. PAYMENT <input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL	37. CHECK NUMBER
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38. S/R ACCOUNT NO.	39. S/R VOUCHER NO.	40. PAID BY
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41.a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT	42a. RECEIVED BY (<i>Print</i>)	
41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER	41c. DATE	42b. RECEIVED AT (<i>Location</i>)
		42c. DATE REC'D (<i>YY/MM/DD</i>)

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SECTION 1 - THE SCHEDULE

CONTINUATION TO SF-1449
RFQ NUMBER S-RB100-15-0013
PRICES, BLOCK 23

1.0 DESCRIPTION

The American Embassy in Belgrade, Serbia requires preventive maintenance services on the facility's main service electrical distribution switchgear. These services shall result in all systems being serviced under this agreement being in good operational condition when activated.

1.1. TYPE OF CONTRACT

This is a firm fixed price contract payable entirely in USD. Prices for all Contract Line Item Numbers (CLIN) shall include proper disposal of toxic substances as per Item 8.4 where applicable. No additional sums will be payable for any escalation in the cost of materials, equipment or labor, or because of the contractor's failure to properly estimate or accurately predict the cost or difficulty of achieving the results required. The contract price will not be adjusted due to fluctuations in currency exchange rates.

1.2. PERIOD OF PERFORMANCE

The contract will be for a period of one-year, with a four one-year optional periods of performance and will be expected to commence no later than (DATE).

2.0 PRICING

The rates below include all costs associated with providing preventive maintenance services in accordance with the attached scope of work, and the manufacturer's warranty including materials, labor, insurance (see FAR 52.228-4 and 52.228-5), overhead, profit and GST (if applicable).

2.1. Base Year. The Contractor shall provide the services shown below for the base period of the contract and continuing for a period of 12 months.

CLIN	Description	Quantity of Equipment	Type of services	No. of service	Unit price / service (\$)	Total per year (\$)
001	Electrical Switchgear Preventive Maintenance	1	Base Year Service	1		

	Total Base Year	
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2.2. Option Year 1. The Contractor shall provide the services shown below for Option Year 1 of the contract, and continuing for a period of 12 months.

CLIN	Description	Quantity of Equipment	Type of services	No. of service	Unit price / service (\$)	Total per year (\$)
101	Electrical Switchgear Preventive Maintenance		Option Year One	1		
Total Option Year 1						

2.3. Option Year 2. The Contractor shall provide the services shown below for Option Year 2 of the contract, and continuing for a period of 12 months.

CLIN	Description	Quantity of Equipment	Type of services	No. of service	Unit price / service (\$)	Total per year (\$)
201	Electrical Switchgear Preventive Maintenance		Option Year Two	1		
Total Option Year 2						

2.4. Option Year 3. The Contractor shall provide the services shown below for Option Year 3 of the contract, and continuing for a period of 12 months.

CLIN	Description	Quantity of Equipment	Type of services	No. of service	Unit price / service (\$)	Total per year (\$)
301	Electrical Switchgear Preventive Maintenance		Option Year Three	1		

	Total Option Year 3	
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2.5. Option Year 4. The Contractor shall provide the services shown below for Option Year 4 of the contract, and continuing for a period of 12 months.

CLIN	Description	Quantity of Equipment	Type of services	No. of service	Unit price / service (\$)	Total per year (\$)
401	Electrical Switchgear Preventive Maintenance		Option Year Four	1		
	Total Option Year 4					

2.6. Total for all years:

Base Year Service	
Option Year 1	
Option Year 2	
Option Year 3	
Option Year 4	
CONTRACT TOTAL	

2.7. Repair option. Repairs are NOT included under this agreement (see Description/Specification/Work statement 4.1.3) and are to be done outside this contract. However, we would like to have current labor rates in the event that there is an issue discovered during the preventive maintenance of the specified equipment. Please provide your current labor rates in the Repair Option fields below. As stated in 4.1.3 any necessary repairs or parts will be submitted for approval and then billed against a separate purchase order. The Contractor is not approved to do any additional work without approval.

Repair Labor Rates

Labor Category	Hourly Rate
Maintenance Engineer	
Electrician	
Electrician Helper	

2.8 Value Added Tax

The Government will not reimburse the Contractor for VAT under this contract. The Contractor shall not include a line for VAT on Invoices as the U.S. Embassy has a tax exemption certificate with the host government (See Section I, 652.232-70 Payment Schedule and Invoice Submission (Fixed-Price) (AUG 1999).

All invoices and payments to local companies shall be in local currency (RSD).

3.0 NOTICE TO PROCEED

After Contract award and submission of acceptable insurance certificates and copies of all applicable licenses and permits, the Contracting Officer will issue a Notice to Proceed. The Notice to Proceed will establish a date (a minimum of ten (10) days from date of Contract award unless the Contractor agrees to an earlier date) on which performance shall start.

CONTINUATION TO SF-1449, RFQ NUMBER S-RB100-15-0013
SCHEDULE OF SUPPLIES/SERVICES, BLOCK 20
DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

1.0 EQUIPMENT AND PERFORMANCE REQUIREMENTS

1.1. The American Embassy in Belgrade, Serbia requires the Contractor to maintain the following systems in a safe, reliable and efficient operating condition.

In the Embassy Compound, located at Bulevar kneza Aleksandra Karadjordjevica 92, 11040 Belgrade, Serbia, there are existing metal-enclosed, low-voltage, power circuit-breaker double-ended switchgears rated 1000 V and less for use in ac systems.

Sets of the existing equipment are:

1. DUOBLE ENDED SWITCHGEAR, installed in UTILITY E BUILDING, type Power-Zone 4 Switchgear, Made by SQUARE D;
2. LV OUTDOOR SWITCHGEAR, installed in UTILITY YARD, type Power-Zone 4 Switchgear, Made by SQUARE D;
3. PARALLELING SWITCHGEAR, installed in UTILITY E BUILDING, type Synchropower 7000 Series; Made by ASCO Power Technologies
4. MAIN SWITCHBOARD, installed in CHANCERY BUILDING, type SQUARE D CUSTOM QED SWITCHBOARD, Made by SQUARE D

Please see equipment list included in Exhibit A for a more detailed description.

1.2. The Contractor shall provide all necessary managerial, administrative and direct labor personnel, as well as all transportation, equipment, tools, supplies and materials required to perform inspection, maintenance, and component replacement as required to maintain the systems in accordance with this work statement. Under this Contract the Contractor shall provide:

- The services of trained and qualified technicians to inspect, adjust, and perform scheduled preventive maintenance.

1.3. Performance Standards

It is expected that all aspect this SOW will be completed. Work will result in the system being in good working condition upon reactivation. All deliverables shall be completed on time under this agreement.

2.0 HOURS OF PERFORMANCE

2.1. The Contractor shall maintain work schedules. The schedules shall take into consideration the hours that the staff can effectively perform their services without placing a burden on the

security personnel of the Post. The Contractor shall deliver standard services between the hours of 9:00 AM and 5:00 PM Monday through Friday. Because most of this work will require complete electrical shutdowns of listed equipment, a significant portion of services shall be delivered during Weekend, between the hours of 9:00 AM and 5:00 PM on Saturday and Sunday. No work shall be performed on US Government and local holidays.

3.0 ACCESS TO GOVERNMENT BUILDINGS AND STANDARDS OF CONDUCT

3.1 General. The Contractor shall designate a representative who shall supervise the Contractor's technicians and be the Contractor's liaison with the American Embassy. The Contractor's employees shall be on-site only for contractual duties and not for any other business or purpose. Contractor employees shall have access to the equipment and equipment areas and will be escorted by Embassy personnel.

3.2 Personnel Security. The Government reserves the right to deny access to U.S.-owned and U.S.-operated facilities to any individual. The Contractor shall provide the names, biographic data and police clearance on all Contractor personnel who shall be used on this Contract prior to their utilization. Submission of information shall be made within 5 days of award of contract. **No technician will be allowed on site without prior authorization. Note: this may include cleared personnel if advance notice of visit is not given at least one week before the scheduled visit.**

3.2.1 Vehicles. Contractor vehicles will not be permitted inside the embassy compound without prior approval. If you need to have vehicle access please submit your vehicle information (Make, Model, License Plate #) along with a written justification as to why access is necessary. This should be submitted to the Facility Manager at least one (1) week prior to the visit.

3.2.1 Government shall issue identity cards to Contractor personnel, after they are approved. Contractor personnel shall display identity card(s) on the uniform at all times while providing services under this contract. These identity cards are the property of the US Government. The Contractor is responsible for their return at the end of the contract, when an employee leaves Contractor service, or at the request of the Government. The Government reserves the right to deny access to U.S.-owned and U.S.-operated facilities to any individual.

3.3 Security Clearances. Security clearances are not a requirement for performance on this contract, as there will be no access to classified information or areas.

3.3.1 The Contractor must comply with all of the following requirements relating to the protection of U.S. Embassy in Belgrade, Serbia, Diplomatic personnel, property and compound project information and cooperate fully in all security matters Sensitive But Unclassified (SBU) and information that may arise relating to this contract.

Contractor personnel may also be exposed to various documents and signs, including Post notices, event schedules, DoS regulations and conversations or announcements relating to the

operation of the U. S. Embassy Belgrade and diplomatic personnel. This information should not be shared with anyone not employed by or falling under the protection of the Embassy.

Contractor personnel may be exposed to various documents, such as blueprints, drawings, sketches, notes, surveys, reports, photographs, and specifications, received or generated in conjunction with this contract. These documents contain information associated with diplomatic facilities for the U.S. Department of State. These documents have been marked with the handling designations "Unclassified" or "Sensitive But Unclassified" and US Government warnings against reproduction and distribution. These documents require special handling and dissemination restrictions. All handling designations and warnings on original documents must be reproduced on subsequent copies.

The loss, compromise, or suspected compromise or loss of any SBU information, contract related information (personnel files, payroll information, etc.), any post or diplomatic facility related information (documents, notes, drawings, sketches, surveys, reports, exposed film, negatives, or photographs), or ANY information which may adversely affect the security interests of the United States, must be immediately brought to the attention of the Contracting Officer (CO) and Contracting Officer's Representative (COR).

Photographs of any diplomatic overseas building or facility must be authorized in advance by the COR and Regional Security Officer (RSO), who will establish any controls, limits, and/or restrictions as necessary. Exposed film depicting any Controlled Access Area and/or sensitive equipment must be developed in a U.S.- controlled environment by appropriately cleared personnel. No further dissemination, publication, duplication, or other use beyond that which was requested and approved is authorized without specific, advance approval from DS. DS reserves the right to demand retention of all copies of said photographs and/or negatives, following fulfillment of the previously authorized usage.

Transmission of any information marked Sensitive But Unclassified (SBU) or contract/personnel sensitive information, via the Internet, is prohibited. SBU information can be transmitted via ProjNet, mail, FedEx (or other commercial carrier) or fax, or handcarried by authorized contractor personnel.

Discussion of U.S. Diplomatic post activities while not on post, to include in homes, hotel rooms, restaurants and all other public places, is prohibited. Any contact with host or third country nationals that seems suspicious (such as undue curiosity in the project or project personnel) shall be reported immediately to the COR and RSO.

The Contractor and its employees shall exercise utmost discretion in regard to all matters relating to their duties and functions. They shall not communicate to any person any information known to them by reason of their performance of services under this contract which has not been made public, except to the extent necessary to perform their required duties in the performance of the contract requirements or as provided by written authorization of the Contracting Officer. All documents and records (including photographs) generated during the performance of work under this contract shall be for sole use of and shall become the exclusive property of the U.S. Government. No article, book, pamphlet, recording, broadcast, speech, television appearance,

film or photograph concerning any aspect of the work performed under this contract shall be published or disseminated through any media, to include company or personal websites, without the prior written authorization of the Contracting Officer. These obligations do not cease upon the expiration or termination of this contract or at any other point in time. The Contract shall include the substance of this provision in all subcontracts hereunder.

3.4 Standards of Conduct

3.4.1 General. The Contractor shall maintain satisfactory standards of employee competency, conduct, cleanliness, appearance, and integrity and shall be responsible for taking such disciplinary action with respect to employees as may be necessary. Each Contractor employee shall adhere to standards of conduct that reflect credit on themselves, their employer, and the United States Government. The Government reserves the right to direct the Contractor to remove an employee from the worksite for failure to comply with the standards of conduct. The Contractor shall immediately replace such an employee to maintain continuity of services at no additional cost to the Government.

3.4.2 Uniforms and Personal Equipment. The Contractor's employees shall wear clean, neat and complete uniforms when on duty. All employees shall wear uniforms approved by the Contracting Officer's Representative (COR). The Contractor shall provide, to each employee and supervisor, uniforms and personal equipment. The Contractor shall be responsible for the cost of purchasing, cleaning, pressing, and repair of the uniforms.

3.4.3 Neglect of Duties. Neglect of duties shall not be condoned. This includes sleeping while on duty, unreasonable delays or failures to carry out assigned tasks, conducting personal affairs during duty hours and refusing to render assistance or cooperate in upholding the integrity of the worksite security.

3.4.4 Disorderly Conduct. The Contractor shall not condone disorderly conduct, use of abusive or offensive language, quarreling, and intimidation by words, actions, or fighting. Also included is participation in disruptive activities that interfere with normal and efficient Government operations.

3.4.5 Intoxicants and Narcotics. The Contractor shall not allow its employees while on duty to possess, sell, consume, or be under the influence of intoxicants, drugs or substances which produce similar effects.

3.4.6 Criminal Actions. Contractor employees may be subject to criminal actions as allowed by law in certain circumstances. These circumstances include but are not limited to the following actions: falsification or unlawful concealment, removal, mutilation, or destruction of any official documents or records or concealment of material facts by willful omission from official documents or records; unauthorized use of Government property, theft, vandalism, or immoral conduct; unethical or improper use of official authority or credentials; security violations; organizing or participating in gambling in any form; and misuse of weapons.

3.4.7 Key Control. The Contractor **will not** be issued any keys. The keys will checked out

from Post 1 by a “Cleared American” escort on the day of service requirements.

3.4.8 Notice to the Government of Labor Disputes. The Contractor shall inform the COR of any actual or potential labor dispute that is delaying or threatening to delay the timely performance of this contract.

4.0 SCHEDULED PREVENTIVE MAINTENANCE

4.1. General

4.1.1. The Contractor shall perform preventive maintenance as outlined in Exhibit A - STATEMENT OF WORK. The objective of scheduled preventive maintenance is to eliminate system malfunction, breakdown and deterioration when units are activated/running.

4.1.2. The Contractor shall inventory, supply and replace expendable parts (eg, filters, belts, hoses, gaskets) that have become worn down due to wear and tear. The Contractor shall maintain a supply of expendable and common parts on site so that these are readily available for normal maintenance to include: hoses, belts, oil, chemicals, coolant, filters (Air, Fuel, Oil), grease, sealant, thermostat, fuses, batteries for electronic trip units; in addition to the appropriate tools, testing equipment, safety shoes and apparel for technicians, personal protective equipment (hands, hearing, eye protection), MSDS, cleaning material and oil spill containment kits. The contractor should inventory the supply after each visit and order replacement supplies and have them delivered on site.

4.1.3. Exclusion. This contract does NOT include repair of equipment and replacement of hardware (e.g. bearings, pistons, piston rings, crankshaft, gears.) **Hardware replacements will be separately priced out by the Contractor for the Government’s approval and acceptance.** The Government has the option to accept or reject the Contractor’s quote for parts and reserves the right to obtain similar spare parts from other competitive sources. If required by the Government, the Contractor shall utilize Government-purchased spare parts, if awarded the work. Such repairs/replacements will be accomplished by a separate purchase order. However, this exclusion does not apply if the repair is to correct damage caused by Contractor negligence.

4.1.4. Replacement/repair of any electronic or electrical parts must be approved by the COR prior to installation of the part. If the Contractor proceeds to replace any electronic or electrical parts without COR approval, the Contractor shall de-install the parts at no cost to the Government.

4.2 Checklist Approval

The Contractor shall submit to the COR a schedule and description of preventive maintenance tasks which the Contractor plans to provide. The contractor shall customize a work sheet to match the equipment or use a factory supplied one outlining the sequence of events and tasks to be performed. The Contractor shall prepare this schedule, work sheet, and task description in a checklist format for the COR’s approval prior to contract work commencement.

4.2.1. The Contractor shall provide trained technicians to perform the service at frequencies stated in Exhibit A and on the equipment called out in this SOW. The technician shall sign off on every item of the checklist and leave a copy of this signed checklist with the COR or the COR's designate after the maintenance visit.

4.2.2. It is the responsibility of the Contractor to perform all manufacturers' recommended preventive maintenance as well as preventive maintenance recommended by the manufacture technical manuals for the respective equipment.

5.0 PERSONNEL, TOOLS, CONSUMABLE MATERIALS AND SUPPLIES

The Contractor shall provide trained technicians with the appropriate tools and testing equipment for scheduled maintenance, safety inspection, and safety testing as required by this Contract. The Contractor shall provide all of the necessary materials and supplies to maintain, service, inspect and test all the systems to be maintained.

5.1 Contractor furnished materials will include but not limited to appropriate tools, testing equipment, safety shoes and apparel for technicians, hands, hearing and eye protection, MSDS, cleaning material and oil spill containment kit. Expendable/consumable items (e.g. hoses, belts, oil, chemicals, coolant, filters (Air, Fuel, Oil), generator starting batteries, grease, sealant, thermostat, fuse), will be maintained in the onsite inventory. See 4.1.2.

5.2 Repairs. Repairs are not included in this contract. See Item 4.1.3. Exclusions.

5.3 Disposal of used oil, fuel, battery and other toxic substances. The Contractor is responsible for proper disposal of toxic/hazardous substances. All material shall be disposed of according to Government and Local law. After proper disposal the contractor must show proof of authorized disposal of these toxic/hazardous substances.

5.0 Test and inspection field report: The contractor shall provide one copy of a typed summary report within 30 days of site work statement completion. The report must be written in the English language. At a minimum the report must include:

- Provide a narrative summary site report to include all findings, repairs or corrective measures, completed inspection/testing checklists.
- Provide a detailed report noting any noted discrepancy, include photos of the problem and a narrative summary of the corrective action required. The repair action will be contracted separately.
- Provide a Bill of Materials (BOM) as necessary for any required repair parts for future corrective action or repair. The BOM must note component name, part #, vendor or source, approximate lead time, suggested retail price.
- Provide a separate Bill of Materials (BOM) as necessary for any recommended spare parts for system. This can include applicable electrical safety PPE that post does not have onsite.

- Detail report covering all aspects of equipment upgrading, system modification, new part installation in all locations.
- Provide a “marked-up” as-build drawing as necessary to indicate any modifications or differences found during inspection.
- In the final report list any Locally Employed Staff that assisted in this planned maintenance action. This is not a training requirement, but rather to document the personnel involved in the work.

6. DELIVERABLES

The following items shall be delivered under this contract:

Description	QTY	Delivery Date	Deliver to
Names, biographic data, police clearance on Contractor personnel (#3.2)	1	5 days after contract award	COR
Certificate of Insurance (#7.2)	1	10 days after contract award	COR
Checklist and work sheet (4.2)	1	Prior to commencement of work	COR
Checklist signed by Contractor’s employee (#4.2.1)	1	After completion of each maintenance service	COR
Test and Inspection Field Report (#5.0)	1	30 days after each completion of service	COR
Invoice (#11)	1	After completion of each maintenance service	COR

7.0 INSURANCE REQUIREMENTS

7.1 Personal Injury, Property Loss or Damage (Liability). The Contractor assumes absolute responsibility and liability for any and all personal injuries or death and property damage or losses suffered due to negligence of the Contractor’s personnel in the performance of this Contract

The Contractor’s assumption of absolute liability is independent of any insurance policies.

7.2 Insurance. The Contractor, at its own expense, shall provide and maintain during the entire period of performance of this Contract, whatever insurance is legally necessary. The Contractor shall carry the following minimum insurance:

Public Liability Insurance

1. Bodily Injury on or off the site stated in US Dollars:

Per Occurrence	\$20,000
Cumulative	\$100,000

2. Property Damage on or off the site in US Dollars:

Per Occurrence	\$50,000
Cumulative	\$200,000

Workers' Compensation and Employer's Liability

7.3 Worker's Compensation Insurance. The Contractor agrees to provide all employees with worker's compensation benefits as required under local laws (see FAR 52.228-4 "Worker's Compensation and War-Hazard Insurance Overseas").

8.0 LOCAL LAW REGISTRATION

If the local law or decree requires that one or both parties to the contract register the contract with the designated authorities to insure compliance with this law or decree, the entire burden of this registration shall rest upon the Contractor. Any local or other taxes which may be assessed against the Contract shall be payable by the Contractor without Government reimbursement.

9.0 QUALITY ASSURANCE PLAN (QAP).

9.1 Plan. This plan is designed to provide an effective surveillance method to promote effective Contractor performance. The QAP provides a method for the Contracting Officer's Representative (COR) to monitor Contractor performance, advise the Contractor of unsatisfactory performance, and notify the Contracting Officer of continued unsatisfactory performance. The Contractor, not the Government, is responsible for management and quality control to meet the terms of the Contract. The role of the Government is to conduct quality assurance to ensure that Contract standards are achieved.

Performance Objective	Performance Work Statement Paragraph	Performance Threshold
<p style="text-align: center;"><u>Services.</u></p> <p>Performs all services set forth in the performance work statement (PWS)</p>	<p style="text-align: center;">1 thru 12</p>	<p style="text-align: center;">All required services are performed and no more than one (1) customer complaint is received per job</p>

9.2 Surveillance. The COR will receive and document all complaints from Government personnel regarding the services provided. If appropriate, the COR will send the complaints to the Contractor for corrective action.

9.3 Standard. The performance standard is that the Government receives no more than one (1) customer complaint per month. The COR shall notify the Contracting Officer of the complaints so that the Contracting Officer may take appropriate action to enforce the inspection clause (FAR 52.212-4, Contract Terms and Conditions-Commercial Items), if any of the services exceed the standard.

9.4. Procedures.

9.4.1 If any Government personnel observe unacceptable services, either incomplete work or

required services not being performed, they should immediately contact the COR.

9.4.2 The COR will complete appropriate documentation to record the complaint.

9.4.3 If the COR determines the complaint is invalid, the COR will advise the complainant. The COR will retain the annotated copy of the written complaint for his/her files.

9.4.4 If the COR determines the complaint is valid, the COR will inform the Contractor and give the Contractor additional time to correct the defect, if additional time is available. The COR shall determine how much time is reasonable.

9.4.5 The COR shall, as a minimum, orally notify the Contractor of any valid complaints.

9.4.6 If the Contractor disagrees with the complaint after investigation of the site and challenges the validity of the complaint, the Contractor will notify the COR. The COR will review the matter to determine the validity of the complaint.

9.4.7 The COR will consider complaints as resolved unless notified otherwise by the complainant.

13.4.8. Repeat customer complaints are not permitted for any services. If a repeat customer complaint is received for the same deficiency during the service period, the COR will contact the Contracting Officer for appropriate action under the Inspection clause.

10. TRANSITIONS/CONTACTS

Within 10 days after contract award, the Contracting Officer may ask the contractor to develop a plan for preparing the contractor to assume all responsibilities for preventive maintenance services. The plan shall establish the projected period for completion of all clearances of contractor personnel, and the projected start date for performance of all services required under this contract. The plan shall assign priority to the selection of all supervisors to be used under the contract.

10.1 On site contact. The following are the designated contact personnel between the US Embassy and the Contractor

-Facility Manager: Tregaskis, Kevin FM, (381 11) 706-4525, TregaskisK@state.gov

-Technical Specialist: Panjik, Jaroslav Electrical Engineer, (381 11) 706-4224, PanjikJJ@state.gov

11. SUBMISSION OF INVOICES

The Contractor shall submit an invoice after each preventive maintenance service has been

performed. Invoices must be accompanied by a signed copy of the Maintenance Checklist for the work performed including parts replacement and break down calls, if any. No invoice for preventive maintenance services will be considered for payment unless accompanied by the relevant documentation.

The Contractor should expect payment 30 days after completion of service or 30 days after receipt of invoice at the Embassy's payment office, whichever is later. Invoices shall be sent to:

American Embassy
Budget & Fiscal
Bul. Kneza Aleksandra Karadjordjevica 92
11000 Belgrade
Serbia

The contractor shall include the following statement on invoices submitted for payment "Oslobodjeno plaćanja PDV-a po članu 24. st.1.16 pod tačka 1. Zakona o PDV" ("Exempt from VAT under article 24, paragraph 1.16, item 1 on the Law on VAT").

Exhibit A**STATEMENT OF WORK AND EQUIPMENT LIST****I. GENERAL INFORMATION:**

The United States Embassy in Belgrade, Serbia requires professional services and contractor cost proposals to perform preventive maintenance services on the facility's Electrical Switchgear.

II. PROJECT REQUIREMENTS:**DESCRIPTION OF EQUIPMENT *:**

**Please see attachment at the end of this sheet for more details*

In the Embassy Compound, located at Bulevar kneza Aleksandra Karadordevica 92, 11040 Belgrade 11040, Serbia, there are existing metal-enclosed, low-voltage, power circuit-breaker double-ended switchgears rated 1000 V and less for use in ac systems.

Sets of the existing equipment are:

1. DUOBLE ENDED SWITCHGEAR, installed in UTILITY E BUILDING, type Power-Zone 4 Switchgear, Made by SQUARE D;
2. LV OUTDOOR SWITCHGEAR, installed in UTILITY YARD, type Power-Zone 4 Switchgear, Made by SQUARE D;
3. PARALLELING SWITCHGEAR, installed in UTILITY E BUILDING, type Synchropower 7000 Series; Made by ASCO Power Technologies
4. MAIN SWITCHBOARD, installed in CHANCERY BUILDING, type SQUARE D CUSTOM QED SWITCHBOARD, Made by SQUARE D

III. GENERAL REQUIREMENTS:

The Contractor under this SOW will be responsible for labor, tools, and materials required to carry out all preventive maintenance as outlined in this SOW. Embassy staff has Operational & Maintenance documents for all Electrical Switchgear on site.

IV. SCOPE OF WORK - - ELECTRICAL SWITCHGEAR PREVENTIVE MAINTENANCE

Contractor shall provide all materials, supervision, labor, tools and equipment to perform preventive maintenance. This must include, but not limited to, batteries for the trip units, fuses, and dielectric lubricant.

