

AGREEMENT

THIS AGREEMENT is made and entered into as of this ____ day of November 2017, by and between

THE SCHOOL BOARD OF BROWARD COUNTY, FLORIDA

(Hereinafter referred to as "SBBC"),

a body corporate and political subdivision of the State of Florida,

whose principal place of business is

600 Southeast Third Avenue, Fort Lauderdale, Florida 33301

and

AGC ELECTRIC, INC.

(Hereinafter referred to as "VENDOR"),

whose principal place of business is

2660 W 79 Street, Hialeah, FL 33016

WHEREAS, the SBBC is in need of certain services and has selected the VENDOR to provide such services; and

WHEREAS, VENDOR is willing to provide such services to the SBBC; and

WHEREAS, the SBBC and VENDOR desire to memorialize the terms and conditions of their agreement;

NOW, THEREFORE, in consideration of the premises and of the mutual covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereby agree as follows:

ARTICLE 1 – RECITALS

1.0 **Recitals.** The parties agree that the foregoing recitals are true and correct and that such recitals are incorporated herein by reference.

ARTICLE 2 – SPECIAL CONDITIONS

2.0 **Term of Agreement.** Unless terminated earlier pursuant to Section 3.06 of this Agreement, the term of this Agreement shall commence on **November 15, 2017** and conclude on **September 30, 2020**.

2.01 **Description of Goods or Services Provided.** VENDOR shall provide the services described in Attachment A (Statement of Work/Scope of Services).

2.02 **Priority Documents:** In the event of a conflict between documents, the following priority of documents shall govern.

First: This Agreement, then;
 Second: RFP 18-098C – Electrical Services
 Third: Proposal submitted in response to the RFP by Vendor

2.03 **Cost of Services.** SBBC shall pay VENDOR for services rendered under this Agreement at the rates below:

Hourly Labor Rate	AGC Electric, Inc.
Journeyman Electrician - Hourly Rate	\$44.50
Electrician's Helper - Hourly Rate	\$34.00

Overtime & Weekend Labor Rate	AGC Electric, Inc.
Journeyman Electrician - Hourly Rate	\$65.00
Electrician's Helper - Hourly Rate	\$56.00

Holiday Labor Rate	AGC Electric, Inc.
Journeyman Electrician - Hourly Rate	\$90.00
Electrician's Helper - Hourly Rate	\$76.00

2.04 **Services.** VENDOR will provide SBBC with services as proposed in its Proposal and in compliance with this Agreement and the RFP and its Addenda:

Service Level Agreement	Response Time
Routine	After Notice to Proceed (NTP) is issued, work must start within 5 business days, or as agreed with Physical Plant Operations (PPO)
Emergency	Response Time is 2 Hours and to begin Rectification of work within 12 hours of meeting onsite Supervisor

2.05 **Inspection of VENDOR Records by SBBC:** VENDOR shall establish and maintain books, records and documents (including electronic storage media) sufficient to reflect all income and expenditures of funds provided by SBBC under this Agreement. All VENDOR Records, regardless of the form in which they are kept, shall be open to inspection and subject to audit, inspection, examination, evaluation and/or reproduction, during normal working hours, by SBBC's agent or its authorized representative to permit SBBC to evaluate, analyze and verify the satisfactory performance of the terms and conditions of this Agreement and to evaluate, analyze and verify any and all invoices, billings, payments and/or claims submitted by VENDOR or any of VENDOR'S payees pursuant to this Agreement. VENDOR Records subject to examination shall include, without limitation, those records necessary to evaluate and verify direct and indirect costs (including overhead allocations) as they may apply to costs associated with this Agreement. VENDOR Records subject to this section shall include any and all documents pertinent to the evaluation, analysis, verification and reconciliation of any and all expenditures under this Agreement without regard to funding sources.

(a) **VENDOR Records Defined.** For the purposes of this Agreement, the term "VENDOR Records" shall include, without limitation, accounting records, payroll time sheets, cancelled payroll checks, W-2 forms, written policies and procedures, computer records, disks and software, videos, photographs, executed subcontracts, subcontract files (including proposals of successful and unsuccessful bidders), original estimates, estimating worksheets, correspondence, change order files (including sufficient supporting documentation and documentation covering negotiated settlements), and any other supporting documents that would substantiate, reconcile or refute any charges and/or expenditures related to this Agreement.

(b) **Duration of Right to Inspect.** For the purpose of such audits, inspections, examinations, evaluations and/or reproductions, SBBC's agent or authorized representative shall have access to VENDOR Records from the effective date of this Agreement, for the duration of the term of this Agreement, and until the later of five (5) years after the termination of this Agreement or five (5) years after the date of final payment by SBBC to VENDOR pursuant to this Agreement.