All personnel working in the vicinity shall wear and /or use safety protection while all work is performed. Strict adherence to NFPA70-E and applicable OSHA standards must be maintained at all times. Regular safety meetings shall be held among on-site contractor personnel, LES staff

assisting. Any questions or injuries **shall** be brought to the attention of the Post Occupation Safety and Health Officer (POSHO). Material Safety Data Sheets (MSDS) shall be provided by the Contractor for all HAZMAT materials. Copies will be provided to the COR for approval.

Prior to beginning any site work the contractor must submit to the embassy FM an isolation Standard Operating Procedure (SOP) and schedule to reflect the planned work and sequence. The contractor must obtain written approval from the embassy Facility Manager noting the planned servicing schedule, and all required generator transfers, tie-breaker switching, or switchgear outages.

If any discrepancies are found with the generator system that are not covered under this scope of work then the contractor must provide the following:

1. Detailed report noting the discrepancy found.
2. Bill of Materials (BOM) to include component name, quantity, part #, and price for any repair material required and material lead time.
3. Price quote for repair labor.

At a minimum, the following work must be done:

Task Description

A. Step-One, Visual Inspection:

- 1) Visual and Mechanical Inspection to insure the proper operation of all factory and vender installed meters, breakers, remote power monitoring equipment associated with the switch gear.
- 2) Inspect physical, electrical, and mechanical condition including evidence of moisture or corona.
- 3) Inspect that all filters are in place, and the vents are clear.
- 4) Inspect that the working space is maintained in front of all the electrical gear per the National Electrical Code (NEC) requirements.
- 5) Inspect that the electrical room is free from foreign articles not associated with the room.

B. Step-Two, Verify:

- 1) Compare the installed metering measurements with voltage and power readings from a True RMS meter. Make calibration corrections as necessary to ensure accurate voltage and power readings.
- 2) Verify the switchgear circuit breakers sizing match the drawings.
- 3) Verify the proper labeling of all the breakers in the switchgear.
- 4) Verify that the Post as-build drawings (electrical one-line) match the switchgear distribution. Make "Red Ink" corrections on a paper copy as necessary. Inform the FM of any discrepancies or changes to the drawings.
- 5) Verify that the required NFPA70-E safety equipment is available and in good condition for local staff to use.
- 6) Refer to the manufacturer's recommendations for additional maintenance requirements.

C. Step-Three, Test/Clean/Correct:

- 1) Inspect anchorage, alignment, grounding for the equipment.
- 2) Test the system earth ground (25 ohms or less).
- 3) Perform infrared testing on all conductor connections, buss terminations. Only record hot spots on digital format for review.
- 4) Before shutdown insure that all components are operational. Record ones that are not at this time. Make the FM aware of all components that are not functioning prior to shut down.
- 5) Schedule power outage of equipment for cleaning. Coordinate any required outage with post. (Outage may require off hours work).
- 6) As applicable perform function tests on “rack-out” breakers, test trip units and settings. Replace any faulty battery, fuse, or switch.
- 7) Perform proper Lock-out/Tag-out and ensure the system is de-energized before removing panel covers and exposing any electrical bus or cabling. Under no circumstances should the equipment be energized during the maintenance operation.
- 8) Clean each compartment. Check for damage, excessive wear, or corrosion
- 9) Spot check and correct any loose components or connections.
- 10) Torque loose connections identified during the infrared test or during inspection.
- 11) Confirm correct operation and sequencing of electrical and mechanical interlock systems.
- 12) Use appropriate dielectric lubrication on moving current-carrying parts and on moving and sliding surfaces.
- 13) Correct any faulty, damaged, discolored, and worn components using site spares.
- 14) Exercise all active components. This includes racking the breakers out than back in.
- 15) Inspect mechanical indicating devices for correct operation.
- 16) Inspect all power control transformers for physical damage, cracked insulation, broken leads, tightness of connections, defective wiring, proper overload protection, and over all general wiring.
- 17) After re-energizing the equipment ensure that all components are up and functioning properly.
- 18) Refer to the manufacturer’s suggested recommendations for additional maintenance requirements.
- 19) Clean or replace any air filters present.
- 20) Make calibration corrections as necessary to ensure accurate voltage and power readings on permanently installed switchgear metering.

Performance in each Option Year of the Contract shall be in compliance with the Manufacturer’s recommendations (e.g. Regular Maintenance of *Masterpact* Circuit Breakers includes Checking of the arc chambers every two years).

Equipment List:

Equipment	Manufacturer	Make/ Model	Location
1. DUOBLE ENDED SWITCHGEAR MDPSG E/U	SQUARE D a brand of Schneider Electric	Power-Zone 4 Switchgear	DUOBLE ENDED SWITCHGEAR, UTILITY E BUILDING
Specifications:			
1	<p>LOW VOLTAGE SWITCHGEAR Gen(M1)-Tie-Main(M2) - Center Fed 400/230V,3PH-4W,50HZ 4000A Copper Main Bus Solidly Grounded Neutral 100% Neutral Two - 3KVA Control Power Transformers 65KA Maximum Available Fault Current Indoor NEMA 1 Style Enclosure ANSI 49 Exterior Color Paint Network Communications Only - No Web Pages RS485 Modbus Comms Wired Out Automatic Throwover System with Hot Standby;</p> <p>ENCLOSURE OPTIONS 8 - 22", 4000A, 4W, 100%N, Indoor Vertical Section 11 - 72" Deep Enclosure 11 - Rear Barriers Between Bus/Cable Compartment 11 - Plastic Mimic Bus - Black 10 - Bus Compartment Side Barriers 10 - Cable Compartment Side Barriers 11 - Cable Supports 11 - Locking Hinged Rear Doors 11 - 4000A, 1000A per Square Inch 3 - 36", 4000A, 4W, 100%N, Indoor Vertical Section</p>		
	<p>INCOMING ONE: CONNECTIONS & METERING OPTIONS Freestanding Cable Fed - Bottom Incoming 4000A UL Service Entrance Label 4000A 4W Mechanical 1-Hole Lugs</p>		
1.1	<p>MAIN ONE: CIRCUIT BREAKER 4000A, NW40H2, Electrically Operated Main Breaker</p>		

	<p>DESCRIPTION: CB1 Power Measurement Unit (6.0P), LSIG Modbus Communications - Main/Tie Sensor Rating Plug - A Plug Dial Setting - 1.0 Trip Setting (Amps) - 4000 Separate Breaker Control Switch Power Meter - PM870RD PM800 Option: 1 - PM8M2222 Shunt Trip - Electrically Operated Main Open/Close Pushbutton Lock - Main 3C Connected, 1C Test, 2C Disconnected Cell Switch Assembly Breaker ID Nameplate - Main Shutters Over Bus in Cell Metering CTs - Main Programmable Contact Modules - 2 Contacts Spring Charging Motor (MCH) Closing Coil (XF) Breaker Padlock Attachment on Circuit Breaker Shunt Close - Electrically Operated Main 8A Form C Contacts Auxiliary Switch CT Test Blocks - Main Special Records: TAG 3672712 - 1 - 4 pole brkr TAG 3672712 - 1 - 4 pole brkr 48" section Cell - 4 CD</p>
	<p>FEEDER CIRCUIT BREAKERS & INSTRUMENTATION DESCRIPTION: Customer Instrumentation Compartment, 1-Cell Special Records: TAG sw5 - 1 - 4000A Lugs Cell - 1 A</p>
<p>1.2</p>	<p>800A, NW08H1, Manually Operated Feeder Breaker DESCRIPTION: CCE11 Power Measurement Unit (6.0P), LSIG Modbus Communications - Feeder Sensor Rating Plug - A Plug Dial Setting - 0.8 Trip Setting (Amps) - 200 3C Connected, 1C Test, 2C Disconnected Cell Switch Assembly Shutters Over Bus in Cell Breaker ID Nameplate - Feeder 4A Contacts Auxiliary Switch</p>

	<p>Breaker Padlock Attachment on Circuit Breaker 800A, 4W, Mechanical 1-Hole Lugs Cell - 1 B</p>
1.3	<p>800A, NW08H1, Manually Operated Feeder Breaker DESCRIPTION: SPARE Power Measurement Unit (6.0P), LSIG Modbus Communications - Feeder Sensor Rating Plug - A Plug Dial Setting - 1.0 Trip Setting (Amps) - 100 3C Connected, 1C Test, 2C Disconnected Cell Switch Assembly Shutters Over Bus in Cell Breaker ID Nameplate - Feeder 4A Contacts Auxiliary Switch Breaker Padlock Attachment on Circuit Breaker 800A, 4W, Mechanical 1-Hole Lugs Cell - 2 A</p>
1.4	<p>800A, NW08H1, Manually Operated Feeder Breaker DESCRIPTION: UE11 Power Measurement Unit (6.0P), LSIG Modbus Communications - Feeder Sensor Rating Plug - A Plug Dial Setting - 1.0 Trip Setting (Amps) - 100 3C Connected, 1C Test, 2C Disconnected Cell Switch Assembly Shutters Over Bus in Cell Breaker ID Nameplate - Feeder 4A Contacts Auxiliary Switch Breaker Padlock Attachment on Circuit Breaker 800A, 4W, Mechanical 1-Hole Lugs Cell - 2 B</p>
1.5	<p>800A, NW08H1, Manually Operated Feeder Breaker DESCRIPTION: SPARE Power Measurement Unit (6.0P), LSIG Modbus Communications - Feeder Sensor Rating Plug - A Plug Dial Setting - 0.8 Trip Setting (Amps) - 200 3C Connected, 1C Test, 2C Disconnected Cell Switch Assembly</p>

	<p>Shutters Over Bus in Cell Breaker ID Nameplate - Feeder 4A Contacts Auxiliary Switch Breaker Padlock Attachment on Circuit Breaker 800A, 4W, Mechanical 1-Hole Lugs Cell - 2 C</p>
1.6	<p>800A, NW08H1, Manually Operated Feeder Breaker DESCRIPTION: SCE11 Power Measurement Unit (6.0P), LSIG Modbus Communications - Feeder Sensor Rating Plug - A Plug Dial Setting - 1.0 Trip Setting (Amps) - 400 3C Connected, 1C Test, 2C Disconnected Cell Switch Assembly Shutters Over Bus in Cell Breaker ID Nameplate - Feeder 4A Contacts Auxiliary Switch Breaker Padlock Attachment on Circuit Breaker 800A, 4W, Mechanical 1-Hole Lugs Cell - 2 D</p>
1.7	<p>800A, NW08H1, Manually Operated Feeder Breaker DESCRIPTION: SPARE Power Measurement Unit (6.0P), LSIG Modbus Communications - Feeder Sensor Rating Plug - A Plug Dial Setting - 1.0 Trip Setting (Amps) - 100 3C Connected, 1C Test, 2C Disconnected Cell Switch Assembly Shutters Over Bus in Cell Breaker ID Nameplate - Feeder 4A Contacts Auxiliary Switch Breaker Padlock Attachment on Circuit Breaker 800A, 4W, Mechanical 1-Hole Lugs Cell - 3 A</p>
1.8	<p>3200A, NW32H1, Electrically Operated Feeder Breaker DESCRIPTION: MSBE Power Measurement Unit (6.0P), LSIG Modbus Communications - Feeder Sensor Rating Plug - A Plug Dial Setting - 1.0</p>

	<p>Trip Setting (Amps) - 3000 Separate Breaker Control Switch Status Indicating Lights - Open 3C Connected, 1C Test, 2C Disconnected Cell Switch Assembly Shutters Over Bus in Cell Breaker ID Nameplate - Feeder Programmable Contact Modules - 2 Contacts Status Indicating Lights - Close Shunt Close - Electrically Operated Feeder 4A Contacts Auxiliary Switch Closing Coil (XF) Shunt Trip - Electrically Operated Feeder Special Records: Breaker Padlock Attachment on Circuit Breaker Spring Charging Motor (MCH) TAG 5135759 - 1 - Loadshed Wiring TAG 5135759 - 1 - Aux Contacts to Gen Provider 3200A, 4W, Mechanical 1-Hole Lugs Cell - 3 BC</p>
<p>1.9</p>	<p>800A, NW08H1, Manually Operated Feeder Breaker DESCRIPTION: MCE11 Power Measurement Unit (6.0P), LSIG Modbus Communications - Feeder Sensor Rating Plug - A Plug Dial Setting - 1.0 Trip Setting (Amps) - 100 3C Connected, 1C Test, 2C Disconnected Cell Switch Assembly Shutters Over Bus in Cell Breaker ID Nameplate - Feeder 4A Contacts Auxiliary Switch Breaker Padlock Attachment on Circuit Breaker 800A, 4W, Mechanical 1-Hole Lugs Cell - 3 D</p>
<p>1.10</p>	<p>TIE 4000A, NW40H2, Electrically Operated Tie Breaker DESCRIPTION: CB2 Power Measurement Unit (6.0P), LSIG Modbus Communications - Main/Tie Sensor Rating Plug - A Plug Dial Setting - 1.0 Trip Setting (Amps) - 4000</p>

	<p>Separate Breaker Control Switch Breaker ID Nameplate - Tie Shunt Close - Electrically Operated Tie Spring Charging Motor (MCH) Open/Close Pushbutton Lock - Tie Shunt Trip - Electrically Operated Tie Breaker Padlock Attachment on Circuit Breaker Shutters Over Bus in Cell Programmable Contact Modules - 2 Contacts Closing Coil (XF) 8A Form C Contacts Auxiliary Switch Special Records: TAG 3672712 - 1 - 4 pole brkr TAG 3672712 - 1 - 4 pole brkr 48" section Cell - 5 BC</p>
<p>1.11</p>	<p>INCOMING TWO: CONNECTIONS & METERING OPTIONS Freestanding Cable Fed - Bottom Incoming 4000A UL Service Entrance Label 4000A 4W Mechanical 1-Hole Lugs MAIN TWO: CIRCUIT BREAKER 4000A, NW40H2, Electrically Operated Main Breaker DESCRIPTION: CB3 Power Measurement Unit (6.0P), LSIG Modbus Communications - Main/Tie Sensor Rating Plug - A Plug Dial Setting - 1.0 Trip Setting (Amps) - 4000 Separate Breaker Control Switch Power Meter - PM870RD PM800 Option: 1 - PM8M2222 Shunt Trip - Electrically Operated Main Open/Close Pushbutton Lock - Main 3C Connected, 1C Test, 2C Disconnected Cell Switch Assembly Breaker ID Nameplate - Main Shutters Over Bus in Cell Metering CTs - Main Programmable Contact Modules - 2 Contacts Spring Charging Motor (MCH) Closing Coil (XF) Breaker Padlock Attachment on Circuit Breaker Shunt Close - Electrically Operated Main 8A Form C Contacts Auxiliary Switch CT Test Blocks - Main Special Records:</p>

	<p>TAG 3672712 - 1 - 4 pole brkr TAG 3672712 - 1 - 4 pole brkr 48" section Cell - 7 CD</p>
<p>1.12</p>	<p>FEEDER CIRCUIT BREAKERS & INSTRUMENTATION 800A, NW08H1, Electrically Operated Feeder Breaker DESCRIPTION: SU11 Power Measurement Unit (6.0P), LSIG Modbus Communications - Feeder Sensor Rating Plug - A Plug Dial Setting - 0.8 Trip Setting (Amps) - 320 Separate Breaker Control Switch Status Indicating Lights - Open 3C Connected, 1C Test, 2C Disconnected Cell Switch Assembly Shutters Over Bus in Cell Breaker ID Nameplate - Feeder Programmable Contact Modules - 2 Contacts Status Indicating Lights - Close Shunt Close - Electrically Operated Feeder 4A Contacts Auxiliary Switch Closing Coil (XF) Shunt Trip - Electrically Operated Feeder Special Records: Breaker Padlock Attachment on Circuit Breaker Spring Charging Motor (MCH) TAG 5135759 - 1 - Loadshed Wiring TAG 5135759 - 1 - Aux Contacts to Gen Provider 800A, 4W, Mechanical 1-Hole Lugs Cell - 8 A</p>
<p>1.13</p>	<p>3200A, NW32H1, Electrically Operated Feeder Breaker DESCRIPTION: MSBU Power Measurement Unit (6.0P), LSIG Modbus Communications - Feeder Sensor Rating Plug - A Plug Dial Setting - 1.0 Trip Setting (Amps) - 3000 Separate Breaker Control Switch Status Indicating Lights - Open 3C Connected, 1C Test, 2C Disconnected Cell Switch Assembly Shutters Over Bus in Cell Breaker ID Nameplate - Feeder Programmable Contact Modules - 2 Contacts</p>

	<p>Status Indicating Lights - Close Shunt Close - Electrically Operated Feeder 4A Contacts Auxiliary Switch Closing Coil (XF) Shunt Trip - Electrically Operated Feeder Special Records: Breaker Padlock Attachment on Circuit Breaker Spring Charging Motor (MCH) TAG 5135759 - 1 - Loadshed Wiring TAG 5135759 - 1 - Aux Contacts to Gen Provider 3200A, 4W, Mechanical 1-Hole Lugs Cell - 8 BC</p>
<p>1.14</p>	<p>800A, NW08H1, Electrically Operated Feeder Breaker DESCRIPTION: SPARE Power Measurement Unit (6.0P), LSIG Modbus Communications - Feeder Sensor Rating Plug - A Plug Dial Setting - 1.0 Trip Setting (Amps) - 800 Separate Breaker Control Switch Status Indicating Lights - Open 3C Connected, 1C Test, 2C Disconnected Cell Switch Assembly Shutters Over Bus in Cell Breaker ID Nameplate - Feeder Programmable Contact Modules - 2 Contacts Status Indicating Lights - Close Shunt Close - Electrically Operated Feeder 4A Contacts Auxiliary Switch Closing Coil (XF) Shunt Trip - Electrically Operated Feeder Special Records: Breaker Padlock Attachment on Circuit Breaker Spring Charging Motor (MCH) TAG 5135759 - 1 - Loadshed Wiring TAG 5135759 - 1 - Aux Contacts to Gen Provider 800A, 4W, Mechanical 1-Hole Lugs Cell - 8 D</p>
<p>1.15</p>	<p>800A, NW08H1, Manually Operated Feeder Breaker DESCRIPTION: SPARE Power Measurement Unit (6.0P), LSIG Modbus Communications - Feeder</p>

	<p>Sensor Rating Plug - A Plug Dial Setting - 0.8 Trip Setting (Amps) - 320 3C Connected, 1C Test, 2C Disconnected Cell Switch Assembly Shutters Over Bus in Cell Breaker ID Nameplate - Feeder 4A Contacts Auxiliary Switch Breaker Padlock Attachment on Circuit Breaker 800A, 4W, Mechanical 1-Hole Lugs Cell - 9 A</p>
<p>1.16</p>	<p>800A, NW08H1, Electrically Operated Feeder Breaker DESCRIPTION: MU11 Power Measurement Unit (6.0P), LSIG Modbus Communications - Feeder Sensor Rating Plug - A Plug Dial Setting - 0.8 Trip Setting (Amps) - 320 Separate Breaker Control Switch Status Indicating Lights - Open 3C Connected, 1C Test, 2C Disconnected Cell Switch Assembly Shutters Over Bus in Cell Breaker ID Nameplate - Feeder Programmable Contact Modules - 2 Contacts Status Indicating Lights - Close Shunt Close - Electrically Operated Feeder 4A Contacts Auxiliary Switch Closing Coil (XF) Shunt Trip - Electrically Operated Feeder Special Records: Breaker Padlock Attachment on Circuit Breaker Spring Charging Motor (MCH) TAG 5135759 - 1 - Loadshed Wiring TAG 5135759 - 1 - Aux Contacts to Gen Provider 800A, 4W, Mechanical 1-Hole Lugs Cell - 9 B</p>
<p>1.17</p>	<p>800A, NW08H1, Electrically Operated Feeder Breaker DESCRIPTION: UU11 Power Measurement Unit (6.0P), LSIG Modbus Communications - Feeder Sensor Rating Plug - A Plug Dial Setting - 0.8</p>

	<p>Trip Setting (Amps) - 320 Separate Breaker Control Switch Status Indicating Lights - Open 3C Connected, 1C Test, 2C Disconnected Cell Switch Assembly Shutters Over Bus in Cell Breaker ID Nameplate - Feeder Programmable Contact Modules - 2 Contacts Status Indicating Lights - Close Shunt Close - Electrically Operated Feeder 4A Contacts Auxiliary Switch Closing Coil (XF) Shunt Trip - Electrically Operated Feeder Special Records: Breaker Padlock Attachment on Circuit Breaker Spring Charging Motor (MCH) TAG 5135759 - 1 - Loadshed Wiring TAG 5135759 - 1 - Aux Contacts to Gen Provider 800A, 4W, Mechanical 1-Hole Lugs Cell - 9 C</p>
<p>1.18</p>	<p>800A, NW08H1, Manually Operated Feeder Breaker DESCRIPTION: CHILLER 2A Power Measurement Unit (6.0P), LSIG Modbus Communications - Feeder Sensor Rating Plug - A Plug Dial Setting - 1.0 Trip Setting (Amps) - 400 3C Connected, 1C Test, 2C Disconnected Cell Switch Assembly Shutters Over Bus in Cell Breaker ID Nameplate - Feeder 4A Contacts Auxiliary Switch Breaker Padlock Attachment on Circuit Breaker 800A, 4W, Mechanical 1-Hole Lugs Cell - 9 D</p>
<p>1.19</p>	<p>800A, NW08H1, Manually Operated Feeder Breaker DESCRIPTION: CHILLER 2B Power Measurement Unit (6.0P), LSIG Modbus Communications - Feeder Sensor Rating Plug - A Plug Dial Setting - 1.0 Trip Setting (Amps) - 100 3C Connected, 1C Test, 2C Disconnected Cell Switch Assembly</p>

	<p>Shutters Over Bus in Cell Breaker ID Nameplate - Feeder 4A Contacts Auxiliary Switch Breaker Padlock Attachment on Circuit Breaker 800A, 4W, Mechanical 1-Hole Lugs Cell - 10 A</p>
1.20	<p>800A, NW08H1, Manually Operated Feeder Breaker DESCRIPTION: CHILLER 1A Power Measurement Unit (6.0P), LSIG Modbus Communications - Feeder Sensor Rating Plug - A Plug Dial Setting - 1.0 Trip Setting (Amps) - 400 3C Connected, 1C Test, 2C Disconnected Cell Switch Assembly Shutters Over Bus in Cell Breaker ID Nameplate - Feeder 4A Contacts Auxiliary Switch Breaker Padlock Attachment on Circuit Breaker 800A, 4W, Mechanical 1-Hole Lugs Cell - 10 B</p>
1.21	<p>800A, NW08H1, Manually Operated Feeder Breaker DESCRIPTION: CHILLER 1B Power Measurement Unit (6.0P), LSIG Modbus Communications - Feeder Sensor Rating Plug - A Plug Dial Setting - 1.0 Trip Setting (Amps) - 400 3C Connected, 1C Test, 2C Disconnected Cell Switch Assembly Shutters Over Bus in Cell Breaker ID Nameplate - Feeder 4A Contacts Auxiliary Switch Breaker Padlock Attachment on Circuit Breaker 800A, 4W, Mechanical 1-Hole Lugs Cell - 10 C</p>
1.22	<p>800A, NW08H1, Manually Operated Feeder Breaker DESCRIPTION: WW Power Measurement Unit (6.0P), LSIG Modbus Communications - Feeder Sensor Rating Plug - A Plug Dial Setting - 0.8</p>

	<p>Trip Setting (Amps) - 200 3C Connected, 1C Test, 2C Disconnected Cell Switch Assembly Shutters Over Bus in Cell Breaker ID Nameplate - Feeder 4A Contacts Auxiliary Switch Breaker Padlock Attachment on Circuit Breaker 800A, 4W, Mechanical 1-Hole Lugs Cell - 10 D</p>
	<p>DESCRIPTION: Customer Instrumentation Compartment, 1-Cell Special Records: TAG sw5 - 1 - 4000A Lugs Cell - 11 A</p>
1.23	<p>800A, NW08H1, Manually Operated Feeder Breaker DESCRIPTION: SPARE Power Measurement Unit (6.0P), LSIG Modbus Communications - Feeder Sensor Rating Plug - A Plug Dial Setting - 1.0 Trip Setting (Amps) - 100 3C Connected, 1C Test, 2C Disconnected Cell Switch Assembly Shutters Over Bus in Cell Breaker ID Nameplate - Feeder 4A Contacts Auxiliary Switch Breaker Padlock Attachment on Circuit Breaker 800A, 4W, Mechanical 1-Hole Lugs Cell - 11 B</p>

Equipment	Manufacturer	Make/ Model	Location
2. LV OUTDOOR SWITCHGEAR	SQUARE D a brand of Schneider Electric	Power-Zone 4 Switchgear	LV SWITCHGEAR, UTILITY YARD
Specifications:			
2	<p>LOW VOLTAGE SWITCHGEAR</p> <p>Feeder Section(s)</p> <p>380/220V,3PH-4W,50HZ</p> <p>4000A Copper Main Bus</p> <p>Solidly Grounded Neutral</p> <p>100% Neutral</p> <p>External CPT - 120VAC Secondary</p> <p>65KA Maximum Available Fault Current</p> <p>NEMA Type 3R Outdoor Walk-in Construction</p> <p>ANSI 49 Exterior Color Paint</p> <p>Network Communications Only - No Web Pages</p> <p>RS485 Modbus Comms Wired Out</p> <p>White Back Pans</p> <p>Manually Operated Overhead Lifting Device</p> <p>Hand Held Breaker Test Kit</p> <p>24VDC to Trip Unit Display</p> <p>Certified Test Reports</p> <p>Special Records:</p> <p>TAG 5135759 - 1 - Power Flow Nameplate</p> <p>TAG 5135759 - 1 - EGX200 Gateway</p> <p>TAG 3766161 - 1 - 1 lot of 6 spare lights</p> <p>TAG 3766161 - 1 - 1 lot of 6 spare fuses</p> <p>TAG 3672712 - 1 - TVSS Disconnect</p> <p>TAG 5135759 - 2 - Red Adhesive Bus Labels</p> <p>ENCLOSURE OPTIONS</p> <p>3 - 36", 4000A, 4W, 100%N, Indoor Vertical Section</p> <p>3 - 72" Deep Enclosure</p> <p>3 - 36" NEMA Type 3R section adder</p> <p>3 - Strip Heaters in Bus Compartment</p> <p>3 - Rear Barriers Between Bus/Cable Compartment</p> <p>3 - Plastic Mimic Bus - Black</p> <p>2 - Bus Compartment Side Barriers</p> <p>3 - Strip Heaters in Cable Compartment</p> <p>3 - Humidistat</p> <p>3 - Bottom Plates</p> <p>2 - Cable Compartment Side Barriers</p> <p>3 - Cable Supports</p>		