(c) **Notice of Inspection.** SBBC's agent or its authorized representative shall provide VENDOR reasonable advance notice (not to exceed two (2) weeks) of any intended audit, inspection, examination, evaluation and or reproduction.

(d) **Audit Site Conditions.** SBBC's agent or its authorized representative shall have access to the VENDOR'S facilities and to any and all records related to this Agreement, and shall be provided adequate and appropriate work space in order to exercise the rights permitted under this section.

(e) **Failure to Permit Inspection.** Failure by VENDOR to permit audit, inspection, examination, evaluation and/or reproduction as permitted under this Section shall constitute grounds for termination of this Agreement by SBBC for cause and shall be grounds for the denial of some or all of any VENDOR claims for payment by SBBC.

(f) Overcharges and Unauthorized Charges. If an audit conducted in accordance with this Section discloses overcharges or unauthorized charges to SBBC by VENDOR in excess of two percent (2%) of the total billings under this Agreement, the actual cost of SBBC's audit shall be paid by the VENDOR. If the audit discloses billings or charges to which the VENDOR is not contractually entitled, the VENDOR shall pay said sum to SBBC within twenty (20) days of receipt of written demand under otherwise agreed to in writing by both parties.

(g) Inspection of Subcontractor's Records. VENDOR shall require any and all subcontractors, insurance agents and material suppliers (hereafter referred to as "Payees") providing services or goods with regard to this Agreement to comply with the requirements of this section by insertion of such requirements in any written subcontract. Failure by VENDOR to include such requirements in any subcontract shall constitute grounds for termination of this Agreement by SBBC for cause and shall be grounds for the exclusion of some or all of any Payee's costs from amounts payable by SBBC to VENDOR pursuant to this Agreement and such excluded costs shall become the liability of the VENDOR.

(h) Inspector General Audits. VENDOR shall comply and cooperate immediately with any inspections, reviews, investigations, or audits deemed necessary by the Florida Office of the Inspector General or by any other state or federal officials.

2.06 Notice: When any of the parties desire to give notice to the other, such notice must be in writing, sent by U.S. Mail, postage prepaid, addressed to the party for whom it is intended at the place last specified; the place for giving notice shall remain such until it is changed by written notice in compliance with the provisions of this paragraph. For the present, the Parties designate the following as the respective places for giving notice:

To SBBC: Superintendent of Schools
The School Board of Broward County, Florida
600 Southeast Third Avenue
Fort Lauderdale, Florida 33301

With a Copy to: District Representative
Procurement & Warehousing Services
7720 West Oakland Park Boulevard
Sunrise, FL 33351

To VENDOR: Tomas Curbelo
AGC Electric, Inc.
2660 W 79th Street,
Hialeah, FL. 33016

2.07 BACKGROUND SCREENING.

(a) For Non-Governmental Agencies. VENDOR agrees to comply with all requirements of Sections 1012.32 and 1012.465, Florida Statutes, and all of its personnel who (1) are to be permitted access to school grounds when students are present, (2) will have direct contact with students, or (3) have access or control of school funds, will successfully complete the background screening required by the referenced statutes and meet the standards established by the statutes. This background screening will be conducted by SBBC in advance of the VENDOR or its personnel providing any services under the conditions described in the previous sentence. VENDOR shall bear the cost of acquiring the background screening required by Section 1012.32, Florida Statutes, and any fee imposed by the Florida Department of Law Enforcement to maintain the fingerprints provided with respect to the VENDOR and its personnel. The parties agree that the failure of VENDOR to perform any of the duties described in this section shall constitute a material breach of this Agreement entitling SBBC to terminate immediately with no further responsibilities or duties to perform under this Agreement. VENDOR agrees to indemnify and hold harmless SBBC, its officers and employees from any liability in the form of physical or mental injury, death or property damage resulting from VENDOR'S failure to comply with the requirements of this Section or with Sections 1012.32 and 1012.465, Florida Statutes.

2.08 Insurance Requirements. Vendor shall comply with the following insurance requirements throughout the term of this Agreement.

- (a) General Liability. Limits not less than \$1,000,000 per occurrence for Bodily Injury/ Property Damage; \$1,000,000 General Aggregate. Limits not less than \$1,000,000 for Products/Completed Operations Aggregate.
- (b) Professional Liability/Errors & Omissions. Limit not less than \$1,000,000 per occurrence covering services provided under this Agreement.
- (c) Workers' Compensation. Florida Statutory limits in accordance with Chapter 440; Employer's Liability limits not less than \$100,000/\$100,000/\$500,000 (each accident/disease-each employee/disease-policy limit).
- (d) Auto Liability. Owned, Non-Owned and Hired Auto Liability with Bodily Injury and Property Damage limits of not less than \$1,000,000 Combined Single Limit.

If Awardee does not own any vehicles, hired and non-owned automobile liability coverage in the amount of \$1,000,000 shall be accepted. In addition, an affidavit signed by the Awardee must be furnished to SBBC indicating the following:

N/A (Awardee Name) does not own any vehicles. In the event insured acquires any vehicles throughout the term of this agreement, insured agrees to provide proof of "Any Auto" coverage effective the date of acquisition.

- (e) Acceptability of Insurance Carriers. The insurance policies shall be issued by companies qualified to do business in the State of Florida. The insurance companies must be rated at least A- VI by AM Best or Aa3 by Moody's Investor Service.
- (f) Verification of Coverage. Proof of Insurance must be furnished within 15 days of execution of this Agreement. To streamline this process, SBBC has partnered with EXIGIS RiskWorks to collect and verify insurance documentation. All certificates (and any required documents) must be received and approved by SBBC before any work commences to permit Awardee time to remedy any deficiencies. EXIGIS RiskWorks will send an email notification within three (3) business days after receipt of the award letter.
- New vendors will receive an email notification requesting account verification and insurance agent information.
 - Existing vendors will receive an email notification of current status.
- (g) Required Conditions. Liability policies must contain the following provisions. In addition, the following wording must be included on the Certificate of Insurance:
1. The School Board of Broward County, Florida, its members, officers, employees and agents are added as additional insured.
 2. All liability policies are primary of all other valid and collectable coverage maintained by the School Board of Broward County, Florida.
 3. Certificate Holder: The School Board of Broward County, Florida, c/o EXIGIS Risk Management Services, P. O. Box 4668-ECM, New York, New York 10163-4668
- (h) Cancellation of Insurance. Vendors are prohibited from providing services under this Agreement with SBBC without the minimum required insurance coverage and must notify SBBC within two business days if required insurance is cancelled.

The School Board of Broward County, Florida reserves the right to review, reject or accept any required policies of insurance, including limits, coverage's or endorsements, herein throughout the term of this agreement.

2.09 **Payment Method.** The District's preferred method of payment is via ACH electronic payments. An electronic payment can reduce processing time and administrative overhead costs for both parties, resulting in expedited payment upon invoice approval, and reduces exposure to check fraud. SBBC will not pay convenience fees, surcharges, or any additional costs for payments made by electronic payment.

If you are willing to accept payment via electronic payment as noted above, please check yes.

☐ YES ☐ NO

Please ensure that your ACH form is submitted with this agreement.

ARTICLE 3 – GENERAL CONDITIONS

3.01 **No Waiver of Sovereign Immunity.** Nothing herein is intended to serve as a waiver of sovereign immunity by any agency or political subdivision to which sovereign immunity may be applicable or of any rights or limits to liability existing under Section 768.28, Florida Statutes. This section shall survive the termination of all performance or obligations under this Agreement and shall be fully binding until such time as any proceeding brought on account of this Agreement is barred by any applicable statute of limitations.

3.02 **No Third Party Beneficiaries.** The parties expressly acknowledge that it is not their intent to create or confer any rights or obligations in or upon any third person or entity under this Agreement. None of the parties intend to directly or substantially benefit a third party by this Agreement. The parties agree that there are no third party beneficiaries to this Agreement and that no third party shall be entitled to assert a claim against any of the parties based upon this Agreement. Nothing herein shall be construed as consent by an agency or political subdivision of the State of Florida to be sued by third parties in any matter arising out of any contract.

3.03 **Independent Contractor.** The parties to this agreement shall at all times be acting in the capacity of independent contractors and not as an officer, employee or agent of one another. Neither party or its respective agents, employees, subcontractors or assignees shall represent to others that it has the authority to bind the other party unless specifically authorized in writing to do so. No right to SBBC retirement, leave benefits or any other benefits of SBBC employees shall exist as a result of the performance of any duties or responsibilities under this Agreement. SBBC shall not be responsible for social security, withholding taxes, and contributions to unemployment compensation funds or insurance for the other party or the other party's officers, employees, agents, subcontractors or assignees.