	3 - 4000A, 1000A per Square Inch
	<p>INCOMING ONE: CONNECTIONS & METERING OPTIONS</p> <p>Freestanding Cable Fed - Bottom Incoming</p> <p>Non-Service Entrance</p> <p>Surge Arrestors (3 Phase Set)</p> <p>4000A 4W Mechanical 1-Hole Lugs</p>
2.1	<p>FEEDER CIRCUIT BREAKERS & INSTRUMENTATION</p> <p>4000A, NW40H2, Electrically Operated Feeder Breaker</p> <p>DESCRIPTION: CBE1</p> <p>Power Measurement Unit (6.0P), LSIG</p> <p>Modbus Communications - Feeder</p> <p>Sensor Rating Plug - A</p> <p>Plug Dial Setting - 1.0</p> <p>Trip Setting (Amps) - 4000</p> <p>3C Connected, 1C Test, 2C Disconnected Cell Switch Assembly</p> <p>Shutters Over Bus in Cell</p> <p>Breaker ID Nameplate - Feeder</p> <p>Strip Heaters in Breaker Compartment</p> <p>Shunt Close - Electrically Operated Feeder</p> <p>4A Contacts Auxiliary Switch</p> <p>Closing Coil (XF)</p> <p>Shunt Trip - Electrically Operated Feeder</p> <p>Special Records:</p> <p>Breaker Padlock Attachment on Circuit Breaker</p> <p>Spring Charging Motor (MCH)</p> <p>TAG 5135759 - 1 - BE1-700V 27/47/59 Relay</p> <p>TAG 4987393 - 1 - Standing shunt trip and reclose</p> <p>TAG Q2C - 1 - PM 870RD Meter</p> <p>TAG 5135759 - 1 - Custom Door</p> <p>4000A, 4W, Mechanical 1-Hole Lugs</p> <p>Cell - 2 BC</p>
2.2	<p>4000A, NW40H2, Electrically Operated Feeder Breaker</p> <p>DESCRIPTION: CBU1</p> <p>Power Measurement Unit (6.0P), LSIG</p> <p>Modbus Communications - Feeder</p> <p>Sensor Rating Plug - A</p> <p>Plug Dial Setting - 1.0</p> <p>Trip Setting (Amps) - 4000</p> <p>3C Connected, 1C Test, 2C Disconnected Cell Switch Assembly</p>

	Shutters Over Bus in Cell Breaker ID Nameplate - Feeder Strip Heaters in Breaker Compartment Shunt Close - Electrically Operated Feeder 4A Contacts Auxiliary Switch Closing Coil (XF) Shunt Trip - Electrically Operated Feeder Special Records: Breaker Padlock Attachment on Circuit Breaker Spring Charging Motor (MCH) TAG 5135759 - 1 - BE1-700V 27/47/59 Relay TAG 4987393 - 1 - Standing shunt trip and reclose TAG Q2C - 1 - PM 870RD Meter TAG 5135759 - 1 - Custom Door 4000A, 4W, Mechanical 1-Hole Lugs Cell - 3 BC
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Equipment	Manufacturer	Make/Model	Location
3. PARALLELING SWITCHGEAR	ASCO Power Technologies	Synchroper 7000 Series Digital Generator Paralleling Switchgear	PARALLELING SWITCHGEAR, UTILITY BUILDING

Specifications:

3.1	<p>Master Section: Dimensions: 36"W x 72"D x 94"H</p> <ul style="list-style-type: none"> • 17 inch LCD touch screen – Password Protected – Operator Interface Panel (OIP) • Portable memory in the form of a Compact FLASH slot to accommodate flash memory. • Redundant Programmable Logic Controller – GE Type RX3i with Ethernet communications • Synchroscope • Synchroscope plant selector switch • Voltmeter, 4-1/2", 1% accuracy, 600V scale • Ammeter, 4-1/2", 1% accuracy, scale as required • Frequency meter, 4-1/2", 1% accuracy, 55-65Hz. scale • Wattmeter, 4-1/2", 1% accuracy, scale as required • Ammeter 4 position phase selector switch - Shallco • Voltmeter 7 position phase and neutral selector switch - Shallco
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	<ul style="list-style-type: none"> • 3-Summing Current transformers ratio as required - ITI • Potential transformer assembly, open-delta, ratio as required • Potential transformer assembly, wye-wye, ratio as required • Priority load control • Load add/shed control push-button (One for each priority except priority one) • Bus alarm reset • System test switch located behind locked doors • Manual paralleling controls (consisting of Pushbutton and Selector Switch mounted on the front door of Master control) • Two 24 point LED type system status indicating panels with push-button lamp test • Solid state DC control power selector system • DC – DC Converter • Laminated mimic bus • Strip heater and thermostat • One Transient Voltage Surge Suppressor (TVSS), ASCO, series 451, 200KA with rotary disconnect switch, audible alarm, silencing circuitry and surge counter • Alarm horn with silencing push-button and circuitry to allow subsequent malfunctions to resound alarm • Miscellaneous components: (terminal blocks, control wiring, control relays, wire markers, nameplates, etc.) <p>Section 1</p>
<p>3.2</p>	<p>Generator #1 Section: Dimensions: 26”W x 72”D x 94”H</p> <ul style="list-style-type: none"> • Generator circuit breaker (Square D, NW/ANSI/UL1066 rated, 4-pole, 5.0P trip with power metering and modbus communication), 2000A frame, 1600A trip, electrically operated, drawout, 120VAC charge and close, 24VDC shunt trip, bell alarm, 4a & 4b auxiliary contacts and cover for manual close pushbutton with long delay, short delay, instantaneous overcurrent trip and ground fault indication only functions (65KAIC) • AC Power Meter without Display (integrated with Generator Protective functions and Metering, to be monitored and controlled from Master OIP) • Programmable Logic Controller • Two 24 Point LED type generator status indicating panels with pushbutton lamp test • Voltmeter, 4-1/2", 1% accuracy, 600V scale • Ammeter, 4-1/2", 1% accuracy, scale as required • Frequency meter, 4-1/2", 1% accuracy, 55-65Hz. scale • Wattmeter, 4-1/2", 1% accuracy, scale as required • Ammeter 4 position phase selector switch - Shallco • Voltmeter 7 position phase and neutral selector switch - Shallco • Synchronizing mode selector switch with permissive, check, off and run positions • Three current transformers ratio as required • Potential transformer assembly, open-delta, ratio as required

	<ul style="list-style-type: none"> • Potential transformer assembly, wye-wye, ratio as required • Control Power Transformer – 500VA • Emergency Stop Pushbutton • Position Engine Generator Control Switch with the following: Lockout/Reset, Off/Cool down, Automatic, Test Off-Line, Test On. • Mechanical Cu/Al lugs, set screw type, two hole mounting, scaled to size. • Main bus, 4000A, fully silver-plated copper, 3-phase, 4-wire full neutral with 25% ground <p>Section 2</p>
<p>3.3</p>	<p>Generator #2 Section: Dimensions: 26”W x 72”D x 94”H</p> <ul style="list-style-type: none"> • Generator circuit breaker (Square D, NW/ANSI/UL1066 rated, 4-pole, 5.0P trip with power metering and modbus communication), 2000A frame, 1600A trip, electrically operated, drawout, 120VAC charge and close, 24VDC shunt trip, bell alarm, 4a & 4b auxiliary contacts and cover for manual close pushbutton with long delay, short delay, instantaneous overcurrent trip and ground fault indication only functions (65KAIC) • AC Power Meter without Display (integrated with Generator Protective functions and Metering, to be monitored and controlled from Master OIP) • Programmable Logic Controller • Two 24 Point LED type generator status indicating panels with pushbutton lamp test • Voltmeter, 4-1/2", 1% accuracy, 600V scale • Ammeter, 4-1/2", 1% accuracy, scale as required • Frequency meter, 4-1/2", 1% accuracy, 55-65Hz. scale • Wattmeter, 4-1/2", 1% accuracy, scale as required • Ammeter 4 position phase selector switch - Shallco • Voltmeter 7 position phase and neutral selector switch - Shallco • Synchronizing mode selector switch with permissive, check, off and run positions • Three current transformers ratio as required • Potential transformer assembly, open-delta, ratio as required • Potential transformer assembly, wye-wye, ratio as required • Control Power Transformer – 500VA • Emergency Stop Pushbutton • Position Engine Generator Control Switch with the following: Lockout/Reset, Off/Cool down, Test Off-Line, Test On-Line, • Mechanical Cu/Al lugs, set screw type, two hole mounting, scaled to size. • Main bus, 4000A, fully silver-plated copper, 3-phase, 4-wire full neutral with 25% ground <p>Section 3</p>
<p>3.4</p>	<p>Distribution Section: Dimensions - 36”W x 72”D x 94”H)</p> <ul style="list-style-type: none"> • Distribution circuit breaker (Square D, NW/ANSI/UL1066 rated, 4-pole, 5.0P trip with power metering and modbus communication), 4000A frame, 4000A trip, electrically operated, drawout, 120VAC charge and close,

	<p>24VDC shunt trip, 4a & 4b auxiliary contacts with long delay, short delay, instantaneous overcurrent and ground fault indication only functions (85KAIC)</p> <ul style="list-style-type: none"> • Circuit breaker control switch with open/closed/tripped LEDs - Shallco • Control power transformers – 500VA • Cu/Al lugs, mechanical set screw type, two hole mounting, scaled to size • Laminated mimic bus • Strip heater and thermostat • Main bus, 4000A, fully silver-plated copper, 3-phase, 4-wire full neutral with 25% ground <p>Section 4</p>
<p>3.5</p>	<p>Load Bank Section: Dimensions - 26”W x 72”D x 94”H)</p> <ul style="list-style-type: none"> • Load Bank circuit breaker (Square D, NW/ANSI/UL1066 rated, 3-pole, 5.0P trip with power metering and modbus communication), 2000A frame, 1600A trip, electrically operated, drawout, 120VAC charge and close, 24VDC shunt trip, 4a & 4b auxiliary contacts with long delay, short delay, instantaneous overcurrent and ground fault indication only functions (65KAIC) • Circuit breaker control switch with open/closed/tripped LEDs - Shallco • Control power transformers – 500VA • Cu/Al lugs, mechanical set screw type, two hole mounting, scaled to size • Laminated mimic bus • Strip heater and thermostat • Main bus, 4000A, fully silver-plated copper, 3-phase, 4-wire full neutral with 25% ground <p>Section 5</p>
<p>3.6</p>	<p>Distribution Section: Dimensions - 36”W x 72”D x 94”H)</p> <ul style="list-style-type: none"> • 1-Distribution circuit breaker (Square D, NW/ANSI/UL1066 rated, 4-pole, 5.0P trip with power metering and modbus communication), 4000A frame, 4000A trip, electrically operated, drawout, 120VAC charge and close, 24VDC shunt trip, 4a & 4b auxiliary contacts with long delay, short delay, instantaneous overcurrent and ground fault indication only functions (85KAIC) • 1 - Circuit breaker control switches with open/closed/tripped LEDs - Shallco • 1-Control power transformers – 500VA • Cu/Al lugs, mechanical set screw type, two hole mounting, scaled to size • Laminated mimic bus • Strip heater and thermostat • Main bus, 4000A, fully silver-plated copper, 3-phase, 4-wire full neutral with 25% ground <p>Section 6</p>
<p>3.7</p>	<p>Generator #3 Section:</p>

	<p>Dimensions: 26”W x 72”D x 94”H</p> <ul style="list-style-type: none"> • Generator circuit breaker (Square D, NW/ANSI/UL1066 rated, 4-pole, 5.0P trip with power metering and modbus communication), 2000A frame, 1600A trip, electrically operated, drawout, 120VAC charge and close, 24VDC shunt trip, bell alarm, 4a & 4b auxiliary contacts and cover for manual close pushbutton with long delay, short delay, instantaneous overcurrent trip and ground fault indication only functions (65KAIC) • AC Power Meter without Display (integrated with Generator Protective functions and Metering, to be monitored and controlled from Master OIP) • Programmable Logic Controller • Two 24 Point LED type generator status indicating panels with pushbutton lamp test • Voltmeter, 4-1/2", 1% accuracy, 600V scale • Ammeter, 4-1/2", 1% accuracy, scale as required • Frequency meter, 4-1/2", 1% accuracy, 55-65Hz. scale • Wattmeter, 4-1/2", 1% accuracy, scale as required Ammeter 4 position phase selector switch - Shallco • Voltmeter 7 position phase and neutral selector switch - Shallco • Synchronizing mode selector switch with permissive, check, off and run positions • Three current transformers ratio as required • Potential transformer assembly, open-delta, ratio as required • Potential transformer assembly, wye-wye, ratio as required • Control Power Transformer – 500VA • Emergency Stop Pushbutton • Position Engine Generator Control Switch with the following: Lockout/Reset, Off/Cool down, Test Off-Line, Test On-Line, • Mechanical Cu/Al lugs, set screw type, two hole mounting, scaled to size. • Main bus, 4000A, fully silver-plated copper, 3-phase, 4-wire full neutral with 25% ground <p>Section 7</p>
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Equipment	Manufacturer	Make/Model	Location
4. MAIN SWITCHBOARD MSB E/U	SQUARE D a brand of Schneider Electric	SQUARE D CUSTOM QED SWITCHBOARD	MAIN SWITCHBOARD, CHANCERY BUILDING
Specifications:			
	<p>4 Square D Power Style Custom Switchboard Designed and Tested in accordance with: UL 891/NATIONAL ELECTRIC CODE/NEMA PB-2 System Voltage - 400Y/230V 3Ph 4W 50Hz Source Description - Main-Tie-Main Split Lineup System Ampacity - 3000A Bussing - Copper Plated with Silver Neutral Bus - 100% Max Available Fault Current (RMS) - 42kA Enclosure - Type 1 Accessibility: Front, Left Side, Right Side and Rear Taped Horizontal Through Bus Exterior Paint Color - ANSI 49 Mimic Nameplate - Power Flow Plastic Ground Lug provided for each device Barriers between Sections - Steel Optional Copper Ground Bus Lineup 1 BTU: 25237 Transparent Ready - Network Communications Only Lineup 2 BTU: 20455 Auto Throw-over System Transparent Ready - Modbus TCP - Ethernet Copper . Standard Main-Tie-Main 100 Base T Copper Hub System . Transition Delay - 2 (SEC) . Source Loss Delay - 3 (SEC) . Utility Stabilization Delay - 10 (SEC) . Transition Type – Open</p> <p>Dimensions ----- 8 - 36" Wide Section(s) 2 - 42" Wide Section(s) 1 - 24" Wide Section(s)</p>		

	<p>11 - 48" Deep Enclosure(s) Dimensions Lineup 1: 222.00" W X 48" D X 91.5" H Dimensions Lineup 2: 174.00" W X 48" D X 91.5" H Approximate Weight: 12295.00 Incoming Requirements ----- Suitable for Use As Service Entrance - Incoming One Entry Point: Section 1, Through the Bottom Connection Type: Cable Power Meter - PM-870RD 3 CTs Power Meter - 3 phase 4 wire wye 480Y/277 Ethernet Communications Card Suitable for Use As Service Entrance - Incoming Two Entry Point: Section 11, Through the Bottom Connection Type: Cable Power Meter - PM-870RD 3 CTs Power Meter - 3 phase 4 wire wye 480Y/277 Ethernet Communications Card</p>
<p>4.1</p>	<p>Main One: ----- 1 - 3000AF/3000AT 100% 4 Pole Stored Energy, Drawout Mounted Circuit Breaker, UL: Type NW Device Associated to Incoming One DESCRIPTION: CBA Common Main Features: Power Trip Unit, Long Time, Short Time, Instantaneous, Ground Fault Circuit Breaker Modbus Communications Wired Cradle Modbus Communications Wired Overcurrent Trip Switch 1A/1B Form C Contact (SDE) Second Shunt Trip without Communications - 120Vac Padlock Attachment Shunt Trip without Communications - 120Vac Auxiliary Switches 12A-12B Contact Wear Indication Via Modbus Communications Drawout Crank Temperature Indication</p>

	<p>Cradle Position Switches 1A/1B Form C</p> <p>(C/T/D)</p> <p>Contact Wear Indication - Visual</p> <p>Spring Charging Motor - 120Vac</p> <p>Padlock Provisions on Cradle</p> <p>Programmable Contact Module, 2 Form C</p> <p>Contacts</p> <p>Cradle Cell Keying</p> <p>Shunt Close without Communications - 120Vac</p> <p>Nameplate - White Surface / Black Letters</p>
<p>4.2</p>	<p>Main Two:</p> <p>-----</p> <p>1 - 3000AF/3000AT 100% 4 Pole Stored Energy, Drawout Mounted Circuit Breaker, UL: Type NW</p> <p>Device Associated to Incoming Two</p> <p>DESCRIPTION: CBC</p> <p>Common Main Features:</p> <p>Power Trip Unit, Long Time, Short Time, Instantaneous, Ground Fault</p> <p>Circuit Breaker Modbus Communications Wired</p> <p>Cradle Modbus Communications Wired</p> <p>Overcurrent Trip Switch 1A/1B Form C</p> <p>Contact (SDE)</p> <p>Second Shunt Trip without Communications - 120Vac</p> <p>Padlock Attachment</p> <p>Shunt Trip without Communications - 120Vac</p> <p>Auxiliary Switches 12A-12B</p> <p>Contact Wear Indication Via Modbus Communications</p> <p>Drawout Crank</p> <p>Temperature Indication</p> <p>Cradle Position Switches 1A/1B Form C</p> <p>(C/T/D)</p> <p>Contact Wear Indication - Visual</p> <p>Spring Charging Motor - 120Vac</p> <p>Padlock Provisions on Cradle</p> <p>Programmable Contact Module, 2 Form C</p> <p>Contacts</p> <p>Cradle Cell Keying</p> <p>Shunt Close without Communications - 120Vac</p> <p>Nameplate - White Surface / Black Letters</p>
<p>4.3</p>	<p>Ties</p>

	<p>-----</p> <p>1 - 3000AF/3000AT 100% 4 Pole Stored Energy, Drawout Mounted Circuit Breaker, UL: Type NW</p> <p>DESCRIPTION: CBB</p> <p>Power Trip Unit, Long Time, Short Time, Instantaneous, Ground Fault</p> <p>Circuit Breaker Modbus Communications</p> <p>Wired</p> <p>Cradle Modbus Communications Wired</p> <p>Overcurrent Trip Switch 1A/1B Form C</p> <p>Contact (SDE)</p> <p>Second Shunt Trip without Communications - 120Vac</p> <p>Padlock Attachment</p> <p>Shunt Trip without Communications - 120Vac</p> <p>Auxiliary Switches 12A-12B</p> <p>Contact Wear Indication Via Modbus Communications</p> <p>Drawout Crank</p> <p>Temperature Indication</p> <p>Cradle Position Switches 1A/1B Form C (C/T/D)</p> <p>Contact Wear Indication - Visual</p> <p>Spring Charging Motor - 120Vac</p> <p>Padlock Provisions on Cradle</p> <p>Programmable Contact Module, 2 Form C</p> <p>Contacts</p> <p>External Voltage Sensing</p> <p>Cradle Cell Keying</p> <p>Shunt Close without Communications - 120Vac</p> <p>Nameplate - White Surface / Black Letters</p>
<p>4.4</p>	<p>Feeders</p> <p>-----</p> <p>Devices Associated to Main 1:</p> <p>6 - 100AT 400V 80% Rated 3 Pole UL, Group Mounted Thermal Magnetic Prepared Space: Type HJ</p> <p>3 - 250AS/200AT 400V 80% Rated 65 kA 3 Pole UL, Group Mounted Electronic Trip</p> <p>Circuit Breaker: Type LX</p> <p>Standard Trip Unit: Long Time, Short Time, Instantaneous, Ground Fault</p> <p>Ground Fault Push-To-Test Feature</p> <p>Alarm Switch - 1A</p>

	<p>Auxiliary Switch 1A/1B - Form C Nameplate - White Surface / Black Letters 7 - 400AS/400AT 400V 80% Rated 65 kA 3 Pole UL, Group Mounted Electronic Trip Circuit Breaker: Type LX Standard Trip Unit: Long Time, Short Time, Instantaneous, Ground Fault Ground Fault Push-To-Test Feature Alarm Switch - 1A</p> <p>Auxiliary Switch 1A/1B - Form C Nameplate - White Surface / Black Letters 1 - 30AT 400V 80% Rated 65 kA 3 Pole UL, Group Mounted Thermal Magnetic Circuit Breaker: Type HJ Alarm Switch - 1A</p> <p>Auxiliary Switch 1A/1B - Form C Nameplate - White Surface / Black Letters 8 - 250AS/100AT 400V 80% Rated 65 kA 3 Pole UL, Group Mounted Electronic Trip Circuit Breaker: Type LX Standard Trip Unit: Long Time, Short Time, Instantaneous, Ground Fault Ground Fault Push-To-Test Feature Alarm Switch - 1A</p> <p>Auxiliary Switch 1A/1B - Form C Nameplate - White Surface / Black Letters 1 - 250AS/60AT 400V 80% Rated 65 kA 3 Pole UL, Group Mounted Electronic Trip Circuit Breaker: Type LX Standard Trip Unit: Long Time, Short Time, Instantaneous, Ground Fault Ground Fault Push-To-Test Feature Alarm Switch - 1A</p> <p>Auxiliary Switch 1A/1B - Form C Nameplate - White Surface / Black Letters 1 - 800AS/800AT 400V 80% Rated 65 kA 3 Pole UL, Group Mounted Electronic Trip Circuit Breaker: Type PJ Power Trip Unit, Long Time, Short Time, Instantaneous, Ground Fault Circuit Breaker Modbus Communications Wired Alarm Switch 1A/1B Form C Auxiliary Switch 1A/1B - Form C Nameplate - White Surface / Black Letters</p>
<p>4.5</p>	<p>Feeders -----</p>

Devices Associated to Main 2:

**11 - 400AS/400AT 400V 80% Rated 65 kA 3 Pole
UL, Group Mounted Electronic Trip**

Circuit Breaker: Type LX

Standard Trip Unit: Long Time, Short

Time, Instantaneous, Ground Fault

Ground Fault Push-To-Test Feature

Alarm Switch - 1A

2 - 250AS/200AT 400V 80% Rated 65 kA 3 Pole

UL, Group Mounted Electronic Trip

Circuit Breaker: Type LX

Standard Trip Unit: Long Time, Short

Time, Instantaneous, Ground Fault

Ground Fault Push-To-Test Feature

Alarm Switch - 1A

2 - 800AS/800AT 400V 80% Rated 65 kA 3 Pole

UL, Group Mounted Electronic Trip

Circuit Breaker: Type PJ

Power Trip Unit, Long Time, Short Time,

Instantaneous, Ground Fault

Circuit Breaker Modbus Communications

Wired

Alarm Switch 1A/1B Form C

2 - 250AS/100AT 400V 80% Rated 65 kA 3 Pole

UL, Group Mounted Electronic Trip

Circuit Breaker: Type LX

Standard Trip Unit: Long Time, Short

Time, Instantaneous, Ground Fault

Ground Fault Push-To-Test Feature

Alarm Switch - 1A

1 - 30AT 400V 80% Rated 65 kA 3 Pole UL,

Group Mounted Thermal Magnetic Circuit

Breaker: Type HJ

Alarm Switch - 1A

Common Feeder Features:

Auxiliary Switch 1A/1B - Form C

Nameplate - White Surface / Black Letters

END OF STATEMENT OF WORK

**Preventive Maintenance Contract
Scope of Work
For
Electrical Switchgear**

**United States Embassy
Belgrade, Serbia
2015**

Exhibit B - Extracts from Manufacturer's Recommendation

Note: Extracts are based on Manufacturer's Installation Bulletins for the equipment which is subject of Maintenance Contract. Detailed technical documentation will be provided by designated technical personnel at Post.

Power-Zone[®] 4

Low Voltage, Metal-Enclosed Drawout Switchgear with Masterpact[®] Low Voltage Power Circuit Breakers Class 6037

Instruction Bulletin

80298-002-06

Retain for future use.



Section 7—Maintaining the Switchgear

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Inspect and perform preventive maintenance only on switchgear and equipment to which power has been turned to the OFF position, disconnected, and electrically isolated (unless otherwise specified) so that no accidental contact can be made with energized parts.
- Follow safety related work practices as described in NFPA 70E - Standard for Electrical Safety Requirements for Employee Workplaces and OSHA Standards - 29 CFR Part 1910 Subpart S - Electrical.

Failure to follow these instructions will result in death or serious injury.

Periodic maintenance on the switchgear includes cleaning, lubrication, and exercising component parts. The interval between maintenance checks can vary depending upon the amount of usage and environmental conditions of each installation. The maximum recommended inspection interval is one year. This definition for periodic maintenance applies throughout this manual, unless otherwise noted.

Always inspect the switchgear after a fault. (Refer to “Section 8—Adverse Circumstances”, beginning on page 52). Service manuals for the various disconnecting and overcurrent devices mounted in the switchgear are available through Square D Services at 1-888-778-2733.

Switchgear Inspection Guidelines

In general, the following guidelines may be followed. However, as conditions vary, the maintenance program must also be adapted to provide a long life for the equipment and the electrical system.

Periodic inspection of the equipment will be necessary to establish the conditions to which the switchgear are subjected (see “Ideal Operating Conditions” below, and “Normal Operating Conditions” and “Harsh Operating Conditions” on page 49). Perform inspections and maintenance according to these conditions.

Inspect the equipment immediately after abnormal or stressful operating conditions occur or after the equipment experiences a fault current.

These inspection and maintenance guidelines cover only Square D® brand Power-Zone 4 switchgear. If conditions cannot be established and documented, then the harsh operating condition must be assumed.

These inspection and maintenance guidelines do not warrant any field connections, field modifications, or supersede any maintenance procedures or schedules recommended by component manufacturers. For more information regarding the warranty of this product, refer to “Schneider Electric Conditions of Sale.”

Ideal Operating Conditions

When the equipment is operating under the “ideal operating conditions” outlined below, it should be able to operate without maintenance for a period of five years.