3.04 **Equal Opportunity Provision.** The parties agree that no person shall be subjected to discrimination because of age, race, color, disability, gender identity, gender expression marital status, national origin, religion, sex or sexual orientation in the performance of the parties' respective duties, responsibilities and obligations under this Agreement.

3.05 **M/WBE Commitment.** Throughout the term of the Agreement, VENDOR shall take commercially reasonable steps and use commercially reasonable resources to identify SBBC-certified M/WBE VENDORS who may be engaged to fulfill various aspects of the Agreement, including, for instance, without limitation, M/WBE VENDORS to provide office supplies, travel, printing, janitorial supplies/services, consulting services, trade services, installation and repair services, medical supplies, where feasible. VENDOR agrees to provide monthly reports and to conduct quarterly meetings with SBBC to discuss progress in meeting the SBBC's objectives regarding M/WBE participation, including dollars spent on M/WBE VENDORS for the quarter; and to continue to assess throughout the term of the Agreement new possibilities for M/WBE VENDOR participation suggested by SBBC. If at any time during the term the parties agree that it is reasonably feasible to include a specific dollar figure for M/WBE participation, the Agreement shall be amended to include the dollar participation objective.

3.06 **Termination.** This Agreement may be canceled with or without cause by SBBC during the term hereof upon thirty (30) days written notice to the other parties of its desire to terminate this Agreement. SBBC shall have no liability for any property left on SBBC's property by any party to this Agreement after the termination of this Agreement. Any party contracting with SBBC under this Agreement agrees that any of its property placed upon SBBC's facilities pursuant to this Agreement shall be removed within ten (10) business days following the termination, conclusion or cancellation of this Agreement and that any such property remaining upon SBBC's facilities after that time shall be deemed to be abandoned, title to such property shall pass to SBBC, and SBBC may use or dispose of such property as SBBC deems fit and appropriate.

3.07 **Default.** The parties agree that, in the event that either party is in default of its obligations under this Agreement, the non-defaulting party shall provide to the defaulting party (30) days written notice to cure the default. However, in the event said default cannot be cured within said thirty (30) day period and the defaulting party is diligently attempting in good faith to cure same, the time period shall be reasonably extended to allow the defaulting party additional cure time. Upon the occurrence of a default that is not cured during the applicable cure period, this Agreement may be terminated by the non-defaulting party upon thirty (30) days' notice. This remedy is not intended to be exclusive of any other remedy, and each and every such remedy shall be cumulative and shall be in addition to every other remedy now or hereafter existing at law or in equity or by statute or otherwise. No single or partial exercise by any party of any right, power, or remedy hereunder shall preclude any other or future exercise thereof. Nothing in this section shall be construed to preclude termination for convenience pursuant to Section 3.05.

3.08 **Annual Appropriation.** The performance and obligations of SBBC under this Agreement shall be contingent upon an annual budgetary appropriation by its governing body. If SBBC does not allocate funds for the payment of services or products to be provided under this Agreement, this Agreement may be terminated by SBBC at the end of the period for which funds have been allocated. SBBC shall notify the other party at the earliest possible time before such termination. No penalty shall accrue to SBBC in the event this provision is exercised, and SBBC shall not be obligated or liable for any future payments due or any damages as a result of termination under this section.

3.09 **Excess Funds.** Any party receiving funds paid by SBBC under this Agreement agrees to promptly notify SBBC of any funds erroneously received from SBBC upon the discovery of such erroneous payment or overpayment. Any such excess funds shall be refunded to SBBC.

3.10 **Public Records:** The following provisions are required by Section 119.0701, Florida Statutes, and may not be amended. VENDOR shall keep and maintain public records required by SBBC to perform the services required under this Agreement. Upon request from SBBC's custodian of public records, VENDOR shall provide SBBC with a copy of any requested public records or to allow the requested public records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes, or as otherwise provided by law. VENDOR shall ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the Agreement's term and following completion of the Agreement if VENDOR does not transfer the public records to SBBC. Upon completion of the Agreement, VENDOR shall transfer, at no cost, to SBBC all public records in possession of VENDOR or keep and maintain public records required by SBBC to perform the services required under the Agreement. If VENDOR transfer all public records to SBBC upon completion of the Agreement, VENDOR shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If VENDOR keeps and maintains public records upon completion of the Agreement, Insert Name shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to SBBC, upon request from SBBC's custodian of public records, in a format that is compatible with SBBC's information technology systems.

IF A PARTY TO THIS AGREEMENT HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO ITS DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THE AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT 754-321-1900, REQUEL.BELL@BROWARDSCHOOLS.COM, RISK MANAGEMENT DEPARTMENT, PUBLIC RECORDS DIVISION, 600 SOUTHEAST THIRD AVENUE, FORT LAUDERDALE, FLORIDA 33301.

3.11 **Student Records.** Notwithstanding any provision to the contrary within this Agreement, any party contracting with SBBC under this Agreement shall fully comply with the requirements of Sections 1002.22 and 1002.221, Florida Statutes; FERPA, and any other state or federal law or regulation regarding the confidentiality of student information and records. Each such party agrees, for itself, its officers, employees, agents, representatives, contractors or subcontractors, to fully indemnify and hold harmless SBBC and its officers and employees for any violation of this section, including, without limitation, defending SBBC and its officers and employees against any complaint, administrative or judicial proceeding, payment of any penalty imposed upon SBBC, or payment of any and all costs, damages, judgments or losses incurred by or imposed upon SBBC arising out of a breach of this covenant by the party, or an officer, employee, agent, representative, contractor, or sub-contractor of the party to the extent that the party or an officer, employee, agent, representative, contractor, or sub-contractor of the party shall

either intentionally or negligently violate the provisions of this section or of Sections 1002.22 and/or 1002.221, Florida Statutes.

3.12 **Compliance with Laws.** Each party shall comply with all applicable federal state and local laws, SBBC policies codes, rules and regulations in performing its duties, responsibilities and obligations pursuant to this Agreement.

3.13 **Place of Performance.** All obligations of SBBC under the terms of this Agreement are reasonably susceptible of being performed in Broward County, Florida and shall be payable and performable in Broward County, Florida.

3.14 **Governing Law and Venue.** This Agreement shall be interpreted and construed in accordance with and governed by the laws of the State of Florida. Any controversies or legal problems arising out of this Agreement and any action involving the enforcement or interpretation of any rights hereunder shall be submitted to the jurisdiction of the State courts of the Seventeenth Judicial Circuit of Broward County, Florida.

3.15 **Entirety of Agreement.** This document incorporates and includes all prior negotiations, correspondence, conversations, agreements and understandings applicable to the matters contained herein and the parties agree that there are no commitments, agreements or understandings concerning the subject matter of this Agreement that are not contained in this document. Accordingly, the parties agree that no deviation from the terms hereof shall be predicated upon any prior representations or agreements, whether oral or written.

3.16 **Binding Effect.** This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

3.17 **Assignment.** Neither this Agreement nor any interest herein may be assigned, transferred or encumbered by any party without the prior written consent of the other party. There shall be no partial assignments of this Agreement including, without limitation, the partial assignment of any right to receive payments from SBBC.

3.18 **Incorporation by Reference.** Attachment A, attached hereto and referenced herein shall be deemed to be incorporated into this Agreement by reference.

3.19 **Captions.** The captions, section designations, section numbers, article numbers, titles and headings appearing in this Agreement are inserted only as a matter of convenience, have no substantive meaning, and in no way define, limit, construe or describe the scope or intent of such articles or sections of this Agreement, nor in any way affect this Agreement and shall not be construed to create a conflict with the provisions of this Agreement.

3.20 **Severability.** In the event that any one or more of the sections, paragraphs, sentences, clauses or provisions contained in this Agreement is held by a court of competent jurisdiction to be invalid, illegal, unlawful, unenforceable or void in any respect, such shall not affect the remaining portions of this Agreement and the same shall remain in full force and effect as if such invalid, illegal, unlawful, unenforceable or void sections, paragraphs, sentences, clauses or provisions had never been included herein.

3.21 **Preparation of Agreement.** The parties acknowledge that they have sought and obtained whatever competent advice and counsel as was necessary for them to form a full and complete understanding of all rights and obligations herein and that the preparation of this Agreement has been their joint effort. The language agreed to herein expresses their mutual intent and the resulting document shall not, solely as a matter of judicial construction, be construed more severely against one of the parties than the other.

3.22 **Amendments.** No modification, amendment, or alteration in the terms or conditions contained herein shall be effective unless contained in a written document prepared with the same or similar formality as this Agreement and executed by each party hereto.

3.23 **Waiver.** The parties agree that each requirement, duty and obligation set forth herein is substantial and important to the formation of this Agreement and, therefore, is a material term hereof. Any party's failure to enforce any provision of this Agreement shall not be deemed a waiver of such provision or modification of this Agreement unless the waiver is in writing and signed by the party waiving such provision. A written waiver shall only be effective as to the specific instance for which it is obtained and shall not be deemed a continuing or future waiver.