Environmental

- Ambient room temperature range is 50 °F (10 °C) to 104 °F (40 °C).
- Altitude is less than 6600 ft (2012 m).
- Equipment is located indoors in a climate controlled room (heat/AC).
- Absence of dust or debris either airborne or settled.
- Relative humidity averaging less than 70%.
- Absence of vibrations or seismic activity.

Circuit Loading

- Continuous loading (with 100% rated devices) is between 20–80% of the equipment ratings.
- Average loading not exceeding 70% of the equipment rating.
- Only resistive or continuous motor loads, no welding or jogging loads.
- Circuit breaker switching less than 15 cycles annually.
- Maximum of two circuit breaker trips due to overload or fault annually.

Equipment Installation

- Torque all busbar joints, lugs, and bolts to their appropriate tightness at installation.
- Securely tighten all control and communications wiring at installation.
- Follow pre-energizing checkout rigorously.

Normal Operating Conditions

When the equipment is operating under the “normal operating conditions” outlined below, it should be inspected and maintained every 1–3 years, or more frequently, based on the user’s experience.

Environmental

- Ambient room temperature is between -22 °F (-30 °C) and 104 °F (40 °C).
- Altitude is less than 6600 ft (2012 m).
- The effect of solar radiation is not significant.

NOTE: Refer to the principles outlined in IEEE Standard C37.24-1986 for additional information.

Circuit Loading

- Circuit breaker switching is no more than 200 cycles annually.
- Welding or jogging loads represents less than 15% of a circuit and/or equipment loading.

Equipment Installation

- Torque all busbar joints, lugs, and bolts to their appropriate tightness at installation.
- Securely tighten all control and communications wiring at installation.
- Follow pre-energizing checkout rigorously.

Harsh Operating Conditions

When the equipment is operating under the “harsh operating conditions” outlined below, it should be inspected and maintained every 6 months, or more frequently, based on the user’s experience.

Environmental

- Ambient room temperature is less than -22 °F (-30 °C) or greater than 104 °F (40 °C).
- Altitude exceeds 6600 ft (2012 m).
- The effect of solar radiation is significant.
- The equipment is exposed to hot and/or humid climate.
- The equipment is exposed to damaging fumes, vapors, steam, salt air, and/or oil vapors.
- The equipment is exposed to seismic shock or abnormal vibrations or tilting.

General Inspection and Cleaning

CAUTION

CONTAMINATION HAZARD

- Do not use an air hose to blow out the switchgear. The dust may settle inside relays and overcurrent devices, causing overheating and improper operation.
- Do not allow paint, chemicals, or petroleum-based solvents to contact plastics or insulating materials.

Failure to follow these instructions can result in equipment damage.

Bus Bar Joints, Lug Terminations, and Insulating Materials

CAUTION

PLATING DAMAGE HAZARD

- Do not sand or remove plating on any bus bar, splice bar, or terminal lug.
- Damage to plating can result in overheating. Replace damaged part. Contact Square D Services at 1-888-778-2733.

Failure to follow these instructions can result in equipment damage.

Circuit Loading

- The circuit breaker trips frequently due to overloading or fault.
- Circuit breaker switching exceeds 200 times annually.
- Welding loads or jogging loads represent greater than 15% of a circuit's load.

Equipment Installation

- Torque all busbar joints, lugs, and bolts to their appropriate tightness at installation.
- Securely tighten all control and communications wiring at installation.
- Follow pre-energizing checkout rigorously.

1. Vacuum the switchgear interior to remove any dirt or dust deposits. Wipe all bus bars, insulators, cables, and so forth, with a clean, dry, lint-free cloth.
2. Check the switchgear interior carefully for moisture, condensation build-up, or signs of any previous wetness. Moisture can cause insulation breakdown and rapid oxidation of current carrying parts. Inspect all conduit entrances and cracks between the enclosure panels for dripping leaks. Condensation in conduits may be a source of moisture and must not be allowed to drip onto live parts or insulating material. Take the necessary steps to eliminate the moisture and seal off all leaks.
3. Inspect the switchgear for any signs of overheating. Discoloration and flaking of insulation or metal parts are indications of overheating.
NOTE: If overheating occurs, be sure that all conditions that caused the overheating have been corrected. Loose or contaminated connections can cause overheating.
4. Check for signs of rodent nesting in the switchgear. If required, use a good exterminating technique in the general area of the switchgear.
NOTE: Do not place or use exterminating substances and chemicals inside the switchgear. Some of these products attract rodents.
5. Carefully inspect all devices for any visibly worn-out, cracked, or missing parts.
6. Open and close circuit breakers several times to verify they are working properly.
7. Verify that all key interlocks and door interlocking provisions are working properly.

1. Bus bar joints are maintenance-free. Do not retighten them after the pre-energizing checkout procedure is complete.
2. Check all bus bar joints and terminal lugs for any pitting, corrosion, or discoloration resulting from high temperatures or subjection to high fault conditions. If any damage has occurred, replace the bus bars or lugs. If cleaning is required, use Lectra-Clean®, made by CRC.
3. Inspect all insulating materials. Before re-energizing the switchgear, replace insulators having any visible damage (such as cracks).

Traveling Lifter Inspection and Maintenance Procedures

Lubrication

Inspect the traveling lifter for wear. These units were developed as quality products for intermittent use, not for continuous use. Frequent use increases lifter wear, but proper lubrication can extend service life.

Perform the following steps to lubricate the traveling lifter assembly.

1. Make sure a good film of lubrication is always present in appropriate places.
2. All wheels and rollers must be lubricated properly with a multi-purpose grease. Brush a high-quality, multi-purpose grease onto the worm gear assembly. Repeat this procedure, as necessary, to maintain a continuous film of grease over the face of these gears.
3. Never operate the winch with the worm gear assembly dry.
4. Lubricate all other points of friction as needed with a high-quality, medium-weight oil. Avoid over saturation that produces oil dripping.

Inspection and Maintenance

After the equipment has been lubricated, perform the following steps.

- ❑ Inspect all components for cracks, loose parts, and weather or chemical damage.
- ❑ If cracks or strain damage are suspected, remove the unit from service. If cracked components are detected, replace them before returning unit to use.
- ❑ Periodically check for distortion of the traveling lifter. If distortion is found:
 - Verify that the rails and sections are aligned.
 - Verify that the carriage and winch mechanism have been installed correctly.
 - Verify that the cable has been fastened securely to the winch drum.
 - Verify that the gears are well lubricated.

NOTE: For normal operation, use a heavy gear lubricant. In very dirty or gritty conditions, it is advisable to use a dry lubricant such as dry graphite to lubricate the gears. Never allow the gears to run dry.

- ❑ If applicable, remove handling means and any obstructions from the top of the unit that could inhibit operation of the traveling lifter.
- ❑ Thoroughly inspect the traveling lifter wire cable. Pay close attention to cable sections, such as parts passing over sheaves or wound on the drum, which are normally hidden during inspection or maintenance procedures. Contact Square D Services at 1-888-Square D (1-888-778-2733) if the cable shows any of the following signs of deterioration:
 - Kinking, crushing, cutting, or unstranding
 - Corroded, cracked, bent, or broken wires
 - Worn end connections
- ❑ Always keep the exterior finish in good condition to protect against corrosive damage. When damage is noticed, remove the finish to bare metal and refinish using a high-quality primer and finish coat.
- ❑ Be certain that all the warning labels are still in place and readable. If the warning labels become unreadable or are destroyed, contact your local Schneider Electric sales office.
- ❑ Do not repair any parts that are worn, cracked, deformed, misaligned, or severely corroded. Repairing parts does not ensure satisfactory or safe performance. Do not substitute other manufacturers' parts.
- ❑ Record all inspections and maintenance performed on the traveling lifter in a maintenance log. See "Section 10—Maintenance Log" on page 55.

Circuit Breaker Inspection Schedule

The inspection schedule for circuit breakers and trip units should be based on recommendations contained in the circuit breaker and trip units manuals.

Masterpact[®] NW Low-Voltage Power/Insulated Case Circuit Breaker

Instruction Bulletin

48049-106-10

Retain for future use.



Section 10—Testing, Maintenance and Troubleshooting

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.
- This equipment must be installed and serviced only by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- Replace all devices, doors and covers before turning on power to this equipment.

Failure to follow these instructions will result in death or serious injury.

Testing

Dielectric Testing Masterpact Circuit Breakers with Micrologic® P or H Trip Systems.

CAUTION

HAZARD OF EQUIPMENT DAMAGE

- Dielectric tests (high potential, insulation resistance, or Megger tests) may damage Micrologic P and H trip units.
- Remove rating plug from trip unit prior to testing.
- Replace trip unit if rating plug was not removed during tests or if trip unit was exposed to more than 700 Vac.

Failure to follow these instructions can result in equipment damage.

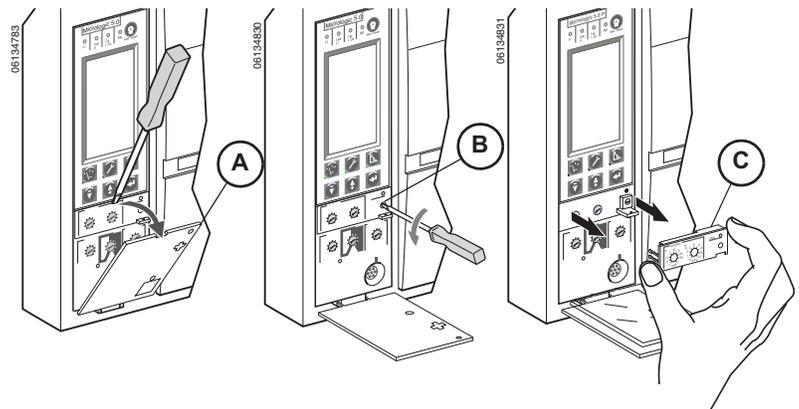
Dielectric tests (high potential, insulation resistance or Megger tests) are used to ensure the proper isolation and insulation between phases and between each phase and ground. The equipment used to conduct these tests creates a high-potential voltage (thousands of volts) to verify dielectric or insulation integrity.

The rating plug connects/disconnects the trip unit with the voltage connections in the circuit breaker. Before conducting any high-voltage tests, remove the rating plug as shown.

NOTE: Only Micrologic P and H trip units have phase voltage connections into the trip unit. For other types of trip units, it is not necessary to remove the rating plug prior to dielectric testing.

1. Open switch cover (A).
2. Unscrew rating plug mounting screw (B).
3. Remove rating plug (C).

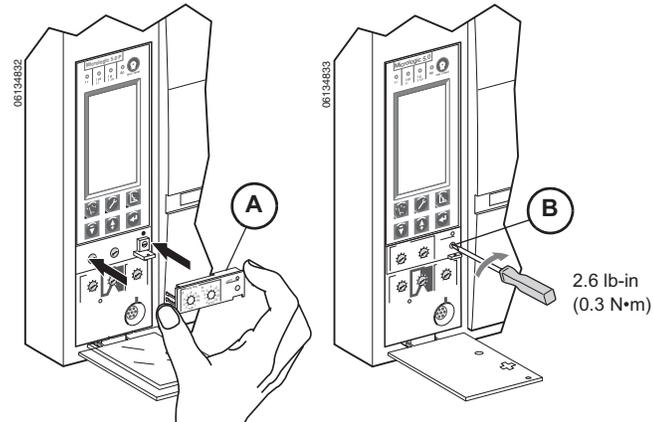
Figure 140: Removing Rating Plug



4. Replace rating plug (A).
5. Tighten rating plug mounting screw (B).

NOTE: If the rating plug is not installed, the circuit breaker will default to a long-time pickup setting of 0.4 x the sensor (In) and some of the advanced functions will not be operable.

Figure 141: Replacing Rating Plug



Trip Unit Testing

Circuit breaker trip unit operation can be tested using the hand-held test kit or the full-function test kit.

Primary injection testing is recommended to ensure that all trip system connections have been correctly made. Perform primary injection testing per the instructions in the *Field Testing and Maintenance Guide*, bulletin 48049-900-xx, where xx is 02 or higher.

Testing Ground-Fault

For ground-fault circuit breakers, test ground-fault push-to-test button.

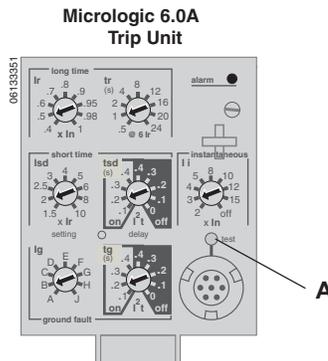
Make sure the trip unit is powered. The trip unit is powered if:

- Circuit breaker is closed or bottom fed and has more than 100 V of load voltage on two phases (P or H trip unit only).
- Full-function or hand-held test kit is connected and on.
- 24 Vdc external power supply is connected.
- An external voltage tap is installed and voltage of more than 100 V is present on two phases (P or H trip unit only).

If this is a radial (single-ended) system, press ground-fault push-to-test button (A). Circuit breaker will trip and trip unit ground-fault indicator light will come on.

NOTE: If a complete check of the ground-fault system is necessary, use primary injection testing. If the system has multiple sources and/or requires field connections at the job site, use primary injection testing.

Figure 142: Test Ground-Fault Push-to-Test



Maintenance

Routine Inspection

Perform routine inspection:

- When Masterpact circuit breaker is first placed in service.
- After the equipment has been de-energized for an extended period of time.

1. De-energize equipment.
2. Upon receipt of the equipment:
 - Disconnect all electrical switches (MCH, MX, XF, MN, RES, etc.)
 - Disconnect the adjustable rating plug of Micrologic 5.0P, 6.0P, 5.0H or 6.0H trip unit (if installed) (this disconnects the voltage plug)
 - Perform isolation and dielectric strength tests. Perform tests as described in the ANSI/IEEE C37 or UL 489 Standard
3. Inspect equipment:
 - Verify that the circuit breaker is correctly installed and that all power connections are properly torqued (see connection installation instructions)
 - Check that circuit breaker is installed in a clean environment free from all installation materials and debris (tools, electrical wiring, metallic particles, etc.)
4. Check compliance with installation diagram. Make sure that:
 - Circuit breaker interruption ratings comply with the installation diagram
 - Trip unit (type, size, settings) comply with the installation diagram
 - Optional accessories (charging motor, auxiliary switches, etc.) called for in the installation diagram are installed
 - The protected circuit is identified on the front of the circuit breaker
5. Check that accessories are correctly installed and wired. Verify that:
 - Circuit breaker accessories are properly installed
 - Auxiliary circuits are connected correctly
6. Verify operation:
 - Open and close the circuit breaker manually
 - Open and close the circuit breaker remotely, using the different auxiliary devices successively
 - Test operation of the trip unit, using hand-held test kit or the full-function test kit

Maintenance After Circuit Breaker Trips

1. Identify the cause(s) of the trip:
 - Do not reclose the circuit breaker until the cause of the fault has been identified and eliminated
 - Faults are reported locally or remotely by means of indicators and overcurrent trip switches (SDE).
 - There may be multiple causes. Precautions such as isolation and dielectric testing on the equipment may need to be taken, depending on the fault type and the installation's restart priority. For more information, refer to the *Field Testing and Maintenance Guide*, bulletin 48049-900-xx, where xx is 02 or higher.
2. If a short-circuit has occurred, inspect the circuit breaker. Make sure all power is disconnected prior to inspection.
 - Check the condition of the arc chambers (see page 91)
 - Check the condition of the contacts (see page 91)
 - Check the torque of the connections (see the connector installation instructions)
3. After eliminating the cause of the trip, reset the device.

Regular Maintenance

The following maintenance procedures are recommended.

De-energize and padlock the installation in accordance with applicable safety standards.

1. For Type A maintenance, the circuit breaker must be in the test position. See page 61.
2. For Type B maintenance, remove the circuit breaker from the cradle and place on a flat, steady surface before doing maintenance operations.

Table 24: Regular Maintenance

Frequency	Type	Operation	Described
Every year.	A	<ol style="list-style-type: none"> 1. Open and close circuit breaker manually. 2. Open and close circuit breaker remotely, using different auxiliary devices successively. 3. Test the racking and interlocks command sequences. 4. Use test kit to test trip unit operation. 	<ol style="list-style-type: none"> 1. See Section 6—Operation. 2. See Section 6—Operation. 3. See Section 6—Operation. 4. See test kit instruction bulletin.
Every two years or when the operation counter, if installed, reaches 100.	B	<ol style="list-style-type: none"> 1. Check condition of the arc chambers. 2. Check condition of the contacts. 3. Check connections for proper torque. 4. Check condition of clusters. 	<ol style="list-style-type: none"> 1. See Arc Chamber Maintenance, page 91 2. See Main Contact Maintenance, page 91. 3. See Section 3—Installation. 4. See “Cluster Inspection, Replacement and Lubrication” on page 16.
At the number of operations at rated current where part replacement is recommended. (UL 1066 [ANSI C37.50] only.)	B	Replace parts when service life is over. See Service Life of Parts table below.	Follow part maintenance instructions to replace parts, see pages 91.

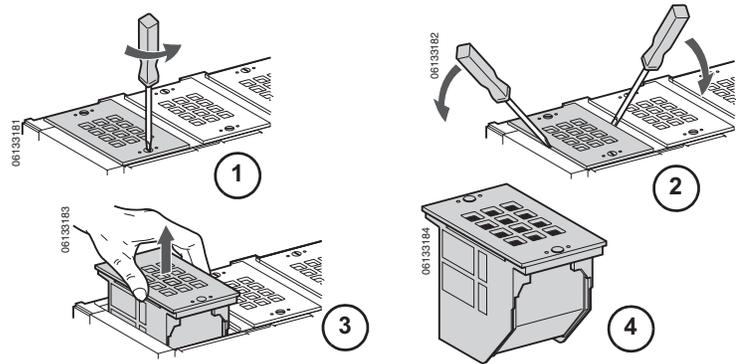
Table 5: Service Life of Parts

Circuit Breaker Type	Number of Electrical Operations (Open-Close Cycle)			
	Arc Chamber	Main Contacts	Spring-Charging Motor (MCH)	Trip Devices (MX/XF)
NW08–NW16 Types N/N1/H/H1/H2/H3/HA/HF	10,000	10,000	12,500	12,500
NW08–NW16 Types L/LF/L1/L1F/HB/HC	3,000	3,000	12,500	12,500
NW20 Types N/H/H1/H2/H3/HA/HF	8,000	8,000	10,000	12,500
NW20 Types L/LF/L1/L1F/HB/HC	3,000	3000	10,000	12,500
NW32 Types H1/H2/H3/HA/HF NW25–NW30 Types H/L/HB/HF	5,000	5,000	10,000	12,500
NW40B (W-Frame) Types H1/H2/H3/HA/HF	5,000	5,000	10,000	12,500
NW40–NW50–NW60 Types H/H2/H3/L/L1/HA/HB/HC/HF NW32 Type L1	1,500	1,500	5,000	12,500

Arc Chamber Maintenance

1. Unscrew the mounting screws.
 2. Use screwdrivers to lift arc chamber from circuit breaker.
 3. Remove arc chamber.
 4. Inspect arc chamber. Check that arc chamber body is not broken.
- If necessary, replace arc chamber.

Figure 143: Arc Chamber Maintenance



Main Contact Maintenance

If the trip unit has a maintenance indicator, there is no need to check the contacts on a periodic basis. If the trip unit does not have a maintenance indicator, check contacts for wear.

1. Remove the arc chambers.
2. Close the circuit breaker and check the condition of the contacts.

If contacts are worn:

- For UL 1066 Listed (ANSI C37.50) circuit breakers, contact field office for replacement information.
- For UL 489 Listed circuit breakers, replace circuit breaker.

Table 25: Contact Wear

Standard	Frame Size	Interruption Type	Poles	New Contacts	Contacts Need to be Replaced
ANSI	250	H1/H2/H3/N1	3P		
	3200-4000b	H2/H3	3P		
	800-1600	N1	4P		
	800-2000	H1/HA	4P		
	800-2000	H2/H3/HF	3P/4P		
	3200	H1/HA/H2/H3/HF	4P		
	3200	HF	3P/4P		
UL	250	H/N	3P		
	2000-3000	L/HB	3P		
	800-3000	H/HF	3/4P/4P RHN		
	800-2000	N	3P/4P		
ANSI	250	L1/L1F	3P		
	800-2000	H1/HA/L1/HC/L1F	3P		
	3200-5000	L1/HC	3P		
	4000-5000	H2/HA/H3/HF	3P/4P		
	800-1600	N1	3P		
	3200-4000b	H1/HA	3P		
UL	250	L/LF	3P		
	4000-6000	H/HF	3P/4P/4P RHN		
	4000-6000	L/HB	3P		
	800-1600	L/HB	3P		
	800-2000	LF	3P		

Cluster Inspection and Lubrication

See “Cluster Inspection, Replacement and Lubrication” on page 16.

Troubleshooting

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.
- This equipment must be installed and serviced only by qualified electrical personnel.
- Troubleshooting may require energizing auxiliary devices with a test power supply. Make sure that the power supply is off before connecting or disconnecting it to the auxiliary device.
- Do not touch the terminals of the device during the test.

Failure to follow these instructions will result in death or serious injury.

Problem	Probable Causes	Solutions
Circuit breaker is open but fault trip reset button is not out.	<ol style="list-style-type: none"> 1. Voltage not present or the undervoltage release (MN or MNR) is damaged. 2. A load shedding order was sent by another device. 3. Shunt trip (MX) terminals show nuisance voltage. 	<ol style="list-style-type: none"> 1. Check voltage. Replace damaged undervoltage release. 2. Check load on mains. Check mains device settings. 3. Determine where voltage originated.
The circuit breaker opens instantaneously when closed and fault trip reset button is out.	<ol style="list-style-type: none"> 1. Short circuit. 2. Transient current is too high when closing is attempted. 3. Thermal imaging. 	<ol style="list-style-type: none"> 1. Eliminate fault; check condition of circuit breaker before returning it to service. 2. Modify network or change the setting on the trip unit. 3. Consult instruction bulletin shipped with the trip unit.
Circuit breaker cannot be opened remotely but can be opened manually.	<ol style="list-style-type: none"> 1. Supply voltage from shunt trip(s) (MX) is too low: $V < 0.7V_n$. 2. Defective electrical circuit on undervoltage release (MN or MNR). 	<ol style="list-style-type: none"> 1. Check supply voltage, apply a voltage of between 0.7 and 1.1 V_n. Check that shunt close(s) are functioning. 2. Cut all power to undervoltage release: If circuit breaker does not open check installation of undervoltage release. Replace if necessary. If circuit breaker does open, supply power to undervoltage release and reclose circuit breaker. Slowly reduce voltage until circuit breaker trips. If tripping is not between 0.35 and 0.7 V_n, replace undervoltage trip.
Circuit breaker cannot be opened manually.	<ol style="list-style-type: none"> 1. Damaged mechanism. 2. Main circuits have welded together. 	<ol style="list-style-type: none"> 1. Contact field office. 2. Contact field office.
Circuit breaker cannot be closed manually or remotely.	<ol style="list-style-type: none"> 1. Closing on a short circuit. 2. Fault trip reset button has not been reset. 3. Incomplete device reconnection. 4. Anti-pumping function. 5. Circuit breaker closing spring was not recharged. 6. Power on shunt close (XF). 7. Power to shunt trip (MX). 8. Insufficient power to undervoltage release (MN) or it is defective. 9. Circuit breaker is locked in open position. 10. Circuit breaker is interlocked. 	<ol style="list-style-type: none"> 1. Eliminate fault. Check condition of circuit breaker before returning it to service. 2. Reset fault trip reset button. 3. Connect device completely. 4. De-energize and then re-energize shunt close (XF). 5. Check power supply to spring charging motor. Verify that manual charge is operating. Replace spring charging motor if necessary. 6. De-energize shunt close (XF). Re-energize the shunt close only if the circuit breaker is ready to close. 7. Remove power from shunt trip. 8. Supply voltage $V > 0.85V_n$ to auxiliary switch, then try to close circuit breaker via shunt close (XF). 9. Determine whether closing fault is abnormal. 10. Remove interlock.
Circuit breaker cannot be closed remotely but can be closed manually.	<ol style="list-style-type: none"> 1. Voltage to shunt close (XF) is inadequate. 2. Shunt close (XF) is on an open circuit. 	<ol style="list-style-type: none"> 1. Check shunt close supply voltage (U between 0.85 and 1.1 V_n). 2. Replace shunt close.
Circuit breaker cannot be recharged electrically.	Supply voltage to spring-charging motor is inadequate.	<p>Check supply voltage.</p> <p>Check spring-charging motor electrical circuit.</p> <p>Perform a manual reset. If there is a problem, the mechanism is defective. Contact the local field office. If there is not a problem, then the spring charging motor is damaged. Replace it.</p>

Continued on next page

Problem	Probable Causes	Solutions
Impossible to insert racking handle to connect or disconnect drawout circuit breaker.	<ol style="list-style-type: none"> 1. Push to open button is not held in. 2. There is a padlock or interlock in place. 3. Pull-out rails have not been pushed all the way into cradle. 4. Door is not closed. 	<ol style="list-style-type: none"> 1. Hold in Push to open button while inserting racking handle. 2. Remove padlock or interlock. 3. Push rails in as far as they will go. 4. Close door.
Right rail of drawout circuit breaker cannot be pulled out.	<ol style="list-style-type: none"> 1. Racking handle is inserted. 2. Circuit breaker is not in disconnected position. 3. There is a padlock or interlock in place. 	<ol style="list-style-type: none"> 1. Remove and store racking handle. 2. Place circuit breaker in disconnected position. 3. Remove padlock or interlock.
Drawout circuit breaker cannot be placed in connected position.	<ol style="list-style-type: none"> 1. Cradle and circuit breaker do not match. 2. Clusters are improperly positioned. 3. Safety shutters are interlocked. 	<ol style="list-style-type: none"> 1. Check that circuit breaker and cradle are appropriate. If OK, check rejection features installed on cradle and circuit breaker. 2. Reposition clusters, see "Cluster Inspection, Replacement and Lubrication" on page 16. 3. Remove interlock(s).

ENGLISH

Micrologic® 5.0P and 6.0P Electronic Trip Units v PLogic-2002-AA and Later

Instruction Bulletin

48049-137-05

Retain for Future Use.



Section 7—Battery Replacement

Circuit Breaker Disconnection

Disconnect circuit breaker as directed in the circuit breaker instruction bulletin shipped with the circuit breaker.

Accessory Cover Removal

Remove circuit breaker accessory cover as directed in the Install Accessories section of the circuit breaker instruction bulletin shipped with the circuit breaker.