3.24 **Force Majeure.** Neither party shall be obligated to perform any duty, requirement or obligation under this Agreement if such performance is prevented by fire, hurricane, earthquake, explosion, wars, sabotage, accident, flood, acts of God, strikes, or other labor disputes, riot or civil commotions, or by reason of any other matter or condition beyond the control of either party, and which cannot be overcome by reasonable diligence and without unusual expense ("Force Majeure"). In no event shall a lack of funds on the part of either party be deemed Force Majeure.

3.25 **Survival.** All representations and warranties made herein, indemnification obligations, obligations to reimburse SBBC, obligations to maintain and allow inspection and audit of records and property, obligations to maintain the confidentiality of records, reporting requirements, and obligations to return public funds shall survive the termination of this Agreement.

3.26 **Contract Administration.** SBBC has delegated authority to the Superintendent of Schools or his/her designee to take any actions necessary to implement and administer this Agreement.

3.27 **Liability.** This section shall survive the termination of all performance or obligations under this Agreement and shall be fully binding until such time as any proceeding brought on account of this Agreement is barred by any applicable statute of limitations.

A. By SBBC: SBBC agrees to be fully responsible up to the limits of Section 768.28, Florida Statutes, for its acts of negligence, or its employees' acts of negligence when acting within the scope of their employment and agrees to be liable for any damages resulting from said negligence.

B. By **VENDOR**: **VENDOR** agrees to indemnify, hold harmless and defend **SBBC**, its agents, servants and employees from any and all claims, judgments, costs, and expenses including, but not limited to, reasonable attorney's fees, reasonable investigative and discovery costs, court costs and all other sums which **SBBC**, its agents, servants and employees may pay or become obligated to pay on account of any, all and every claim or demand, or assertion of liability, or any claim or action founded thereon, arising or alleged to have arisen out of the products, goods or services furnished by **VENDOR**, its agents, servants or employees; the equipment of **VENDOR**, its agents, servants or employees while such equipment is on premises owned or controlled by **SBBC**; or the negligence of **VENDOR** or the negligence of **VENDOR'S** agents when acting within the scope of their employment, whether such claims, judgments, costs and expenses be for damages, damage to property including **SBBC's** property, and injury or death of any person whether employed by **VENDOR**, **SBBC** or otherwise.

3.28 **Authority.** Each person signing this Agreement on behalf of either party individually warrants that he or she has full legal power to execute this Agreement on behalf of the party for whom he or she is signing, and to bind and obligate such party with respect to all provisions contained in this Agreement.

IN WITNESS WHEREOF, the Parties hereto have made and executed this Agreement on the date first above written.

FOR SBBC

(Corporate Seal)

THE SCHOOL BOARD OF BROWARD
COUNTY, FLORIDA

ATTEST:

By _____
Abby M. Freedman, Chair

Robert W. Runcie, Superintendent of Schools

Approved as to Form and Legal Content:

Janette M. Smith

Digitally signed by Janette M.
Smith

Date: 2017.10.26 13:53:47 -04'00'

Office of the General Counsel

FOR VENDOR

(Corporate Seal)

ATTEST:

INSERT VENDOR NAME

By

INSERT OFFICER NAME/ TITLE

Thomas V. Cordeiro (President)

_____, Secretary

-or-

[Signature]

Witness

TCB

Witness

The Following Notarization is Required for Every Agreement Without Regard to Whether the Party Chose to Use a Secretary's Attestation or Two (2) Witnesses.

STATE OF Florida

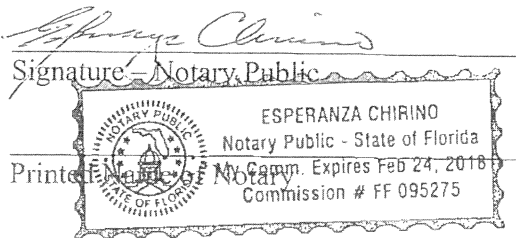
COUNTY OF Miami-Dade

The foregoing instrument was acknowledged before me this 25th day of October, 2017 by Thomas V. Cordeiro of ABC Electric Inc. on behalf of the corporation/agency.