Withstand Module Shifting

NOTE: R-frame and NS1600b–NS3200 circuit breakers only.

Loosen screws (A) securing withstand module (B). Swing module to side to access trip unit battery cover. Do not remove withstand module connector.

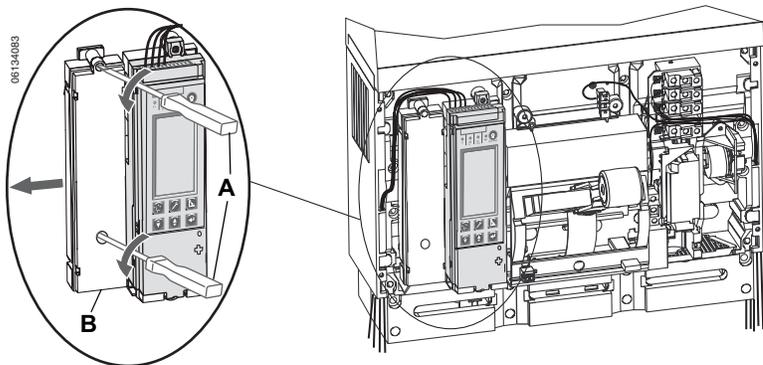
⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.
- This equipment must be installed and serviced only by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment. Follow instructions shipped with circuit breaker to disconnect and reconnect circuit breaker.
- Replace all devices, doors and covers before returning equipment to service.

Failure to follow this instruction will result in death or serious injury.

Figure 97: Shift Withstand Module



Battery Replacement

1. Insert small screwdriver blade into battery housing cover notch and rotate to slide battery housing cover (A) out of trip unit.

2. Remove battery (A).
3. Insert new battery (B). Make sure that the polarity is correct.
4. Replace battery housing cover (C).

Figure 98: Remove Battery Cover

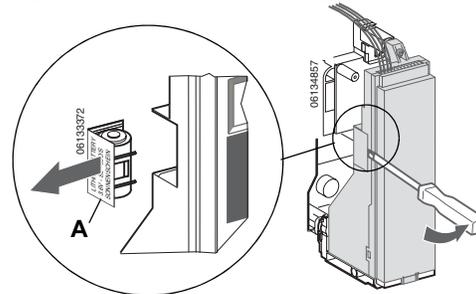
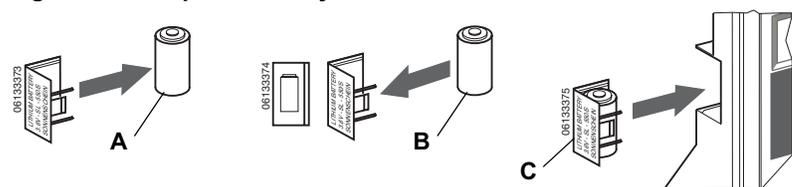


Figure 99: Replace Battery

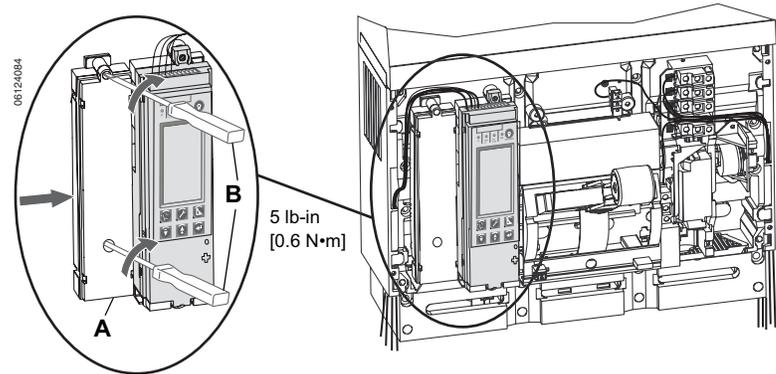


Withstand Module Replacement

NOTE: R-frame and NS1600b–NS3200 circuit breakers only.

Replace withstand module (A). Tighten screws (B) securing withstand module.

Figure 100: Replace Withstand Module



Accessory Cover Replacement

Replace circuit breaker accessory cover as directed in the Install Accessories section of the circuit breaker instruction bulletin shipped with the circuit breaker.

Circuit Breaker Reconnection

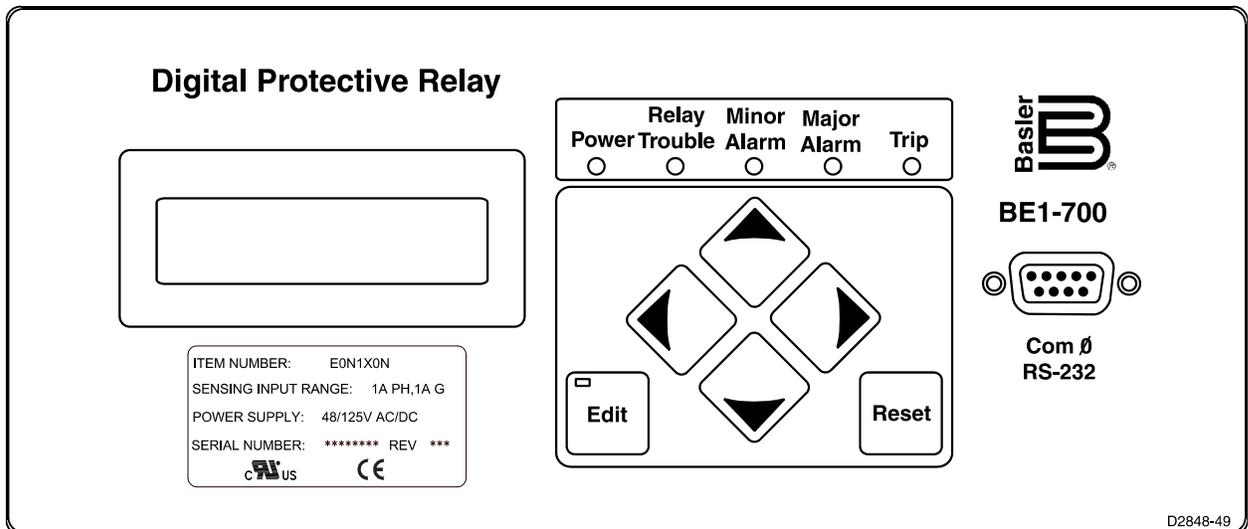
Reconnect circuit breaker as directed in the circuit breaker instruction bulletin shipped with the circuit breaker.

INSTRUCTION MANUAL

FOR

DIGITAL PROTECTIVE RELAY

BE1-700



Basler Electric

Publication: 9376700990
Revision: J 12/10

SECTION 13 • TESTING AND MAINTENANCE

GENERAL

The need to test protective relays to confirm performance as designed by relay manufacturers has always existed. However, numeric relay design is changing the industry testing paradigms that have been in use since the first protective relay was built. Each time a fault occurs, the numeric protection system is tested, and because of its fault and event recording capability, the test is documented. In the unlikely event of a protection system problem, continuous monitoring along with remote communications capability provide for removing the affected relay from service, auto switching to backup systems, and immediate notification of a manned facility. These features have virtually eliminated the need for periodic maintenance. Simple acceptance tests that verify the integrity of the relays measuring circuits and commissioning tests that verify the relays "electronic wiring" (control logic) are Basler Electric's recommended pre-installation tests.

This section provides guidelines for performing these tests and others. It also provides guidelines for care, handling, and troubleshooting of the BE1-700 relay. For assistance in conducting relay self-tests and troubleshooting using internal diagnostics, contact Basler Electric Technical Support Services.

TESTING PHILOSOPHIES

Testing is generally divided into the following categories:

- Acceptance
- Commissioning
- Periodic (user scheduled maintenance)
- Functional

While all types of tests may be performed, all users do not generally perform them. Likewise, the degree to which you will conduct each type of test depends on need, economics, and perceived system value.

Acceptance Testing

Acceptance testing is intended to confirm that a particular relay delivered to a customer meets published specifications. Because this is a numerical relay whose characteristics are defined by software, Basler Electric does not require the user to test each operational setting in the relay. Successful completion of the Acceptance Test verifies proper response of the relay's input and output circuits as well as its response to all external sensing input quantities (voltage, current, frequency).

Basler Electric performs detailed acceptance testing on all devices to verify all functions meet published specifications. All products are packaged and shipped with the strictest of standards. The BE1-700 relay is a microprocessor-based relay whose operating characteristics will not change over time. The relay will also not experience any change in operating characteristics during transit. However, it remains material that the user perform these acceptance tests to verify the device has not suffered any degradation in transit. Basler Electric warrants all products against any decay in performance outside of the published specified tolerances that result from problems created during transit.

Commissioning Testing

Commissioning testing verifies all physical connections and functional aspects of the protective relay for a new installation. This includes a thorough review and documentation of the operational settings to verify that the users calculated values match the actual values on each enabled protection element of the relay. All of the following connections or functions can be verified during commissioning tests:

- Proper connection and sensing of current and voltage signals as applicable
- Connections of I/O contacts
- I/O sensing versus virtual sensing
- Setting validation
- Proper operation of equipment (main or auxiliary)
- Proper alarming (to SCADA) and/or targeting

Periodic Testing

Periodic testing can be performed at regularly scheduled intervals or upon an indication of problems or questionable operations within the relay. Verifying the integrity of the relay's performance, short of playback of recorded events, may be necessary by performing certain tests similar to those accomplished in the acceptance tests. Verification that the relay is measuring signals faithfully, that relay logic is appropriate, and, that protective elements and equipment (main or auxiliary) operate correctly, are goals that can be achieved during this type of testing.

Basler Electric recommends that all captured fault records and sequence of event records be analyzed and kept on file as in-service periodic test results for this particular device. This is an indication that all protective elements and the associated equipment are operating satisfactorily.

It is not the intent of this manual to elaborate on every conceivable test possible since this would encroach on individual preferences, techniques, and philosophies. It is the intent to pursue relevant testing methods to verify this relay meets published design specifications and applicability.

Functional Testing

Functional (or application) testing is significantly more comprehensive in nature and is intended to test suitability for a particular application. Functional testing also provides a means to familiarize the user with the logic and operation of this device. Test setups are generally more involved and often times include ancillary equipment beyond voltage or current source type equipment. While economics may at times prohibit full functional testing, it is recommended that some application testing be performed when published specifications lack appropriate detail to satisfy application testing requirements.

Basler Electric performs a thorough and comprehensive functional test of all relays before shipping. This ensures that this device is within specified tolerances, measures accurately, and operates correctly as designed.

TESTING AND TROUBLESHOOTING AIDS

Under test or in-service, the BE1-700 provides several ways to check operations, targets, or events. A continuous self-test monitors the system health and status. The most basic reporting function is targets. Targets may be viewed through ASCII command interface or through the front panel human-machine interface (HMI). Fault Summary Reports, Sequence of Events Recorder (SER) Reports, and Oscillographic Records yield more detail.

Each time a system disturbance occurs in or around this relay zone of protection, it is a test of the relay performance during the fault. If a questionable operation results in the need for troubleshooting, you have several ways in which to troubleshoot the relay, the installation, and the overall application.

Performance Testing

Performance testing can be accomplished through the capture and playback of system fault records. In actual applications, this type of test realizes further confirmation of faithful relay responses during system disturbances. For specific power system disturbances, relays can be subject to a re-creation of captured events with the aide of equipment capable of replicating COMTRADE record files. In these instances, there is significant merit in testing relays in this manner to assess relay performance. Correct response of relay action in a performance test is supplemental verification of the conclusions drawn from functional (or application) tests.

This type of testing verifies not only whether or not the device operated correctly for a particular system disturbance but also offers additional confirmation of your protection philosophy in this application. It is beyond the scope of this manual to develop performance tests for this device. For assistance in developing these types of tests, please consult Basler Electric and your test equipment.

Relay Self-Test

All internal circuitry and software that affect the relay core functionality are monitored by the continuous self-test diagnostics. For specific relay trouble alarms, the self-test diagnostics force the microprocessor to reset and try to correct the problem. If unsuccessful, OUTA operates, the Relay Trouble LED on the front panel turns on, all of the output relays are disabled, internal logic Point ALMREL is set, and the relay is taken off line. For more information on self-test diagnostics and relay trouble alarms, see Section 6, *Reporting and Alarm Functions, Alarms Function*.

Status Reporting Features

General status reporting is available through the ASCII command interface using the RG-STAT (report general, status) command. This report assembles all of the information required to determine the relay status. For more information on general status reporting, see Section 6, *Reporting and Alarm Functions, General Status Reporting, General Status Report*.

Fault reporting and target data is dependent on the proper setting of trip, pickup, and logic trigger expressions (via the SG-TRIGGER command) and the assignment of protective elements to be logged as targets (via the SG-TARG command).

While the design of the relay facilitates obtaining and verifying targets and event data, it is not always necessary to utilize the relay functions to determine if the device operated while testing. You may simply use an ohmmeter or continuity tester to monitor the output contact status.

The following is a summary of ASCII commands where target and event data may be viewed:

- RF provides a directory of fault summary reports in memory
- RF-# provides a summary report giving targets, timing and event data
- RG-TARG provides target data only
- RS provides a summary of sequence of events records
- RS-F# provides a detailed SER report for the selected fault event number
- RS-# provides a detailed SER report on the last numbered events

For more information on human-machine interface (HMI) menu trees, see Section 10, *Human-Machine Interface*. In addition, much of this information can be accessed through BESTCOMS™. See Section 14, *BESTCOMS Software*, for details.

Event Reporting Features

The SER function of the relay records protective element output changes, overcurrent element pickup or dropout, input/output contact state changes, logic triggers, setting group changes, and setting changes. For more information on event reporting, see Section 6, *Reporting and Alarm Functions, Sequence of Events Recorder*.

The following summarizes the reporting capabilities of the relay through the front panel HMI:

- Trip LED (Flashing): flashes during pickup of protective elements based on the pickup logic expression set in the SG-TRIGGER command.
 - Trip LED (sealed-in): stays lit after trip logic becomes TRUE based on the trip logic expression set in the SG-TRIGGER command.
 - TARGETS, Screen 1.2: Provides target data.
 - ALARMS, Screen 1.3: Provides alarm data (including BKR FAIL, REC FAIL and REC LO).
 - FAULT REPORTS, Screen 4.1: Indicates new fault reports
 - EVENT REPORT, Screen 4.2: Gives the number of new events logged by the SER since the last new counter reset (executed only by the RS=0 command). Events must be viewed using the RS and RS# commands listed in the previous paragraph.
-

PERIODIC TESTING

Because the BE1-700 has extensive internal test capabilities, periodic testing of the protection system can be greatly reduced. Relay operating characteristics are a function of programming instructions that do not drift over time. Thus, the user may wish to verify items that the relay's self-testing features cannot completely determine. Periodic testing might consist of the following settings and function checks:

- Verify that the set points that were proven during commissioning have not been changed.
- Verify that the inputs and outputs are interfacing properly with the rest of the protection and control system.
- Verify that the power system analog parameters used by the protection and control functions are being measured accurately.

Settings Verification

Verification of the relay digital I/O connections can be accomplished in different ways. The method used depends on your preferences and practices. You might choose to use either of the following two methods:

- Repeat the digital I/O connection and label verification under commissioning tests.
- Monitor SER, Status, and Fault reports for proper sensing of digital signals and proper output tripping during normal operation.

NOTE

In redundant protection systems where multiple relays will trip a given breaker or other device for a fault, fault record monitoring may not indicate a failed output contact. The relay may report that it energized an output when tripping was actually accomplished by the redundant relay. In this situation, testing the contact is recommended.

Analog Circuit Verification

Verification of relay analog measurement circuits can be accomplished in multiple ways and depends on your preferences and practices. Either of the two following methods might be used:

- Repeat the acceptance tests by injecting test quantities into the relay.

- Use the relay metering functions to compare the relay's measurements with those made by similar devices that are measuring the same signals. Redundant relays or metering devices can provide this independent conformation of measured signals. If the relay is connected to an integration system, this verification can even be automated and done on a semi-continuous basis.

NOTE

If verifying the analog measurement circuits by comparison to independent devices is used, you should ensure that the two devices use similar measurement algorithms. For example, the measurements of a fundamental sensing relay cannot be compared with the measurements of an RMS sensing device.

CARE AND HANDLING

The BE1-700 Digital Protective Relay requires no preventative maintenance. The fully numeric design of the relay contains no internal jumpers or mechanical settings, and requires no circuit-board level calibration.

There is no need to disturb the circuit interconnections within the drawout assembly. Repair of the assembly by replacement of individual circuit boards is not recommended. The printed circuit boards are constructed using surface-mount technology and are not intended to be field serviceable.

Before returning the assembly for repair, contact the Basler Electric, Technical Services Department at 618-654-2341 for a return authorization number.

UPDATING FIRMWARE AND SOFTWARE

Future enhancements to relay functionality may make a firmware update desirable. Enhancements to relay firmware typically coincide with enhancements to BESTCOMS software for that relay. When a relay is updated with the latest version of firmware, the latest version of BESTCOMS software should also be obtained.

Updating Relay Firmware

If a firmware upgrade is desired, you may request a CD-ROM containing the latest firmware or download the firmware from the Basler Electric website. Direct your web browser to http://www.basler.com/BE1_Firm/ and complete the online form to request a CD-ROM containing the latest firmware or a password for downloading firmware from the Basler Electric web site.

Once the appropriate firmware is obtained, it can be uploaded to a relay using the BESTload software utility provided on the CD-ROM originally supplied with the relay.

Updating BESTCOMS™ Software

Firmware enhancements often include the addition of relay settings or the modification of existing settings. BESTCOMS software is revised to accommodate the new or changed settings. When firmware is updated, the latest version of BESTCOMS should also be obtained. If a CD-ROM containing firmware was obtained from Basler Electric, then that CD-ROM will also contain the corresponding version of BESTCOMS software. BESTCOMS can also be downloaded from the Basler Electric web site (<http://www.basler.com>). An online form can be completed to obtain a password for downloading BESTCOMS from the Basler Electric web site.

FUNCTIONAL TESTING

NOTE

Functional testing is not required for this device. It is necessary only when performing a comprehensive assessment to determine suitability for an application.

Power-Style[®]

QED-2 Switchboards

Class 2700

Instruction Bulletin

80043-055-09

05/2010

Retain for future use.



by **Schneider** Electric

Section 7— Maintaining the Switchboard

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Inspect and perform preventive maintenance only on switchboards and equipment that has been de-energized and electrically isolated (unless otherwise specified). This helps ensure that accidental contact cannot be made with energized parts.
- Follow safety-related work practices as described in NFPA 70E, Part II at all times.

Failure to follow these instructions will result in death or serious injury.

General Inspection and Cleaning

CAUTION

HAZARD OF EQUIPMENT DAMAGE

- Do not use an air hose to blow out the switchboard. Dust can settle inside relays and overcurrent devices, causing overheating and improper operation.
- Do not allow paint, chemicals, or petroleum-based solvents to contact plastics or insulating materials.

Failure to follow these instructions can result in equipment damage.

Periodic maintenance of the switchboard includes cleaning, lubrication, and exercising component parts. The interval between maintenance checks can vary depending upon the amount of usage and environmental conditions of each installation. The maximum recommended inspection interval is one year. This definition for periodic maintenance applies throughout this manual, unless otherwise noted.

Always inspect the switchboard after a fault. (Refer to “Section 8—Adverse Circumstances”, beginning on page 36). Service bulletins for the various disconnecting and overcurrent devices mounted in the switchboard are available through your local Schneider Electric field office.

1. Vacuum the switchboard interior to remove any dirt or dust deposits. Wipe all bus bars, insulators, cables, etc., with a clean, dry, lint-free cloth.
2. Check the switchboard interior carefully for moisture, condensation build-up, or signs of any previous wetness. Moisture can cause insulation failures and rapid oxidation of current-carrying parts. Inspect all conduit entrances and cracks between the enclosure panels for dripping leaks. Condensation in conduits can be a source of moisture and must not be allowed to drip onto live parts or insulating material. Take the necessary steps to eliminate the moisture and seal off all leaks.
3. Inspect the switchboard for any signs of overheating. Discoloration and flaking of insulation or metal parts are indications of overheating.
NOTE: If overheating occurs, be sure that all conditions that caused the overheating have been corrected. Loose or contaminated connections can cause overheating.
4. Check for signs of rodent nesting in the switchboard. If required, use a good exterminating technique in the general area of the switchboard.
NOTE: Do not place or use exterminating substances and chemicals inside the switchboard. Some products attract rodents.
5. Carefully inspect all devices for any visibly worn-out, cracked, or missing parts.
6. Manually open and close switches and circuit breakers several times to verify they are working properly.
7. Verify that all key interlocks and door interlocking provisions are working properly.

Bus Bar Joints, Lug Terminations, and Insulating Materials

<h2>CAUTION</h2>
<p>HAZARD OF EQUIPMENT DAMAGE</p> <ul style="list-style-type: none">• Do not sand or remove plating on any bus bar, splice bar, or terminal lug.• Damage to plating can result in overheating. Replace damaged part. Contact Square D Services at 1-888-778-2733 (US) or 1-800-265-3374 (Canada). <p>Failure to follow these instructions can result in equipment damage.</p>

1. Bus bar joints are maintenance-free. Do not retighten them after the pre-energizing checkout procedure is complete.
2. Check all bus bar joints and terminal lugs for any pitting, corrosion, or discoloration resulting from high temperatures or subjection to high fault conditions. If any damage has occurred, replace the bus bars or lugs. If cleaning is required, use Lectra-Clean®, made by CRC.
3. Inspect all insulating materials. Before re-energizing the switchboard, replace insulators with any visible damage (such as cracks).

General Lubrication Information

For field maintenance relubrication of blade/jaw components in switches 600 V and below, use Square D catalog number SWLUB, BG20 High Performance Synthetic Grease from Dow Corning. This grease is applicable for the following switches:

- Bolt-Loc
- QMB Main and Branch
- QMJ Branch
- QMQB¹ Main and Branch

For bus/plug-on connections, use electric joint compound, Square D catalog number PJC7201.

For SED and NED circuit breaker drawout connections, Square D catalog number PJC8311 Electric Joint Compound **must** be used.

For Masterpact® NW drawout connections, use only Square D catalog number S48899 Electric Joint Compound.

Automatic Transfer Switches

Consult the documentation provided by the manufacturer for all installation, operation, and maintenance instructions for these devices.

Bolt-Loc Bolted Pressure Contact Switch Maintenance (800–4,000 A)

Refer to the Bolt-Loc switch installation and maintenance manual for complete information (manual is shipped with the switchboard). If the manual is not available, refer to “Section 11—Reference Publications” on page 41, and contact your local Schneider Electric field office to obtain the appropriate manuals.

1. Exercise the operating mechanism at least once a year to ensure proper operation.
2. The Bolt-Loc switch is shipped from the factory properly lubricated. Periodic cleaning and lubrication of the switch is required. The maintenance interval between lubrications depends on factors such as usage and ambient conditions. The maximum recommended maintenance interval is one year for current-carrying parts and five years for operating mechanisms.

¹ QMQB switches are available in Canada only.

⚠ DANGER

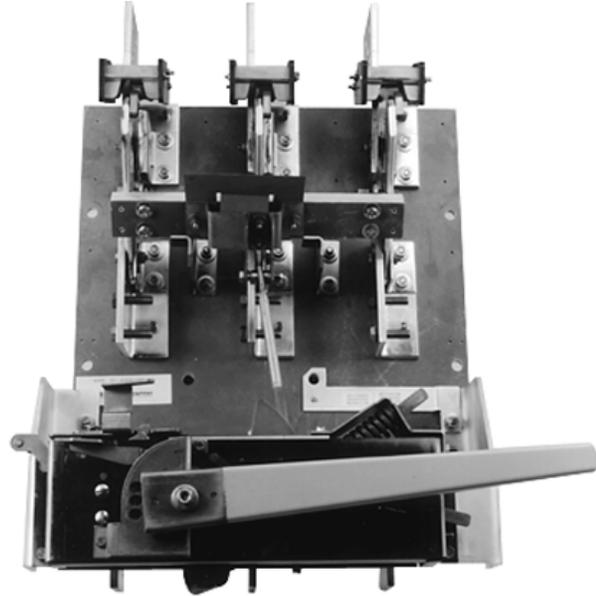
**HAZARD OF ELECTRIC SHOCK,
EXPLOSION, OR ARC FLASH**

Always check line and load ends of the fuses for voltage before starting the replacement procedure. The Bolt-Loc switch can be part of a multiple source system in which the fuses can be energized when the Bolt-Loc switch is in the “open” position.

Failure to follow this instruction will result in death or serious injury.

3. To replace the fuse:
 - a. Open the switch before opening the fuse door.

Figure 24: Type BP Bolt-Loc Fusible Switch



- b. Open the fuse door, releasing the interlock as described in the instructions on the door.
 - c. Observe the switch blades to confirm the switch is “open.”
 - d. Check the line and load ends of fuses for voltage using a properly rated voltage sensing device. No voltage should be present.
 - e. Remove all fuses. Retain the hardware for reuse.
 - f. Using a non-abrasive cleaner such as Lectra-Clean, made by CRC, wipe clean the fuse mounting pads on the switch and the terminals of each new fuse. Check the alignment of fuse terminals before installing new fuses.
 - g. Install new fuses using the same hardware removed in Step e. Tighten to 21–30 lb-ft (28–41 N•m).
 4. Close the fuse door, and check the fuse door interlock with the switch in the ON position. The fuse doors should not open using normal hand force.

Circuit Breakers

Schneider Electric circuit breakers are designed and manufactured as sealed units requiring minimal periodic maintenance.

Exercise circuit breakers at least once a year to ensure proper operation. For general maintenance:

1. Trip the circuit breaker by pushing the Push-To-Trip or “Open” button located on the face of the circuit breaker. Refer to the appropriate circuit breaker manual for the specific location of this button.
2. Manually open and close the circuit breaker two to three times.

Figure 25: PowerPact® R-Frame Circuit Breaker



NOTE: Square D bulletin number 0600DB9901, *Field Testing and Maintenance Guide for Micrologic Electronic Trip and Thermal-magnetic Molded Case Circuit Breakers*, provides more in-depth information. Refer to “Section 11—Reference Publications” on page 41. Contact your local Schneider Electric field office to obtain this bulletin.

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- If adjusting circuit breaker settings, do not set the long-time trip rating at a higher ampacity than the rating of the bus bar or load cables it supplies; overheating can occur.
- Before energizing the switchboard, fill all unused I-Line circuit breaker mounting spaces with blank fillers and/or extensions as listed in Table 2.

Failure to follow these instructions will result in death or serious injury.

Refer to individual circuit breaker instruction manuals shipped with the switchboard for additional maintenance information, such as changing rating columns or adjustable settings and removing circuit breakers. If the instruction manual is not available, refer to “Section 11—Reference Publications” of this manual for the appropriate number, and contact your local Schneider Electric field office to obtain this manual.

Table 2: I-Line® Blank Fillers and Extensions

	Height	Catalog No.
Blank Fillers	1.50 in. (38 mm)	HNM1BL
	4.50 in. (114 mm)	HNM4BL
Blank Extensions	1.50 in. (38 mm)	HLW1BL
	4.50 in. (114 mm)	HLW4BL

CAUTION

HAZARD OF EQUIPMENT DAMAGE

- Do not remove the protective lubricant on the plug-on connectors.
- If additional lubrication is required, apply a coating of electrical joint compound, catalog number PJC7201, to the contact surfaces of the plug-on connector.

Failure to follow these instructions can result in equipment damage.

QMB/QMJ/QMQB¹ Fusible Switches

Switch Maintenance

Fuse Replacement (Fusible Switches Only)

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Always check line and load ends of the fuses for voltage before starting the fuse replacement procedure with a properly rated voltage sensing device.

Failure to follow this instruction will result in death or serious injury.

3. The universal test set, catalog number UTS3, is available to test all Schneider Electric circuit breakers equipped with Micrologic trip units. It runs trip unit tests automatically, with prompts to the user for initial information. Test modules for each circuit breaker frame are used to store data necessary for automatic tests. Series B Micrologic trip units require test module CBTMB, which is included in UTS3.

Masterpact NW trip units require the full-function test set catalog number S33595 or hand-held test set S33594.

NOTE: Tests can be conducted with a circuit breaker installed in the switchboard; circuit breaker removal is not required. **The switchboard must be de-energized.**

Refer to the QMB/QMJ/QMQB¹ instruction manual for complete maintenance information. If the instruction manual is not available, refer to “Section 11—Reference Publications” on page 41 of this manual for the appropriate number. Contact your local Schneider Electric field office to obtain the manual.

1. Periodically exercise the switch to ensure proper operation. This period should not exceed one year.
 2. Check the cover interlock with the switch in the ON position. The cover should not open using normal hand force.
 3. Inspect the switch interior for any damaged or cracked parts, and replace as necessary.
 4. For fusible switch units, check the fuse mounting clips or bolted contact area for corrosion or discoloration (indicating overheating). Replace them if necessary.
 5. For additional maintenance instructions, see the label on the inside of the door.
1. Turn the switch to the OFF position before opening the door.
 2. Observe the switch blades to confirm that the switch is in the OFF position.
 3. Using a properly rated voltage sensing device, verify that line and load ends of the fuse are not energized.
 4. Observe all warning labels specifying the type of fuse to use. Do not substitute a non-current limiting fuse, or attempt in any way to defeat the rejection feature of the fuse clips furnished with the switch. Do not use renewable link fuses in Schneider Electric fusible switches.

CAUTION

HAZARD OF EQUIPMENT DAMAGE

Do not pry open or spread the fuse mounting clips. Doing so can cause a loose connection, resulting in overheating and nuisance fuse blowing.

Failure to follow this instruction can result in equipment damage.

¹ QMQB switches are available in Canada only.

Installing QMB/QMJ/QMQB¹ Fusible Switches

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Remove power for these sections before installing or removing QMB/QMJ/QMQB¹ switches.
- Do not use a main as a branch unit or a branch as a main.
- All unused spaces must be filled with blank fillers before energizing the switchboard. Refer to Tables 3 and 4 for sizes and catalog numbers.

Failure to follow these instructions will result in death or serious injury.

Table 3: QMB/QMJ Fusible Switch Blank Fillers

Height	Catalog No.
1.50 in. (38 mm)	QMB1BLW
3.00 in. (76 mm)	QMB3BLW
6.00 in. (152 mm)	QMB6BLW
15.00 in. (381 mm)	QMB15BLW

Table 4: QMQB¹ Fusible Switch Blank Fillers

Height	Catalog No.
2x: 1.375 in. (35 mm)	QFS1
8x: 5.50 in. (140 mm)	QFS5
10x: 6.875 in. (175 mm)	QFS6
14x: 9.625 in. (244 mm)	QFS9
24x: 16.50 in. (419 mm)	QFS16

CAUTION

HAZARD OF EQUIPMENT DAMAGE

Do not remove the protective lubricant on the plug-on connectors.

Failure to follow this instruction can result in equipment damage.

- Turn off the main power.
- Turn the switch handle(s) to the OFF position. Align switch plug-on connectors with QMB panel vertical bus, and plug switch onto panel.
- Place and partially tighten all unit mounting screws that mount to the QMB panel mounting rails.
- Tighten all screws evenly. The unit mounting flange and plug-on connectors must be seated securely.

Removing QMB/QMJ/QMQB¹ Fusible Switches

- Turn off the main power.
- Turn switch handle(s) to the OFF position.
- Disconnect the load wires.
- For QMB and QMJ switches, remove mounting screws holding the switch to the mounting rail. For QMQB¹ switches, remove the bolts holding the switch to the line terminal.
- Unplug the switch.

Ground-Fault Protection Systems

Check the terminal connections on the ground-fault protection system at least once a year for tightness and corrosion. If the system can be tested without tripping the main or branch device, directions for testing the system are in the device manual. Otherwise, testing the ground-fault protection system will trip the main or branch device to which it is connected. If the ground-fault sensor or relay is physically or electrically damaged, replace it.

If the ground-fault protection system does not operate properly and additional equipment has been connected to the installation since the last maintenance test/check, de-energize the entire system, and check for grounds on the neutral downstream from the main bonding jumper. If no downstream grounds are detected and the ground fault system is not operating properly, contact Square D Services at 1-888-778-2733 (US) or 1-800-265-3374 (Canada).

If no additions have been made to the installation and the ground-fault protection system does not operate properly, contact Square D Services at 1-888-778-2733 (US) or 1-800-265-3374 (Canada).

¹ QMQB switches are available in Canada only.

P-frame and NS630b–NS1600 Circuit Breakers

Retain for future use.

NECESSARY TOOLS

- Screwdriver, Pozidriv® #2 or 3, or slotted
- Socket Wrench, 7 mm internal hex
- Screwdriver, long-shanked slotted
- Torque Wrench, 5/16 in. or 8 mm

INSTALL CIRCUIT BREAKER

1. Turn off all power supplying this equipment before working on or inside equipment.
2. Make sure circuit breaker is in tripped or off position

Individually-mounted Circuit Breaker Installation

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

Install circuit breaker so minimum clearance distance to grounded metal is maintained.

Failure to follow this instruction will result in death or serious injury.

3. Check clearances between circuit breaker and closest grounded metal. (Minimum enclosure dimensions are given in Table 4.)

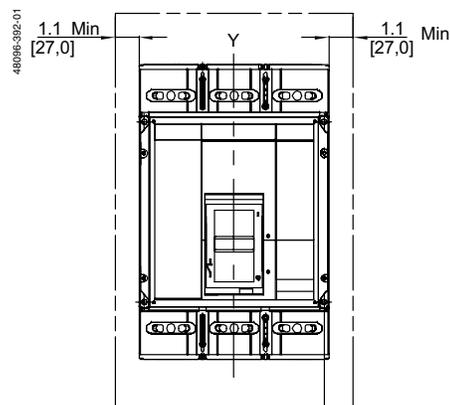
⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.
- This equipment must be installed and serviced only by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- Replace all devices, doors and covers before turning on power to this equipment.

Failure to follow this instruction will result in death or serious injury.

Figure 1: Minimum Clearance to Metal Requirement



Dimensions: in. [mm]

LE, LX and LXI Electronic Trip Circuit Breakers with Micrologic® Trip System Series B

Instruction Bulletin
Retain for future use.



SECTION 1— GENERAL INFORMATION

LX, LXI and LE electronic trip circuit breakers with Micrologic® trip systems conform to UL, CSA and IEC standards for electronic trip molded case circuit breakers. They provide adjustable tripping functions and characteristics on ac systems. They are not applicable for use on dc systems.

SENSOR SIZE

The circuit breaker sensor size is the maximum current rating possible for a specific circuit breaker. It is based on the size of the current sensor inside the circuit breaker. (Current sensors are integral to the circuit breaker and cannot be removed or replaced.)

LX, LXI and LE circuit breakers are available in 250, 400, and 600 A sensor sizes. The sensor size is indicated on the faceplate on the front of the circuit breaker.

LX, LXI and LE circuit breakers are available in 250, 400, and 600 A sensor sizes. The sensor size is indicated on the faceplate on the front of the circuit breaker.

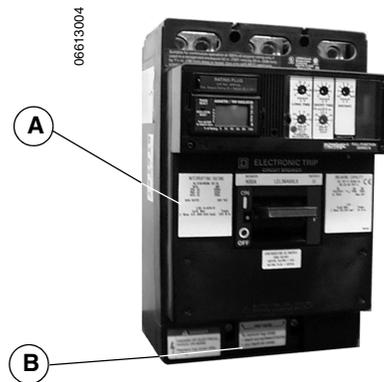
FRAME SIZE

The maximum current rating a circuit breaker family can carry is called the frame size. All LE, LX and LXI circuit breakers have a 600 A frame size and are the same physical size.

INTERRUPTING RATINGS

The maximum amount of current the circuit breaker is designed to safely interrupt is called the interrupting rating. Interrupting ratings are shown on the faceplate label (A) of the circuit breaker.

Figure 1: Faceplate Label



ACCESSORIES AND CONTROL WIRING

Accessories are available for field installation or factory installed. Control wiring is routed out the wire exit area (B). Section 4 gives instructions for connecting control wiring.

CIRCUIT BREAKERS RATED 100%

All 250 A and 400 A frame LE electronic trip circuit breakers are 100% rated. Circuit breakers marked "100% Rated" can be continuously loaded to 100% of their rating as long as conditions marked on the circuit breaker case are met. These conditions include enclosure size (Table 1) and conductor specifications. This marking does not prohibit using these circuit breakers in applications requiring only 80% continuous loading.

Table 1: Enclosure Size

Enclosure Size for 100% Rating
52 x 20 x 7-1/2 in. (1321 x 508 x 190 mm) deep

RECEIVING INSPECTION

⚠ DANGER

HAZARD OF PERSONAL INJURY OR EQUIPMENT DAMAGE

Circuit breaker weighs 25 lbs. (11 kg) and must be lifted by the case (never by the handle) using proper equipment.

Failure to follow this instruction will result in death or serious injury.

CAUTION

HAZARD OF CIRCUIT BREAKER DAMAGE

- Do not adjust jaws.
- Do not remove joint compound.

Failure to follow these instructions can result in equipment damage.

Inspect the circuit breaker visually for signs of damage when the circuit breaker is received and again before placing the circuit breaker in service. If any damage is found, return the circuit breaker to Square D.

The circuit breaker case is sealed and must not be opened for any reason. Opening the circuit breaker case voids all warranties and the UL Listing. No serviceable parts are located inside the molded case.

SECTION 6— TROUBLESHOOTING

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- Replace all devices, doors and covers before turning on power to this equipment.

Failure to follow these instructions will result in death or serious injury.

If problems occur during installation, refer to the following guide. If trouble persists, contact the local Square D Field Office.

Condition	Possible Causes	Solution
Circuit breaker fails to stay closed.	<ol style="list-style-type: none"> 1. Undervoltage trip not energized. 2. Shunt trip energized. 3. Circuit breaker reclosed too soon after long-time trip. 4. Short circuit, overload or ground fault exists in system. 	<ol style="list-style-type: none"> 1. Energize undervoltage trip (see Section 5 and Appendix C). 2. De-energize shunt trip (See Section 5 and Appendix C). 3. Wait one minute after trip before reclosing circuit breaker. 4. Check system for overload, short circuit or ground fault.
Circuit breaker trips, but no overload is evident.	<ol style="list-style-type: none"> 1. Rating plug not installed 2. Improper rating plug installed. 3. Trip unit improperly adjusted. 4. Ground-fault condition exists. 5. Trip unit switch settings were adjusted while circuit breaker was feeding loads. 	<ol style="list-style-type: none"> 1. Install rating plug. 2. Check that rating plug is correct.* 3. Check trip unit adjustments.* 4. Check circuit for ground fault. 5. Turn off all power to circuit breaker before adjusting trip unit switches.
Circuit breaker ground fault trips, but no ground fault is evident.	<ol style="list-style-type: none"> 1. Neutral CT leads reversed or neutral CT installed backwards. 2. Improper neutral CT used. 	<ol style="list-style-type: none"> 1. Check neutral CT installation (see Section 4 and Appendix C). 2. Check if correct neutral CT installed (see Section 4 and Appendix A).
Ground-fault test button will not trip circuit breaker with ground-fault protection.	<ol style="list-style-type: none"> 1. No control power on terminals 3 and 4 of circuit breaker terminal block. 2. Terminals 1 and 2 of circuit breaker or X1 and X2 of neutral CT are shorted. 	<ol style="list-style-type: none"> 1. Turn control power on. 2. Check neutral CT installation (see Section 4 and Appendix C).
Ground-fault test button does not signal ground-fault alarm.	<ol style="list-style-type: none"> 1. No control power on terminals 3 and 4 of circuit breaker terminal block. 2. Terminals 1 and 2 of circuit breaker or X1 and X2 of neutral CT are shorted. 3. CIM3F communications adapter not connected. (LE circuit breaker only.) 	<ol style="list-style-type: none"> 1. Turn control power on. 2. Check neutral CT installation (see Section 4 and Appendix C). 3. Check CIM3F communications adapter connections (see Section 4).
Trip indicator does not show cause of trip.	<ol style="list-style-type: none"> 1. Very high fault levels in the circuit breaker caused the magnetic override circuit to trip rather than the electronic trip unit. 2. Push-to-trip or circuit breaker accessory tripped circuit breaker. 	<ol style="list-style-type: none"> 1. Contact Square D Field Office. 2. Check if accessory tripped circuit breaker.
Circuit breaker opens too soon on long-time trip.	Circuit breaker was reclosed before memory had reset all the way to zero.	Wait 15 minutes after trip before reclosing circuit breaker.

*Contact consulting engineer or designer for correct rating plug and trip unit adjustments.

SECTION 2 - CONTRACT CLAUSES

FAR 52.212-4 CONTRACT TERMS AND CONDITIONS – COMMERCIAL ITEMS (MAY 2015), is incorporated by reference. (See SF-1449, block 27a).

52.212-5 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS – COMMERCIAL ITEMS (MAY 2015)

(a) The Contractor shall comply with the following Federal Acquisition Regulation (FAR) clauses, which are incorporated in this contract by reference, to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

(1) [52.209-10](#), Prohibition on Contracting with Inverted Domestic Corporations (Dec 2014)

(2) [52.233-3](#), Protest After Award (AUG 1996) ([31 U.S.C. 3553](#)).

(3) [52.233-4](#), Applicable Law for Breach of Contract Claim (OCT 2004)(Public Laws 108-77 and 108-78 ([19 U.S.C. 3805 note](#))).

(b) The Contractor shall comply with the FAR clauses in this paragraph (b) that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

__ (1) [52.203-6](#), Restrictions on Subcontractor Sales to the Government (Sept 2006), with Alternate I (Oct 1995) ([41 U.S.C. 4704](#) and [10 U.S.C. 2402](#)).

__ (2) [52.203-13](#), Contractor Code of Business Ethics and Conduct (Apr 2010) ([41 U.S.C. 3509](#))).

__ (3) [52.203-15](#), Whistleblower Protections under the American Recovery and Reinvestment Act of 2009 (June 2010) (Section 1553 of Pub. L. 111-5). (Applies to contracts funded by the American Recovery and Reinvestment Act of 2009.)

__ (4) [52.204-10](#), Reporting Executive Compensation and First-Tier Subcontract Awards (Jul 2013) (Pub. L. 109-282) ([31 U.S.C. 6101 note](#)).

__ (5) [Reserved].

__ (6) [52.204-14](#), Service Contract Reporting Requirements (Jan 2014) (Pub. L. 111-117, section 743 of Div. C).

__ (7) [52.204-15](#), Service Contract Reporting Requirements for Indefinite-Delivery Contracts (Jan 2014) (Pub. L. 111-117, section 743 of Div. C).

__ (8) [52.209-6](#), Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment. (Aug 2013) ([31 U.S.C. 6101 note](#)).

__ (9) [52.209-9](#), Updates of Publicly Available Information Regarding Responsibility Matters (Jul 2013) ([41 U.S.C. 2313](#)).

__ (10) [Reserved].

__ (11)(i) [52.219-3](#), Notice of HUBZone Set-Aside or Sole-Source Award (Nov 2011) ([15 U.S.C. 657a](#)).

__ (ii) Alternate I (Nov 2011) of [52.219-3](#).

__ (12)(i) [52.219-4](#), Notice of Price Evaluation Preference for HUBZone Small Business Concerns (OCT 2014) (if the offeror elects to waive the preference, it shall so indicate in its offer) ([15 U.S.C. 657a](#)).

- __ (ii) Alternate I (JAN 2011) of [52.219-4](#).
- __ (13) [Reserved]
- __ (14)(i) [52.219-6](#), Notice of Total Small Business Set-Aside (Nov 2011) ([15 U.S.C. 644](#)).
- __ (ii) Alternate I (Nov 2011).
- __ (iii) Alternate II (Nov 2011).
- __ (15)(i) [52.219-7](#), Notice of Partial Small Business Set-Aside (June 2003) ([15 U.S.C. 644](#)).
- __ (ii) Alternate I (Oct 1995) of [52.219-7](#).
- __ (iii) Alternate II (Mar 2004) of [52.219-7](#).
- __ (16) [52.219-8](#), Utilization of Small Business Concerns (Oct 2014) ([15 U.S.C. 637\(d\)\(2\)](#) and (3)).
- __ (17)(i) [52.219-9](#), Small Business Subcontracting Plan (Oct 2014) ([15 U.S.C. 637\(d\)\(4\)](#)).
- __ (ii) Alternate I (Oct 2001) of [52.219-9](#).
- __ (iii) Alternate II (Oct 2001) of [52.219-9](#).
- __ (iv) Alternate III (Oct 2014) of [52.219-9](#).
- __ (18) [52.219-13](#), Notice of Set-Aside of Orders (Nov 2011)([15 U.S.C. 644\(r\)](#)).
- __ (19) [52.219-14](#), Limitations on Subcontracting (Nov 2011) ([15 U.S.C. 637\(a\)\(14\)](#)).
- __ (20) [52.219-16](#), Liquidated Damages-Subcontracting Plan (Jan 1999) ([15 U.S.C. 637\(d\)\(4\)\(F\)\(i\)](#)).
- __ (21) [52.219-27](#), Notice of Service-Disabled Veteran-Owned Small Business Set-Aside (Nov 2011) ([15 U.S.C. 657 f](#)).
- __ (22) [52.219-28](#), Post Award Small Business Program Re-representation (Jul 2013) ([15 U.S.C. 632\(a\)\(2\)](#)).
- __ (23) [52.219-29](#), Notice of Set-Aside for Economically Disadvantaged Women-Owned Small Business (EDWOSB) Concerns (Jul 2013) ([15 U.S.C. 637\(m\)](#)).
- __ (24) [52.219-30](#), Notice of Set-Aside for Women-Owned Small Business (WOSB) Concerns Eligible Under the WOSB Program (Jul 2013) ([15 U.S.C. 637\(m\)](#)).
- __ (25) [52.222-3](#), Convict Labor (June 2003) (E.O. 11755).
- __ (26) [52.222-19](#), Child Labor-Cooperation with Authorities and Remedies (Jan 2014) (E.O. 13126).
- __ (27) [52.222-21](#), Prohibition of Segregated Facilities (Apr 2015).
- __ (28) [52.222-26](#), Equal Opportunity (Apr 2015) (E.O. 11246).
- __ (29) [52.222-35](#), Equal Opportunity for Veterans (Jul 2014)([38 U.S.C. 4212](#)).
- __ (30) [52.222-36](#), Equal Opportunity for Workers with Disabilities (Jul 2014) ([29 U.S.C. 793](#)).
- __ (31) [52.222-37](#), Employment Reports on Veterans (JUL 2014) (38 U.S.C. 4212).
- __ (32) [52.222-40](#), Notification of Employee Rights Under the National Labor Relations Act (Dec 2010) (E.O. 13496).
- _ X _ (33)(i) [52.222-50](#), Combating Trafficking in Persons (Mar 2015) ([22 U.S.C. chapter 78](#) and E.O. 13627).
- __ (ii) Alternate I (Mar 2015) of [52.222-50](#) ([22 U.S.C. chapter 78](#) and E.O. 13627).
- __ (34) [52.222-54](#), Employment Eligibility Verification (AUG 2013). (Executive Order 12989). (Not applicable to the acquisition of commercially available off-the-shelf items or certain other types of commercial items as prescribed in [22.1803](#).)

- __ (35)(i) [52.223-9](#), Estimate of Percentage of Recovered Material Content for EPA–Designated Items (May 2008) ([42 U.S.C. 6962\(c\)\(3\)\(A\)\(ii\)](#)). (Not applicable to the acquisition of commercially available off-the-shelf items.)
- __ (ii) Alternate I (May 2008) of [52.223-9](#) ([42 U.S.C. 6962\(i\)\(2\)\(C\)](#)). (Not applicable to the acquisition of commercially available off-the-shelf items.)
- __ (36)(i) [52.223-13](#), Acquisition of EPEAT®-Registered Imaging Equipment (JUN 2014) (E.O.s 13423 and 13514).
- __ (ii) Alternate I (Jun 2014) of [52.223-13](#).
- __ (37)(i) [52.223-14](#), Acquisition of EPEAT®-Registered Televisions (JUN 2014) (E.O.s 13423 and 13514).
- __ (ii) Alternate I (Jun 2014) of [52.223-14](#).
- __ (38) [52.223-15](#), Energy Efficiency in Energy-Consuming Products (DEC 2007) ([42 U.S.C. 8259b](#)).
- __ (39)(i) [52.223-16](#), Acquisition of EPEAT®-Registered Personal Computer Products (JUN 2014) (E.O.s 13423 and 13514).
- __ (ii) Alternate I (Jun 2014) of [52.223-16](#).
- _X_ (40) [52.223-18](#), Encouraging Contractor Policies to Ban Text Messaging While Driving (AUG 2011) (E.O. 13513).
- __ (41) [52.225-1](#), Buy American-Supplies (May 2014) ([41 U.S.C. chapter 83](#)).
- __ (42)(i) [52.225-3](#), Buy American-Free Trade Agreements-Israeli Trade Act (May 2014) ([41 U.S.C. chapter 83](#), [19 U.S.C. 3301](#) note, [19 U.S.C. 2112](#) note, [19 U.S.C. 3805](#) note, [19 U.S.C. 4001](#) note, Pub. L. 103-182, 108-77, 108-78, 108-286, 108-302, 109-53, 109-169, 109-283, 110-138, 112-41, 112-42, and 112-43).
- __ (ii) Alternate I (May 2014) of [52.225-3](#).
- __ (iii) Alternate II (May 2014) of [52.225-3](#).
- __ (iv) Alternate III (May 2014) of [52.225-3](#).
- __ (43) [52.225-5](#), Trade Agreements (NOV 2013) ([19 U.S.C. 2501](#), et seq., [19 U.S.C. 3301](#) note).
- _X_ (44) [52.225-13](#), Restrictions on Certain Foreign Purchases (June 2008) (E.O.'s, proclamations, and statutes administered by the Office of Foreign Assets Control of the Department of the Treasury).
- __ (45) [52.225-26](#), Contractors Performing Private Security Functions Outside the United States (Jul 2013) (Section 862, as amended, of the National Defense Authorization Act for Fiscal Year 2008; [10 U.S.C. 2302 Note](#)).
- __ (46) [52.226-4](#), Notice of Disaster or Emergency Area Set-Aside (Nov 2007) ([42 U.S.C. 5150](#)).
- __ (47) [52.226-5](#), Restrictions on Subcontracting Outside Disaster or Emergency Area (Nov 2007) ([42 U.S.C. 5150](#)).
- __ (48) [52.232-29](#), Terms for Financing of Purchases of Commercial Items (Feb 2002) ([41 U.S.C. 4505](#), [10 U.S.C. 2307\(f\)](#)).
- __ (49) [52.232-30](#), Installment Payments for Commercial Items (Oct 1995) ([41 U.S.C. 4505](#), [10 U.S.C. 2307\(f\)](#)).
- _X_ (50) [52.232-33](#), Payment by Electronic Funds Transfer-System for Award Management (Jul 2013) ([31 U.S.C. 3332](#)).

__ (51) [52.232-34](#), Payment by Electronic Funds Transfer-Other than System for Award Management (Jul 2013) ([31 U.S.C. 3332](#)).

__ (52) [52.232-36](#), Payment by Third Party (May 2014) ([31 U.S.C. 3332](#)).

__ (53) [52.239-1](#), Privacy or Security Safeguards (Aug 1996) ([5 U.S.C. 552a](#)).

__ (54)(i) [52.247-64](#), Preference for Privately Owned U.S.-Flag Commercial Vessels (Feb 2006) ([46 U.S.C. Appx. 1241\(b\)](#) and [10 U.S.C. 2631](#)).

__ (ii) Alternate I (Apr 2003) of [52.247-64](#).

(c) The Contractor shall comply with the FAR clauses in this paragraph (c), applicable to commercial services, that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

__ (1) [52.222-17](#), Nondisplacement of Qualified Workers (May 2014)(E.O. 13495).

__ (2) [52.222-41](#), Service Contract Labor Standards (May 2014) ([41 U.S.C. chapter 67](#)).

__ (3) [52.222-42](#), Statement of Equivalent Rates for Federal Hires (May 2014) ([29 U.S.C. 206](#) and [41 U.S.C. chapter 67](#)).

__ (4) [52.222-43](#), Fair Labor Standards Act and Service Contract Labor Standards-Price Adjustment (Multiple Year and Option Contracts) (May 2014) ([29 U.S.C. 206](#) and [41 U.S.C. chapter 67](#)).

__ (5) [52.222-44](#), Fair Labor Standards Act and Service Contract Labor Standards-Price Adjustment (May 2014) ([29 U.S.C. 206](#) and [41 U.S.C. chapter 67](#)).