Name of Corporation or Agency
He/She is personally known to me or produced identification and did/did not first take an oath. personally known as
Type of Identification

My Commission Expires:

(SEAL)



ATTACHMENT A

STATEMENT OF WORK/SCOPE OF SERVICES

BASIC PARAMETERS

1. Awardee must provide a separate quote for each specific project / location. Blanket Purchase Order's for multiple locations and/or projects will not be allowed. All quotes must show the unit prices for labor, material equipment and other costs that may apply. The supplier's invoice for all material must be included with awardees' invoice for payment. In the case of an emergency, the Physical Plant Operations (PPO) Supervisor may waive this requirement.
2. Awardee must be licensed per Special Condition 1 and be able to perform any type of electrical installation, as appropriate, including but not limited to wiring, repair, maintenance and operations services as documented and required by the PPO Supervisor assigned and be in compliance with these Bid Specifications which are based upon the Guide Specification of the Facilities and Construction Division of the School Board of Broward County, Florida.
3. Awardee must provide all supervision, labor, equipment and materials, where required, for all work envisioned and specified in this bid for electrical service without restriction throughout the District. Blueprints will be furnished to the awardee by the PPO Supervisor assigned. Travel time to and from work projects will NOT be considered for reimbursement on any project.
4. A journeyman electrician must have completed a State of Florida-registered electrical apprenticeship program and possess either a State of Florida journeyman electrician's license or the equivalent County-issued Certificate of Competency, as appropriate. All awardee journeyman electricians must be in compliance with this provision and is subject to review at any time during the evaluation process of the bid prior to award or during the contract period.
5. All schedules and the necessary arrangements to implement the scope of work projects must be made with the review and approval of the PPO Supervisor assigned. An awardee representative is required to attend a pre-job conference prior to the commencement of work at each project. The PPO Department shall give the awardee a minimum of 48 hours notification of the date and time of each conference. ATTENDANCE IS MANDATORY, unless specifically waived by the PPO Supervisor assigned. Failure to attend may result in awardee being held in default of contract. All information specific to the project including completion schedules will be discussed at the conference. Failure to adhere to the specifics of the project discussed at this conference may result in the awardee being held in default of contract.
6. The majority of the work will be done during normal SBBC business hours, 7 am to 4 pm, weekdays. Nonetheless, there may be emergencies which require projects to be completed after normal SBBC business hours, on weekends or during holidays. In emergency situations, the requirement to provide a written estimate may be waived. Awardee must be available by phone 24 hours per day, 7 days per week in the event of such an emergency request. Once contacted, the awardee shall meet with the PPO Supervisor assigned and review the scope of the work required. When the awardee is issued an emergency request for repair or service, the awardee shall respond within 24 hours of receiving an "Emergency Notice to Proceed." Failure to respond in a timely manner to SBBC requests for service may constitute grounds for termination of this contract.
7. Awardees are to give prompt and efficient service to any SBBC location at the request of the PPO Department within five business days by mutual approval of the written project schedule by the awardee and the PPO Supervisor assigned.
8. All requested work must be completed within the timeframe and the written project schedule agreed upon between the awardee and the PPO Supervisor assigned. Additional time may be approved, if necessary, when requested, in writing, by the awardee.

9. Each project must be completed as quickly as reasonably possible, not to exceed the number of calendar days set forth in the "Notice to Proceed." The start date of each project shall be the date that the "Notice to Proceed" is issued. The completion date shall be the date mutually agreed upon between the PPO Supervisor assigned and the awardee prior to issuing the "Notice to Proceed." SBBC reserves the right to enforce \$150.00 per calendar day penalty for liquidated damages to be paid to SBBC by the awardee or deducted from the final invoice. Liquidated damages, if enforced, will begin the day after the agreed completion date and continue until the project is substantially complete.
10. Awardee shall check for proper voltages for each job assigned. All material shall bear Underwriters Laboratories, Inc. (UL) labels.
11. Awardee will be responsible for scheduling timely rough, in progress and final inspections with SBBC Building Department (BCI) for all new installations throughout the District. Awardee must provide copies of all approved inspection reports to the PPO Department. Invoices will not be approved for payment without completed, signed and approved inspection reports attached to the invoices.
12. All electrical work assigned MUST be tested and in working order PRIOR to the completion of the work required.
13. Awardees are responsible for contacting Sunshine State One Call of Florida at (800) 432-4770, www.callsunshine.com, for member public utility locations and must repair any and all member public damaged utility or service lines damaged by their excavation immediately upon notice of such damage. Failure to respond immediately for such repairs will bring back charges to the awardee for any and all cost for SBBC to repair damaged lines. Awardee must have the necessary materials and equipment to locate conduit and wires buried in the ground. All wiring installations in PVC conduit shall be buried at least 18" underground or as required by Code. All excavation for installation must be included in the total cost quoted for jobs specified. SBBC site representative will work with awardees when it is necessary to identify SBBC-owned underground service lines, repairs to which will NOT be the responsibility of awardee(s). The awardee(s) will give a one (1) week notice for SBBC to mark SBBC-owned underground services and lines. The awardee(s) shall take necessary precautions to limit the possibility of damaging existing installations, damage to any obvious, identified and/or marked items by the awardee(s) will be the responsibility of the awardee(s).
14. Awardee is responsible for providing a safe work area, proper barricades, warning signage, caution tape, temporary fencing and so forth to insure that awardee's personnel, students and faculty are not subject to safety violations. At no time should there be unsupervised, exposed and/or energized electrical wiring, panels or equipment which would be accessible to the public. Overhead work repairs and installation projects must not be made or installed in an unsecured work area or while unauthorized persons are below. All excavation drilling areas must be effectively barricaded and/or fenced off to safely prohibit entry into the work area and the fenced off areas must be maintained until the completion of the project.
15. Awardee will also be responsible for the prompt clean-up of job sites and the removal of all debris that is a result or part of all related work. All excavation or drilling areas must be backfilled with clean fill to the current or surrounding landscape conditions within five business days after completion of the assigned project.
16. Awardee MAY be requested to replace damaged materials in electrical projects as directed by the PPO Department at the stated hourly labor rate. Replacement of electrical materials MAY be purchased under this contract at the discretion of the PPO Department on a strictly cost-plus basis. These materials purchased under this contract must be verified by the submission of an itemized list of materials proposed for purchase from the identified source, each unit price by cost, the total price and the awardee's cost-plus mark-up. Any remaining materials, after project completion, become the property of SBBC. The PPO Department is under NO OBLIGATION to purchase materials under this contract if the electrical supplies can be purchased on other SBBC contracts.