__ (6) [52.222-51](#), Exemption from Application of the Service Contract Labor Standards to Contracts for Maintenance, Calibration, or Repair of Certain Equipment-Requirements (May 2014) ([41 U.S.C. chapter 67](#)).

__ (7) [52.222-53](#), Exemption from Application of the Service Contract Labor Standards to Contracts for Certain Services-Requirements (May 2014) ([41 U.S.C. chapter 67](#)).

__ (8) [52.222-55](#), Minimum Wages Under Executive Order 13658 (Dec 2014)(E.O. 13658).

__ (9) [52.226-6](#), Promoting Excess Food Donation to Nonprofit Organizations (May 2014) ([42 U.S.C. 1792](#)).

__ (10) [52.237-11](#), Accepting and Dispensing of \$1 Coin (Sept 2008) ([31 U.S.C. 5112\(p\)\(1\)](#)).

(d) Comptroller General Examination of Record. The Contractor shall comply with the provisions of this paragraph (d) if this contract was awarded using other than sealed bid, is in excess of the simplified acquisition threshold, and does not contain the clause at [52.215-2](#), Audit and Records-Negotiation.

(1) The Comptroller General of the United States, or an authorized representative of the Comptroller General, shall have access to and right to examine any of the Contractor's directly pertinent records involving transactions related to this contract.

(2) The Contractor shall make available at its offices at all reasonable times the records, materials, and other evidence for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in FAR [Subpart 4.7](#), Contractor Records Retention, of the other clauses of this contract. If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement. Records relating to appeals under the disputes clause or to litigation or the settlement of claims arising

under or relating to this contract shall be made available until such appeals, litigation, or claims are finally resolved.

(3) As used in this clause, records include books, documents, accounting procedures and practices, and other data, regardless of type and regardless of form. This does not require the Contractor to create or maintain any record that the Contractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(e)(1) Notwithstanding the requirements of the clauses in paragraphs (a), (b), (c), and (d) of this clause, the Contractor is not required to flow down any FAR clause, other than those in this paragraph (e)(1) in a subcontract for commercial items. Unless otherwise indicated below, the extent of the flow down shall be as required by the clause-

(i) [52.203-13](#), Contractor Code of Business Ethics and Conduct (Apr 2010) ([41 U.S.C. 3509](#)).

(ii) [52.219-8](#), Utilization of Small Business Concerns (Oct 2014) ([15 U.S.C. 637\(d\)\(2\)](#) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$650,000 (\$1.5 million for construction of any public facility), the subcontractor must include [52.219-8](#) in lower tier subcontracts that offer subcontracting opportunities.

(iii) [52.222-17](#), Nondisplacement of Qualified Workers (May 2014) (E.O. 13495). Flow down required in accordance with paragraph (l) of FAR clause [52.222-17](#).

(iv) [52.222-21](#), Prohibition of Segregated Facilities (Apr 2015)

(v) [52.222-26](#), Equal Opportunity (Apr 2015) (E.O. 11246).

(vi) [52.222-35](#), Equal Opportunity for Veterans (Jul 2014) ([38 U.S.C. 4212](#)).

(vii) [52.222-36](#), Equal Opportunity for Workers with Disabilities (Jul 2014) ([29 U.S.C. 793](#)).

(viii) [52.222-37](#), Employment Reports on Veterans (Jul 2014) ([38 U.S.C. 4212](#))

(ix) [52.222-40](#), Notification of Employee Rights Under the National Labor Relations Act (Dec 2010) (E.O. 13496). Flow down required in accordance with paragraph (f) of FAR clause [52.222-40](#).

(x) [52.222-41](#), Service Contract Labor Standards (May 2014) ([41 U.S.C. chapter 67](#)).

(xi)

__ (A) [52.222-50](#), Combating Trafficking in Persons (Mar 2015) ([22 U.S.C. chapter 78](#) and E.O 13627).

__ (B) Alternate I (Mar 2015) of [52.222-50](#) ([22 U.S.C. chapter 78](#) and E.O 13627).

(xii) [52.222-51](#), Exemption from Application of the Service Contract Labor Standards to Contracts for Maintenance, Calibration, or Repair of Certain Equipment-Requirements (May 2014) ([41 U.S.C. chapter 67](#)).

(xiii) [52.222-53](#), Exemption from Application of the Service Contract Labor Standards to Contracts for Certain Services-Requirements (May 2014) ([41 U.S.C. chapter 67](#)).

(xiv) [52.222-54](#), Employment Eligibility Verification (AUG 2013).

(xv) [52.222-55](#), Minimum Wages Under Executive Order 13658 (Dec 2014) (Executive Order 13658).

(xvi) [52.225-26](#), Contractors Performing Private Security Functions Outside the United States (Jul 2013) (Section 862, as amended, of the National Defense Authorization Act for Fiscal Year 2008; [10 U.S.C. 2302 Note](#)).

(xvii) [52.226-6](#), Promoting Excess Food Donation to Nonprofit Organizations (May 2014) ([42 U.S.C. 1792](#)). Flow down required in accordance with paragraph (e) of FAR clause [52.226-6](#).

(xviii) [52.247-64](#), Preference for Privately Owned U.S.-Flag Commercial Vessels (Feb 2006) ([46 U.S.C. Appx. 1241\(b\)](#) and [10 U.S.C. 2631](#)). Flow down required in accordance with paragraph (d) of FAR clause [52.247-64](#).

(2) While not required, the contractor may include in its subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

(End of clause)

ADDENDUM TO CONTRACT CLAUSES
FAR AND DOSAR CLAUSES NOT PRESCRIBED IN PART 12

52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at:

<http://acquisition.gov/far/index.html> or <http://farsite.hill.af.mil/vffara.htm>.

These addresses are subject to change. If the Federal Acquisition Regulation (FAR) is not available at the locations indicated above, use the Department of State Acquisition website at <http://www.statebuy.state.gov> to see the links to the FAR. You may also use an Internet "search engine" (for example, Google, Yahoo or Excite) to obtain the latest location of the most current FAR.

The following Federal Acquisition Regulation clauses are incorporated by reference:

<u>CLAUSE</u>	<u>TITLE AND DATE</u>
52.204-12	DATA UNIVERSAL NUMBERING SYSTEM NUMBER MAINTENANCE (DEC 2012)
52.204-13	SYSTEM FOR AWARD MANAGEMENT MAINTENANCE (JUL 2013)
52.225-14	INCONSISTENCY BETWEEN ENGLISH VERSION AND TRANSLATION OF CONTRACT (FEB 2000)
52.228-5	INSURANCE - WORK ON A GOVERNMENT INSTALLATION (JAN 1997)
52.229-6	FOREIGN FIXED PRICE CONTRACTS (FEB 2013)
52.232-39	UNENFORCEABILITY OF UNAUTHORIZED OBLIGATIONS (JUNE 2013)
52.232-40	PROVIDING ACCELERATED PAYMENTS TO SMALL BUSINESS SUBCONTRACTORS (DEC 2013)
52.204-9	PERSONAL IDENTITY VERIFICATION OF CONTRACTOR PERSONNEL (JAN 2011)

The following FAR clauses are provided in full text:

52.217-9 OPTION TO EXTEND THE TERM OF THE CONTRACT (MAR 2000)

(a) The Government may extend the term of this contract by written notice to the Contractor within the performance period of the contract or within 30 days after funds for the option year become available, whichever is later.

(b) If the Government exercises this option, the extended contract shall be considered to include this option clause.

(c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed 5 years.

52.232-19 AVAILABILITY OF FUNDS FOR THE NEXT FISCAL YEAR
(APR 1984)

Funds are not presently available for performance under this contract beyond September 30 of the current calendar year. The Government's obligation for performance of this contract beyond that date is contingent upon the availability of appropriated funds from which payment for contract purposes can be made. No legal liability on the part of the Government for any payment may arise for performance under this contract beyond September 30 of the current calendar year, until funds are made available to the Contracting Officer for performance and until the Contractor receives notice of availability, to be confirmed in writing by the Contracting Officer.

The following DOSAR clauses are provided in full text:

CONTRACTOR IDENTIFICATION (JULY 2008)

Contract performance may require Contractor personnel to attend meetings with government personnel and the public, work within government offices, and/or utilize government email.

Contractor personnel must take the following actions to identify themselves as non-federal employees:

- (1) Use an email signature block that shows name, the office being supported and company affiliation (e.g. "John Smith, Office of Human Resources, ACME Corporation Support Contractor");
- (2) Clearly identify themselves and their contractor affiliation in meetings;
- (3) Identify their contractor affiliation in Departmental e-mail and phone listings whenever Contractor personnel are included in those listings; and
- (4) Contractor personnel may not utilize Department of State logos or indicia on business cards.
(End of clause)

652.232-70 PAYMENT SCHEDULE AND INVOICE SUBMISSION (FIXED-PRICE) (AUG 1999)

(a) General. The Government shall pay the contractor as full compensation for all work required, performed, and accepted under this contract the firm fixed-price stated in this contract.

(b) Invoice Submission. The contractor shall submit invoices in an original and 1 copy to the office identified in Block 18b of the SF-1449. To constitute a proper invoice, the invoice shall include all the items required by FAR 32.905(b).

American Embassy
Budget & Fiscal
Bul. Kneza Aleksandra Karadjordjevic 92
11000 Belgrade
Serbia

The contractor shall include the following statement on invoices submitted for payment "*Oslobodjeno plaćanja PDV-a po članu 24. st.1.16 pod tačka 1. Zakona o PDV*" ("Exempt from VAT under article 24, paragraph 1.16, item 1 on the Law on VAT").

(c) Contractor Remittance Address. The Government will make payment to the contractor’s address stated on the cover page of this contract, unless a separate remittance address is shown below:

(End of Clause)

652.237-72 OBSERVANCE OF LEGAL HOLIDAYS AND ADMINISTRATIVE LEAVE (APR 2004)

(a) The Department of State observes the following days as holidays:

- New Year’s Day
- Martin Luther King’s Birthday
- Washington’s Birthday
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Veterans Day
- Thanksgiving Day
- Christmas Day

Any other day designated by Federal law, Executive Order, or Presidential Proclamation.
All official holidays of the Republic of Serbia.

(b) When any such day falls on a Saturday or Sunday, the following Monday is observed. Observance of such days by Government personnel shall not be cause for additional period of performance or entitlement to compensation except as set forth in the contract. If the contractor’s personnel work on a holiday, no form of holiday or other premium compensation will be reimbursed either as a direct or indirect cost, unless authorized pursuant to an overtime clause elsewhere in this contract.

(c) When the Department of State grants administrative leave to its Government employees, assigned contractor personnel in Government facilities shall also be dismissed. However, the contractor agrees to continue to provide sufficient personnel to perform round-the-clock requirements of critical tasks already in operation or scheduled, and shall be guided by the instructions issued by the contracting officer or his/her duly authorized representative.

(d) For fixed-price contracts, if services are not required or provided because the building is closed due to inclement weather, unanticipated holidays declared by the President, failure of Congress to appropriate funds, or similar reasons, deductions will be computed as follows:

(1) The deduction rate in dollars per day will be equal to the per month contract price divided by 21 days per month.

(2) The deduction rate in dollars per day will be multiplied by the number of days services are not required or provided.

If services are provided for portions of days, appropriate adjustment will be made by the contracting officer to ensure that the contractor is compensated for services provided.

(e) If administrative leave is granted to contractor personnel as a result of conditions stipulated in any "Excusable Delays" clause of this contract, it will be without loss to the contractor. The cost of salaries and wages to the contractor for the period of any such excused absence shall be a reimbursable item of direct cost hereunder for employees whose regular time is normally charged, and a reimbursable item of indirect cost for employees whose time is normally charged indirectly in accordance with the contractor's accounting policy.

(End of clause)

652.242-70 CONTRACTING OFFICER'S REPRESENTATIVE (COR) (AUG 1999)

(a) The Contracting Officer may designate in writing one or more Government employees, by name or position title, to take action for the Contracting Officer under this contract. Each designee shall be identified as a Contracting Officer's Representative (COR). Such designation(s) shall specify the scope and limitations of the authority so delegated; provided, that the designee shall not change the terms or conditions of the contract, unless the COR is a warranted Contracting Officer and this authority is delegated in the designation.

(b) The COR for this contract is the NEC Electrical Engineer.
(End of clause)

652.242-73 AUTHORIZATION AND PERFORMANCE (AUG 1999)

(a) The Contractor warrants the following:

- (1) That it has obtained authorization to operate and do business in the country or countries in which this contract will be performed;
 - (2) That it has obtained all necessary licenses and permits required to perform this contract;
- and,
- (3) That it shall comply fully with all laws, decrees, labor standards, and regulations of said country or countries during the performance of this contract.

(b) If the party actually performing the work will be a subcontractor or joint venture partner, then such subcontractor or joint venture partner agrees to the requirements of paragraph (a) of this clause.
(End of clause)

652.229-70 EXCISE TAX EXEMPTION STATEMENT FOR CONTRACTORS WITHIN THE UNITED STATES (JUL 1988)

This is to certify that the item(s) covered by this contract is/are for export solely for the use of the U.S. Foreign Service Post identified in the contract schedule.

The Contractor shall use a photocopy of this contract as evidence of intent to export. Final proof of exportation may be obtained from the agent handling the shipment. Such proof shall be accepted in lieu of payment of excise tax.

(End of clause)

SECTION 3 - SOLICITATION PROVISIONS

FAR 52.212-1, INSTRUCTIONS TO OFFERORS -- COMMERCIAL ITEMS (JULY 2013), is incorporated by reference. (see SF-1449, BLOCK 27A).

ADDENDUM TO 52.212-1

Instructions to Offeror. Each offer must consist of the following:

A. Summary of Instructions. Each offer must consist of the following:

A.1. A completed solicitation, in which the SF-1449 cover page (blocks 12, 17, 19-24, and 30 as appropriate), and Section 1 has been filled out.

A.2. Information demonstrating the offeror's/quoter's ability to perform, including:

(1) Name of a Project Manager (or other liaison to the Embassy/Consulate) who understands written and spoken English;

(2) Evidence that the offeror/quoter operates an established business with a permanent address and telephone listing. For local companies this will be in the form of a copy of the excerpt from the Serbian Business Registry (*Agencija za privredne registre*) and a copy of the tax identification number certificate (*PIB*);

(3) List of clients over the past 2 (two) years, demonstrating prior experience with relevant past performance information and references (provide dates of contracts, places of performance, value of contracts, contact names, telephone and fax numbers and email addresses). If the offeror has not performed comparable services in Serbia then the offeror shall provide its international experience. Offerors are advised that the past performance information requested above may be discussed with the client's contact person. In addition, the client's contact person may be asked to comment on the offeror's:

- Quality of services provided under the contract;
- Compliance with contract terms and conditions;
- Effectiveness of management;
- Willingness to cooperate with and assist the customer in routine matters, and when confronted by unexpected difficulties; and
- Business integrity / business conduct.

The Government will use past performance information primarily to assess an offeror's capability to meet the solicitation performance requirements, including the relevance and successful performance of the offeror's work experience. The Government may also use this data to evaluate the credibility of the offeror's proposal. In addition, the Contracting Officer may use past performance information in making a determination of responsibility.

(4) Evidence that the offeror/quoter can provide the necessary personnel, equipment, and financial resources needed to perform the work, , including a solvency report (*Izveštaj o bonitetu za javne nabavke*). You must include a list of specialized test/diagnostic/programming equipment for servicing equipment listed in Exhibit A to be used for maintenance;

(5) Your company's Dun & Bradstreet (DUNS) number

(6) The offeror shall address its plan to obtain all licenses and permits required by local law (see DOSAR 652.242-73 in Section 2). If offeror already possesses the locally required licenses and permits, a copy shall be provided.

(7) a. A copy of the Certificate of Insurance(s), or

b. A statement that the Contractor will get the required insurance, and the name of the insurance provider to be used.

Direct any questions regarding this solicitation in writing and in English exclusively. Email the questions to Zoran Djordjevic at BLG-Procurement@state.gov no later than close of business on August 25, 2015. Questions will not be accepted after this date. Answers will be posted on the Embassy web page where the solicitation is publicized. It is your responsibility to monitor the web page for any new information which may be posted until the solicitation response date.

Quotes may be submitted in electronic format. The electronic quote shall be submitted via email to BLG-Procurement@state.gov The quote shall be in Adobe Acrobat pdf format. Attached files shall not be larger than 2MB and shall be named "(your company name)- Quote SRB10015Q0013 file x of x files.

ADDENDUM TO SOLICITATION PROVISIONS
FAR AND DOSAR PROVISIONS NOT PRESCRIBED IN PART 12

52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998)

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at:

<http://acquisition.gov/far/index.html> or <http://farsite.hill.af.mil/search.htm>.

These addresses are subject to change. IF the FAR is not available at the locations indicated above, use of an Internet “search engine” (for example, Google, Yahoo or Excite) is suggested to obtain the latest location of the most current FAR provisions.

The following Federal Acquisition Regulation solicitation provisions are incorporated by reference:

<u>PROVISION</u>	<u>TITLE AND DATE</u>
52.204-7	SYSTEM FOR AWARD MANAGEMENT (JUL 2013)
52.204-16	COMMERCIAL AND GOVERNMENT ENTITY CODE REPORTING (NOV 2014)
52.209-7	INFORMATION REGARDING RESPONSIBILITY MATTERS (FEB 2012)
52.214-34	SUBMISSION OF OFFERS IN THE ENGLISH LANGUAGE (APR 1991)
52.225-25	PROHIBITION ON CONTRACTING WITH ENTITIES ENGAGING IN CERTAIN ACTIVITIES OR TRANSACTIONS RELATING TO IRAN—REPRESENTATION AND CERTIFICATIONS (DEC 2012)

The following Federal Acquisition Regulation solicitation provision is provided in full text:

52.236-27 SITE VISIT (FEB 1995) (CONSTRUCTION)

(a) The clauses at 52.236-2, Differing Site Conditions, and 52.236-3, Site Investigations and Conditions Affecting the Work, will be included in any contract awarded as a result of this solicitation. Accordingly, offerors or quoters are urged and expected to inspect the site where the work will be performed.

(b) A site visit has been scheduled for 11:00 on Friday, August 21, 2015.

(c) Participants will meet at the U.S. Embassy Service Entrance at Jovana Marinovica bb, Belgrade.

(d) In order to be admitted to the Site Visit, a Site Visit Registration form must be submitted by email to BLG-Procurement@state.gov to the attention of Zoran Djordjevic no later than 12:00 on Wednesday, August 19, 2015. No more than 2 persons will be admitted from each company*. The form is available for download from the Embassy web site at <http://serbia.usembassy.gov/solicitations.html> or you may request a copy of the form by email at BLG-Procurement@state.gov

NOTE TO INTERESTED VENDORS* – Due to security concerns, all offerors must contact the above US Government representative and register for the pre-proposal conference. On the date of the pre-proposal conference, company representatives must present matching photo identification in order to be allowed access. Anyone attempting to attend the pre-proposal conference without prior notification will be denied entry.

Offerors should submit written questions at least three days before the scheduled pre-proposal conference date, using the address provided on the Standard Form 1449 or by emailing the questions to BLG-Procurement@state.gov with the subject line “Questions for solicitation SRB10015Q0013”.

Attendees may also bring written questions to the proposal conference. If the answer requires research, there is no guarantee that the question will be answered at that conference.

No statements made by the Government at the pre-proposal conference shall be considered to be a change to the solicitation unless a written amendment is issued.

The following DOSAR provision is provided in full text:

652.206-70 COMPETITION ADVOCATE/OMBUDSMAN (AUG 1999)(DEVIATION)

(a) The Department of State’s Competition Advocate is responsible for assisting industry in removing restrictive requirements from Department of State solicitations and removing barriers to full and open competition and use of commercial items. If such a solicitation is considered competitively restrictive or does not appear properly conducive to competition and commercial practices, potential offerors are encouraged to first contact the contracting office for the respective solicitation.

If concerns remain unresolved, contact the Department of State Competition Advocate on (703) 516-1696, by fax at (703) 875-6155, or by writing to:

Competition Advocate
U.S. Department of State
A/OPE
SA-15, Room 1060
Washington, DC 20522-1510.

(b) The Department of State’s Acquisition Ombudsman has been appointed to hear concerns from potential offerors and contractors during the pre-award and post-award phases of this acquisition. The role of the ombudsman is not to diminish the authority of the contracting officer, the Technical Evaluation Panel or Source Evaluation Board, or the selection official. The purpose of the ombudsman is to facilitate the communication of concerns, issues, disagreements, and recommendations of interested parties to the appropriate Government personnel, and work to resolve them. When requested and appropriate, the ombudsman will maintain strict confidentiality as to the source of the concern. The ombudsman does not participate in the evaluation of proposals, the source selection process, or the adjudication of formal contract disputes.

Interested parties are invited to contact the contracting activity ombudsman, Steven Ryder at +381-11/706-4000. For a U.S. Embassy or overseas post, refer to the numbers below for the Department Acquisition Ombudsman.

Concerns, issues, disagreements, and recommendations which cannot be resolved at a contracting activity level may be referred to the Department of State Acquisition Ombudsman at (703) 516-1696, by fax at (703) 875-6155, or by writing to:

Acquisition Ombudsman
U.S. Department of State
A/OPE
SA-15, Room 1060
Washington, DC 20522-1510.

(End of provision)

SECTION 4 - EVALUATION FACTORS

Award will be made to the lowest priced, acceptable, responsible offeror. The offeror shall submit a completed solicitation, including Sections 1 and 5.

The Government reserves the right to reject proposals that are unreasonably low or high in price. The evaluation process shall include the following:

A. **COMPLIANCE REVIEW.** The Government will perform an initial review of proposals/quotations received to determine compliance with the terms of the solicitation. The Government may reject as unacceptable proposals/quotations that do not conform to the solicitation.

B. **TECHNICAL ACCEPTABILITY.** Technical acceptability will include a review of the items offered to ensure that they meet the required standards, and past performance and experience as defined in Section 3, along with any technical information provided by the offeror with its proposal/quotation.

C. **REJECTION OF OFFERS.** The Government reserves the right to reject an offer if one of the following conditions exists:

- 1) Offeror fails to submit any of the required proposal documents required by Section 3;
- 2) Offeror submits a cost/price proposal that cannot be adequately explained or substantiated;
- 3) Offeror submits an offer that could not be made technically acceptable without a major rewrite.

The Government intends to make award without discussions on the basis of initial proposals received. However, the Government may elect to make award with discussions if it is determined to be in the Government's best interest.

If the Government elects to make award with discussions, it reserves the right, before requesting a final proposal revision, to: 1) limit the number of offerors in the competitive range to the greatest number of proposals that will permit an adequate competition among the technically acceptable proposals; 2) make more than one competitive range determination; 3) conduct more than one round of discussions; and 4) conduct more than one round of proposal revisions.

The Government reserves the right to reject an offer if one of the following conditions exists:

- a. Offeror fails to submit any of the required proposal documents required by Section 3;
- b. Offeror submits a cost/price proposal that cannot be adequately explained or substantiated;
- c. Offeror submits an offer that could not be made technically acceptable without a major rewrite.

The lowest price will be determined by multiplying the offered prices times the estimated quantities in "Prices - Continuation of SF-1449, block 23", and arriving at a grand total, including all options.

The Government will determine acceptability by assessing the offeror's compliance with the terms of the RFQ to include the technical information required by Section 3.

The Government will determine contractor responsibility by analyzing whether the apparent successful offeror complies with the requirements of FAR 9.1, including:

- adequate financial resources or the ability to obtain them;
- ability to comply with the required performance period, taking into consideration all existing commercial and governmental business commitments;
- satisfactory record of integrity and business ethics;
- necessary organization, experience, and skills or the ability to obtain them;
- necessary equipment and facilities or the ability to obtain them; and
- be otherwise qualified and eligible to receive an award under applicable laws and regulations.

ADDENDUM TO EVALUATION FACTORS
FAR AND DOSAR PROVISION(S) NOT PRESCRIBED IN PART 12

The following FAR provisions are provided in full text:

52.217-5 EVALUATION OF OPTIONS (JUL 1990)

The Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirement. Evaluation of options will not obligate the Government to exercise the option(s).

52.225-17 EVALUATION OF FOREIGN CURRENCY OFFERS (FEB 2000)

If the Government receives offers in more than one currency, the Government will evaluate offers by converting the foreign currency to United States currency using the exchange rate used by the Embassy in effect as follows:

- (a) For acquisitions conducted using sealed bidding procedures, on the date of bid opening.
- (b) For acquisitions conducted using negotiation procedures—
 - (1) On the date specified for receipt of offers, if award is based on initial offers;
otherwise
 - (2) On the date specified for receipt of proposal revisions.

SECTION 5 - REPRESENTATIONS AND CERTIFICATIONS

52.212-3 OFFEROR REPRESENTATIONS AND CERTIFICATIONS – COMMERCIAL ITEMS (MAR 2015)

The Offeror shall complete only paragraph (b) of this provision if the Offeror has completed the annual representations and certification electronically via the System for Award Management (SAM) website accessed through <http://www.acquisition.gov>. If the Offeror has not completed the annual representations and certifications electronically, the Offeror shall complete only paragraphs (c) through (p) of this provision.

(a) Definitions. As used in this provision-

“Economically disadvantaged women-owned small business (EDWOSB) concern” means a small business concern that is at least 51 percent directly and unconditionally owned by, and the management and daily business operations of which are controlled by, one or more women who are citizens of the United States and who are economically disadvantaged in accordance with 13 CFR part 127. It automatically qualifies as a women-owned small business eligible under the WOSB Program.

“Forced or indentured child labor” means all work or service-

(1) Exacted from any person under the age of 18 under the menace of any penalty for its nonperformance and for which the worker does not offer himself voluntarily; or

(2) Performed by any person under the age of 18 pursuant to a contract the enforcement of which can be accomplished by process or penalties.

“Highest-level owner” means the entity that owns or controls an immediate owner of the offeror, or that owns or controls one or more entities that control an immediate owner of the offeror. No entity owns or exercises control of the highest level owner.

“Immediate owner” means an entity, other than the offeror, that has direct control of the offeror. Indicators of control include, but are not limited to, one or more of the following: ownership or interlocking management, identity of interests among family members, shared facilities and equipment, and the common use of employees.

“Inverted domestic corporation”, means a foreign incorporated entity that meets the definition of an inverted domestic corporation under 6 U.S.C. 395(b), applied in accordance with the rules and definitions of 6 U.S.C. 395(c).

“Manufactured end product” means any end product in product and service codes (PSCs) 1000-9999, except-

- (1) PSC 5510, Lumber and Related Basic Wood Materials;
- (2) Product or Service Group (PSG) 87, Agricultural Supplies;
- (3) PSG 88, Live Animals;
- (4) PSG 89, Subsistence;
- (5) PSC 9410, Crude Grades of Plant Materials;
- (6) PSC 9430, Miscellaneous Crude Animal Products, Inedible;
- (7) PSC 9440, Miscellaneous Crude Agricultural and Forestry Products;
- (8) PSC 9610, Ores;
- (9) PSC 9620, Minerals, Natural and Synthetic; and
- (10) PSC 9630, Additive Metal Materials.

“Place of manufacture” means the place where an end product is assembled out of components, or otherwise made or processed from raw materials into the finished product that is to be provided to the Government. If a product is disassembled and reassembled, the place of reassembly is not the place of manufacture.

“Restricted business operations” means business operations in Sudan that include power production activities, mineral extraction activities, oil-related activities, or the production of military equipment, as those terms are defined in the Sudan Accountability and Divestment Act of 2007 (Pub. L. 110-174). Restricted business operations do not include business operations that the person (as that term is defined in Section 2 of the Sudan Accountability and Divestment Act of 2007) conducting the business can demonstrate-

- (1) Are conducted under contract directly and exclusively with the regional government of southern Sudan;
- (2) Are conducted pursuant to specific authorization from the Office of Foreign Assets Control in the Department of the Treasury, or are expressly exempted under Federal law from the requirement to be conducted under such authorization;
- (3) Consist of providing goods or services to marginalized populations of Sudan;
- (4) Consist of providing goods or services to an internationally recognized peacekeeping force or humanitarian organization;
- (5) Consist of providing goods or services that are used only to promote health or education; or
- (6) Have been voluntarily suspended.

“Sensitive technology”-

- (1) Means hardware, software, telecommunications equipment, or any other technology that is to be used specifically-
 - (i) To restrict the free flow of unbiased information in Iran; or
 - (ii) To disrupt, monitor, or otherwise restrict speech of the people of Iran; and
- (2) Does not include information or informational materials the export of which the President does not have the authority to regulate or prohibit pursuant to section 203(b)(3) of the International Emergency Economic Powers Act (50 U.S.C. 1702(b)(3)).

“Service-disabled veteran-owned small business concern”-

- (1) Means a small business concern-
 - (i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and
 - (ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a service-disabled veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.
- (2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

“Small business concern” means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and size standards in this solicitation.

“Small disadvantaged business concern”, consistent with 13 CFR 124.1002, means a small business concern under the size standard applicable to the acquisition, that-

- (1) Is at least 51 percent unconditionally and directly owned (as defined at 13 CFR 124.105) by-
 - (i) One or more socially disadvantaged (as defined at 13 CFR 124.103) and economically disadvantaged (as defined at 13 CFR 124.104) individuals who are citizens of the United States; and
 - (ii) Each individual claiming economic disadvantage has a net worth not exceeding \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); and
- (2) The management and daily business operations of which are controlled (as defined at 13.CFR 124.106) by individuals, who meet the criteria in paragraphs (1)(i) and (ii) of this definition.

“Subsidiary” means an entity in which more than 50 percent of the entity is owned-

- (1) Directly by a parent corporation; or

(2) Through another subsidiary of a parent corporation.

“Veteran-owned small business concern” means a small business concern-

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

“Women-owned business concern” means a concern which is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of its stock is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

“Women-owned small business concern” means a small business concern-

(1) That is at least 51 percent owned by one or more women; or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

“Women-owned small business (WOSB) concern eligible under the WOSB Program” (in accordance with 13 CFR part 127), means a small business concern that is at least 51 percent directly and unconditionally owned by, and the management and daily business operations of which are controlled by, one or more women who are citizens of the United States.

(b)

(1) Annual Representations and Certifications. Any changes provided by the offeror in paragraph (b)(2) of this provision do not automatically change the representations and certifications posted on the SAM website.

(2) The offeror has completed the annual representations and certifications electronically via the SAM website accessed through <http://www.acquisition.gov>. After reviewing the SAM database information, the offeror verifies by submission of this offer that the representations and certifications currently posted electronically at FAR 52.212-3, Offeror Representations and Certifications-Commercial Items, have been entered or updated in the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR 4.1201), except for paragraphs _____.

[Offeror to identify the applicable paragraphs at (c) through (p) of this provision that the offeror has completed for the purposes of this solicitation only, if any.

These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.

Any changes provided by the offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications posted electronically on SAM.]

(c) Offerors must complete the following representations when the resulting contract will be performed in the United States or its outlying areas. Check all that apply.

(1) Small business concern. The offeror represents as part of its offer that it is, is not a small business concern.

(2) Veteran-owned small business concern. [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents as part of its offer that it is, is not a veteran-owned small business concern.

(3) Service-disabled veteran-owned small business concern. [Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (c)(2) of this provision.] The offeror represents as part of its offer that it is, is not a service-disabled veteran-owned small business concern.

(4) Small disadvantaged business concern. [Complete only if the offeror represented itself as a small

business concern in paragraph (c)(1) of this provision.] The offeror represents, that it is, is not a small disadvantaged business concern as defined in 13 CFR 124.1002.

(5) Women-owned small business concern. [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents that it is, is not a women-owned small business concern.

(6) WOSB concern eligible under the WOSB Program. [Complete only if the offeror represented itself as a women-owned small business concern in paragraph (c)(5) of this provision.] The offeror represents that-

(i) It is, is not a WOSB concern eligible under the WOSB Program, has provided all the required documents to the WOSB Repository, and no change in circumstances or adverse decisions have been issued that affects its eligibility; and

(ii) It is, is not a joint venture that complies with the requirements of 13 CFR part 127, and the representation in paragraph (c)(6)(i) of this provision is accurate for each WOSB concern eligible under the WOSB Program participating in the joint venture. [The offeror shall enter the name or names of the WOSB concern eligible under the WOSB Program and other small businesses that are participating in the joint venture: _____.] Each WOSB concern eligible under the WOSB Program participating in the joint venture shall submit a separate signed copy of the WOSB representation.

(7) Economically disadvantaged women-owned small business (EDWOSB) concern. [Complete only if the offeror represented itself as a WOSB concern eligible under the WOSB Program in (c)(6) of this provision.] The offeror represents that-

(i) It is, is not an EDWOSB concern, has provided all the required documents to the WOSB Repository, and no change in circumstances or adverse decisions have been issued that affects its eligibility; and

(ii) It is, is not a joint venture that complies with the requirements of 13 CFR part 127, and the representation in paragraph (c)(7)(i) of this provision is accurate for each EDWOSB concern participating in the joint venture. [The offeror shall enter the name or names of the EDWOSB concern and other small businesses that are participating in the joint venture: _____.] Each EDWOSB concern participating in the joint venture shall submit a separate signed copy of the EDWOSB representation.

Note: Complete paragraphs (c)(8) and (c)(9) only if this solicitation is expected to exceed the simplified acquisition threshold.

(8) Women-owned business concern (other than small business concern). [Complete only if the offeror is a women-owned business concern and did not represent itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents that it is a women-owned business concern.

(9) Tie bid priority for labor surplus area concerns. If this is an invitation for bid, small business offerors may identify the labor surplus areas in which costs to be incurred on account of manufacturing or production (by offeror or first-tier subcontractors) amount to more than 50 percent of the contract price: _____

(10) HUBZone small business concern. [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents, as part of its offer, that-

(i) It is, is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material changes in ownership and control, principal office, or HUBZone employee percentage have occurred since it was certified in accordance with 13 CFR Part 126; and

(ii) It is, is not a HUBZone joint venture that complies with the requirements of 13 CFR Part 126, and the representation in paragraph (c)(10)(i) of this provision is accurate for each HUBZone small business concern participating in the HUBZone joint venture. [The offeror shall enter the names of each of the HUBZone small business concerns participating in the HUBZone joint venture: _____.] Each HUBZone small business concern participating in the HUBZone joint venture shall submit a separate

signed copy of the HUBZone representation.

(d) Representations required to implement provisions of Executive Order 11246-

(1) Previous contracts and compliance. The offeror represents that-

(i) It has, has not participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation; and

(ii) It has, has not filed all required compliance reports.

(2) Affirmative Action Compliance. The offeror represents that-

(i) It has developed and has on file, has not developed and does not have on file, at each establishment, affirmative action programs required by rules and regulations of the Secretary of Labor (41 cfr parts 60-1 and 60-2), or

(ii) It has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

(e) Certification Regarding Payments to Influence Federal Transactions (31 U.S.C. 1352). (Applies only if the contract is expected to exceed \$150,000.) By submission of its offer, the offeror certifies to the best of its knowledge and belief that no Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress or an employee of a Member of Congress on his or her behalf in connection with the award of any resultant contract. If any registrants under the Lobbying Disclosure Act of 1995 have made a lobbying contact on behalf of the offeror with respect to this contract, the offeror shall complete and submit, with its offer, OMB Standard Form LLL, Disclosure of Lobbying Activities, to provide the name of the registrants. The offeror need not report regularly employed officers or employees of the offeror to whom payments of reasonable compensation were made.

(f) Buy American Certificate. (Applies only if the clause at Federal Acquisition Regulation (FAR) 52.225-1, Buy American-Supplies, is included in this solicitation.)

(1) The offeror certifies that each end product, except those listed in paragraph (f)(2) of this provision, is a domestic end product and that for other than COTS items, the offeror has considered components of unknown origin to have been mined, produced, or manufactured outside the United States. The offeror shall list as foreign end products those end products manufactured in the United States that do not qualify as domestic end products, i.e., an end product that is not a COTS item and does not meet the component test in paragraph (2) of the definition of "domestic end product." The terms "commercially available off-the-shelf (COTS) item" "component," "domestic end product," "end product," "foreign end product," and "United States" are defined in the clause of this solicitation entitled "Buy American-Supplies."

(2) Foreign End Products:

Line Item No. Country of Origin

Line Item No.	Country of Origin
_____	_____
_____	_____
_____	_____

[List as necessary]

(3) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25.

(g)(1) Buy American-Free Trade Agreements-Israeli Trade Act Certificate. (Applies only if the clause at FAR 52.225-3, Buy American-Free Trade Agreements-Israeli Trade Act, is included in this solicitation.)

(i) The offeror certifies that each end product, except those listed in paragraph (g)(1)(ii) or (g)(1)(iii) of this provision, is a domestic end product and that for other than COTS items, the offeror has considered components of unknown origin to have been mined, produced, or manufactured outside the United States. The terms "Bahrainian, Moroccan, Omani, Panamanian, or Peruvian end product,"

“commercially available off-the-shelf (COTS) item,” “component,” “domestic end product,” “end product,” “foreign end product,” “Free Trade Agreement country,” “Free Trade Agreement country end product,” “Israeli end product,” and “United States” are defined in the clause of this solicitation entitled “Buy American-Free Trade Agreements–Israeli Trade Act.”

(ii) The offeror certifies that the following supplies are Free Trade Agreement country end products (other than Bahrainian, Moroccan, Omani, Panamanian, or Peruvian end products) or Israeli end products as defined in the clause of this solicitation entitled “Buy American-Free Trade Agreements- Israeli Trade Act”:

Free Trade Agreement Country End Products (Other than Bahrainian, Moroccan, Omani, Panamanian, or Peruvian End Products) or Israeli End Products:

Line Item No. Country of Origin

[List as necessary]

(iii) The offeror shall list those supplies that are foreign end products (other than those listed in paragraph (g)(1)(ii) of this provision) as defined in the clause of this solicitation entitled “Buy American-Free Trade Agreements- Israeli Trade Act.” The offeror shall list as other foreign end products those end products manufactured in the United States that do not qualify as domestic end products, i.e., an end product that is not a COTS item and does not meet the component test in paragraph (2) of the definition of “domestic end product.”

Other Foreign End Products:

Line Item No. Country of Origin

[List as necessary]

(iv) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25.

(2) Buy American-Free Trade Agreements- Israeli Trade Act Certificate, Alternate I. If Alternate I to the clause at FAR 52.225-3 is included in this solicitation, substitute the following paragraph (g)(1)(ii) for paragraph (g)(1)(ii) of the basic provision:

(g)(1)(ii) The offeror certifies that the following supplies are Canadian end products as defined in the clause of this solicitation entitled “Buy American-Free Trade Agreements- Israeli Trade Act”:

Canadian End Products:

Line Item No.

[List as necessary]

(3) Buy American-Free Trade Agreements- Israeli Trade Act Certificate, Alternate II. If Alternate II to the clause at FAR 52.225-3 is included in this solicitation, substitute the following paragraph (g)(1)(ii) for paragraph (g)(1)(ii) of the basic provision:

(g)(1)(ii) The offeror certifies that the following supplies are Canadian end products or Israeli end products as defined in the clause of this solicitation entitled “Buy American-Free Trade Agreements- Israeli Trade Act”:

Canadian or Israeli End Products:

Line Item No. Country of Origin

[List as necessary]

(4) Buy American-Free Trade Agreements-Israeli Trade Act Certificate, Alternate III. If Alternate III to the clause at 52.225-3 is included in this solicitation, substitute the following paragraph (g)(1)(ii) for paragraph (g)(1)(ii) of the basic provision:

(g)(1)(ii) The offeror certifies that the following supplies are Free Trade Agreement country end products (other than Bahrainian, Korean, Moroccan, Omani, Panamanian, or Peruvian end products) or Israeli end products as defined in the clause of this solicitation entitled “Buy American-Free Trade Agreements-Israeli Trade Act”:

Free Trade Agreement Country End Products (Other than Bahrainian, Korean, Moroccan, Omani, Panamanian, or Peruvian End Products) or Israeli End Products:

Line Item No. Country of Origin

[List as necessary]

(5) Trade Agreements Certificate. (Applies only if the clause at FAR 52.225-5, Trade Agreements, is included in this solicitation.)

(i) The offeror certifies that each end product, except those listed in paragraph (g)(5)(ii) of this provision, is a U.S.-made or designated country end product, as defined in the clause of this solicitation entitled “Trade Agreements.”

(ii) The offeror shall list as other end products those end products that are not U.S.-made or designated country end products.

Other End Products:

Line Item No. Country of Origin

[List as necessary]

(iii) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25. For line items covered by the WTO GPA, the Government will evaluate offers of U.S.-made or designated country end products without regard to the restrictions of the Buy American statute. The Government will consider for award only offers of U.S.-made or designated country end products unless the Contracting Officer determines that there are no offers for such products or that the offers for such products are insufficient to fulfill the requirements of the solicitation.

(h) Certification Regarding Responsibility Matters (Executive Order 12689). (Applies only if the contract value is expected to exceed the simplified acquisition threshold.) The offeror certifies, to the best of its knowledge and belief, that the offeror and/or any of its principals-

(1) Are, are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(2) Have, have not, within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with

obtaining, attempting to obtain, or performing a Federal, state or local government contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating Federal criminal tax laws, or receiving stolen property;

(3) Are, are not presently indicted for, or otherwise criminally or civilly charged by a Government entity with, commission of any of these offenses enumerated in paragraph (h)(2) of this clause; and

(4) Have, have not, within a three-year period preceding this offer, been notified of any delinquent Federal taxes in an amount that exceeds \$3,000 for which the liability remains unsatisfied.

(i) Taxes are considered delinquent if both of the following criteria apply:

(A) The tax liability is finally determined. The liability is finally determined if it has been assessed. A liability is not finally determined if there is a pending administrative or judicial challenge. In the case of a judicial challenge to the liability, the liability is not finally determined until all judicial appeal rights have been exhausted.

(B) The taxpayer is delinquent in making payment. A taxpayer is delinquent if the taxpayer has failed to pay the tax liability when full payment was due and required. A taxpayer is not delinquent in cases where enforced collection action is precluded.

(ii) Examples.

(A) The taxpayer has received a statutory notice of deficiency, under I.R.C. §6212, which entitles the taxpayer to seek Tax Court review of a proposed tax deficiency. This is not a delinquent tax because it is not a final tax liability. Should the taxpayer seek Tax Court review, this will not be a final tax liability until the taxpayer has exercised all judicial appeal rights.

(B) The IRS has filed a notice of Federal tax lien with respect to an assessed tax liability, and the taxpayer has been issued a notice under I.R.C. §6320 entitling the taxpayer to request a hearing with the IRS Office of Appeals contesting the lien filing, and to further appeal to the Tax Court if the IRS determines to sustain the lien filing. In the course of the hearing, the taxpayer is entitled to contest the underlying tax liability because the taxpayer has had no prior opportunity to contest the liability. This is not a delinquent tax because it is not a final tax liability. Should the taxpayer seek tax court review, this will not be a final tax liability until the taxpayer has exercised all judicial appeal rights.

(C) The taxpayer has entered into an installment agreement pursuant to I.R.C. §6159. The taxpayer is making timely payments and is in full compliance with the agreement terms. The taxpayer is not delinquent because the taxpayer is not currently required to make full payment.

(D) The taxpayer has filed for bankruptcy protection. The taxpayer is not delinquent because enforced collection action is stayed under 11 U.S.C. §362 (the Bankruptcy Code).

(i) Certification Regarding Knowledge of Child Labor for Listed End Products (Executive Order 13126). [The Contracting Officer must list in paragraph (i)(1) any end products being acquired under this solicitation that are included in the List of Products Requiring Contractor Certification as to Forced or Indentured Child Labor, unless excluded at .]

(1) Listed end products.

Listed End Product Listed Countries of Origin

(2) Certification. [If the Contracting Officer has identified end products and countries of origin in paragraph (i)(1) of this provision, then the offeror must certify to either (i)(2)(i) or (i)(2)(ii) by checking the appropriate block.]

(i) The offeror will not supply any end product listed in paragraph (i)(1) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product.

(ii) The offeror may supply an end product listed in paragraph (i)(1) of this provision that was

mined, produced, or manufactured in the corresponding country as listed for that product. The offeror certifies that it has made a good faith effort to determine whether forced or indentured child labor was used to mine, produce, or manufacture any such end product furnished under this contract. On the basis of those efforts, the offeror certifies that it is not aware of any such use of child labor.

(j) Place of manufacture. (Does not apply unless the solicitation is predominantly for the acquisition of manufactured end products.) For statistical purposes only, the offeror shall indicate whether the place of manufacture of the end products it expects to provide in response to this solicitation is predominantly-

(1) In the United States (Check this box if the total anticipated price of offered end products manufactured in the United States exceeds the total anticipated price of offered end products manufactured outside the United States); or

(2) Outside the United States.

(k) Certificates regarding exemptions from the application of the Service Contract Labor Standards (Certification by the offeror as to its compliance with respect to the contract also constitutes its certification as to compliance by its subcontractor if it subcontracts out the exempt services.) [The contracting officer is to check a box to indicate if paragraph (k)(1) or (k)(2) applies.]

(1) Maintenance, calibration, or repair of certain equipment as described in FAR 22.1003-4(c)(1). The offeror does does not certify that-

(i) The items of equipment to be serviced under this contract are used regularly for other than Governmental purposes and are sold or traded by the offeror (or subcontractor in the case of an exempt subcontract) in substantial quantities to the general public in the course of normal business operations;

(ii) The services will be furnished at prices which are, or are based on, established catalog or market prices (see FAR 22.1003-4(c)(2)(ii)) for the maintenance, calibration, or repair of such equipment; and

(iii) The compensation (wage and fringe benefits) plan for all service employees performing work under the contract will be the same as that used for these employees and equivalent employees servicing the same equipment of commercial customers.

(2) Certain services as described in FAR 22.1003-4(d)(1). The offeror does does not certify that-

(i) The services under the contract are offered and sold regularly to non-Governmental customers, and are provided by the offeror (or subcontractor in the case of an exempt subcontract) to the general public in substantial quantities in the course of normal business operations;

(ii) The contract services will be furnished at prices that are, or are based on, established catalog or market prices (see FAR 22.1003-4(d)(2)(iii));

(iii) Each service employee who will perform the services under the contract will spend only a small portion of his or her time (a monthly average of less than 20 percent of the available hours on an annualized basis, or less than 20 percent of available hours during the contract period if the contract period is less than a month) servicing the Government contract; and

(iv) The compensation (wage and fringe benefits) plan for all service employees performing work under the contract is the same as that used for these employees and equivalent employees servicing commercial customers.

(3) If paragraph (k)(1) or (k)(2) of this clause applies-

(i) If the offeror does not certify to the conditions in paragraph (k)(1) or (k)(2) and the Contracting Officer did not attach a Service Contract Labor Standards wage determination to the solicitation, the offeror shall notify the Contracting Officer as soon as possible; and

(ii) The Contracting Officer may not make an award to the offeror if the offeror fails to execute the certification in paragraph (k)(1) or (k)(2) of this clause or to contact the Contracting Officer as required in paragraph (k)(3)(i) of this clause.

(l) Taxpayer Identification Number (TIN) (26 U.S.C. 6109, 31 U.S.C. 7701). (Not applicable if the

offeror is required to provide this information to the SAM database to be eligible for award.)

(1) All offerors must submit the information required in paragraphs (l)(3) through (l)(5) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the Internal Revenue Service (IRS).

(2) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(3) Taxpayer Identification Number (TIN).

- TIN: _____.
- TIN has been applied for.
- TIN is not required because:
 - Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;
 - Offeror is an agency or instrumentality of a foreign government;
 - Offeror is an agency or instrumentality of the Federal Government.

(4) Type of organization.

- Sole proprietorship;
- Partnership;
- Corporate entity (not tax-exempt);
- Corporate entity (tax-exempt);
- Government entity (Federal, State, or local);
- Foreign government;
- International organization per 26 CFR 1.6049-4;
- Other _____.

(5) Common parent.

- Offeror is not owned or controlled by a common parent;
- Name and TIN of common parent:
 - Name _____.
 - TIN _____.

(m) Restricted business operations in Sudan. By submission of its offer, the offeror certifies that the offeror does not conduct any restricted business operations in Sudan.

(n) Prohibition on Contracting with Inverted Domestic Corporations.

(1) Government agencies are not permitted to use appropriated (or otherwise made available) funds for contracts with either an inverted domestic corporation, or a subsidiary of an inverted domestic corporation, unless the exception at 9.108-2(b) applies or the requirement is waived in accordance with the procedures at 9.108-4.

(2) Representation. By submission of its offer, the offeror represents that-

- (i) It is not an inverted domestic corporation; and
- (ii) It is not a subsidiary of an inverted domestic corporation.

(o) Prohibition on contracting with entities engaging in certain activities or transactions relating to Iran.

(1) The offeror shall e-mail questions concerning sensitive technology to the Department of State at CISADA106@state.gov.

(2) Representation and Certifications. Unless a waiver is granted or an exception applies as provided in paragraph (o)(3) of this provision, by submission of its offer, the offeror-

- (i) Represents, to the best of its knowledge and belief, that the offeror does not export any

sensitive technology to the government of Iran or any entities or individuals owned or controlled by, or acting on behalf or at the direction of, the government of Iran;

(ii) Certifies that the offeror, or any person owned or controlled by the offeror, does not engage in any activities for which sanctions may be imposed under section 5 of the Iran Sanctions Act; and

(iii) Certifies that the offeror, and any person owned or controlled by the offeror, does not knowingly engage in any transaction that exceeds \$3,000 with Iran’s Revolutionary Guard Corps or any of its officials, agents, or affiliates, the property and interests in property of which are blocked pursuant to the International Emergency Economic Powers Act (50 U.S.C. 1701 et seq.) (see OFAC's Specially Designated Nationals and Blocked Persons List at <http://www.treasury.gov/ofac/downloads/t11sdn.pdf>).

(3) The representation and certification requirements of paragraph (o)(2) of this provision do not apply if-

(i) This solicitation includes a trade agreements certification (e.g., 52.212-3(g) or a comparable agency provision); and

(ii) The offeror has certified that all the offered products to be supplied are designated country end products.

(p) Ownership or Control of Offeror. (Applies in all solicitations when there is a requirement to be registered in SAM or a requirement to have a DUNS Number in the solicitation.

(1) The Offeror represents that it o has or o does not have an immediate owner. If the Offeror has more than one immediate owner (such as a joint venture), then the Offeror shall respond to paragraph (2) and if applicable, paragraph (3) of this provision for each participant in the joint venture.

(2) If the Offeror indicates “has” in paragraph (p)(1) of this provision, enter the following information:

Immediate owner CAGE code: .

Immediate owner legal name: .

(Do not use a “doing business as” name)

Is the immediate owner owned or controlled by another entity: Yes or No.

(3) If the Offeror indicates “yes” in paragraph (p)(2) of this provision, indicating that the immediate owner is owned or controlled by another entity, then enter the following information:

Highest-level owner CAGE code: .

Highest-level owner legal name: .

(Do not use a “doing business as” name)

(End of provision)

ADDENDUM TO REPRESENTATIONS AND CERTIFICATIONS
FAR AND DOSAR PROVISION(S) NOT PRESCRIBED IN PART 12

652.209-79 REPRESENTATION BY CORPORATION REGARDING AN UNPAID DELINQUENT TAX LIABILITY OR A FELONY CRIMINAL CONVICTION UNDER ANY FEDERAL LAW (SEPT 2014) (DEVIATION per PIB 2014-21)

(a) In accordance with section 7073 of Division K of the Consolidated Appropriations Act, 2014 (Public Law 113-76) none of the funds made available by that Act may be used to enter into a contract with any corporation that –

(1) Was convicted of a felony criminal violation under any Federal law within the preceding 24 months, where the awarding agency has direct knowledge of the conviction, unless the agency has considered, in accordance with its procedures, that this further action is not necessary to protect the interests of the Government; or

(2) Has any unpaid Federal tax liability that has been assessed for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability, where the awarding agency has direct knowledge of the unpaid tax liability, unless the Federal agency has considered, in accordance with its procedures, that this further action is not necessary to protect the interests of the Government.

For the purposes of section 7073, it is the Department of State's policy that no award may be made to any corporation covered by (1) or (2) above, unless the Procurement Executive has made a written determination that suspension or debarment is not necessary to protect the interests of the Government.

(b) Offeror represents that—

(1) It is is not a corporation that was convicted of a felony criminal violation under a Federal law within the preceding 24 months.

(2) It is is not a corporation that has any unpaid Federal tax liability that has been assessed for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

(End of provision)