GENERAL ELECTRICAL SPECIFICATIONS

1. Awardee must provide all labor, materials, necessary equipment and services to provide a complete electrical system as indicated on drawings, as specified herein or both, except the items specifically indicated as "NIC ITEMS" and described as follows:
 - a) Temporary electrical service for all trades.
 - b) Complete distribution system for lighting, electrical power, wiring devices, equipment, controls and panel boards as indicated or directed by the PPO Supervisor assigned.
 - c) A complete raceway system.
 - d) Transformer vault, bus stabs, underground duct bank, grounding, etc., as required for primary and secondary power system under the provisions of Florida Power and Light Company (FPL).
 - e) Empty raceway system and cabinets for the telephone system as indicated on drawings.
 - f) A complete clock & bell system and programming same.
 - g) A complete SBBC-owned instructional television system (ITV).
 - h) A complete intercom/paging system.
 - i) All conduit, outlets and junction boxes for a security system.
 - j) Wiring and hook-up of emergency standby generator and transfer switches.
 - k) Fuel transfer pumps, day tank, muffler, battery charger, control panel and related equipment.
 - l) Normal and emergency lighting system and luminaries.
 - m) Interior and exterior light and control systems.
 - n) Conduit and wiring system for A/C electrical controls.
 - o) Marking of all junction boxes with system voltage inside and outside of box.
 - p) Connect all equipment furnished by the PPO Supervisor assigned and provide caps, cords and other materials required to complete the installation.
 - q) Painting of electrical and special equipment.
 - r) Furnishing and installing necessary access panels.
 - s) Complete electrical testing.
 - t) All motors, unless otherwise specified, are to be furnished and set in place.
 - u) Temperature control equipment: furnished, installed, wired and tested.
2. Awardee(s) are to follow as closely as possible, the drawings and risers indicated in diagrammatic form the arrangements desired for the equipment fixtures, principal apparatus, kitchen equipment and so on. Awardee must include any additional conduit, boxes and wiring due to structural or other obstructions at no extra cost to SBBC.
3. The connection of all equipment even when furnished by the PPO Department.
4. Control wiring under the supervision of the PPO Supervisor assigned where required and install all associated equipment and wiring necessary for a complete system including motor starters, controllers, and control devices.
5. Wire all electrical equipment under this contract. Extras are not permissible for failure on the awardee to comply with Bid Specifications or the parameters of any project.
6. Install HVAC, plumbing and mechanical equipment power and control connections. The PPO Department may provide the following materials at their option or purchase from awardee on a discount from manufacturers' list prices:
 - a) Control wiring diagrams
 - b) Motor Starters
 - c) Contactors
 - d) Thermostats
 - e) Firestats (each fan and air handler unit (AHU))
 - f) Damper motors
 - g) Control devices
 - h) Safety switches

- i) Junction boxes
 - j) Wiring
 - k) Materials for the connection of all equipment and controls
 - l) Provide cord sets as required
 - m) Additional materials and equipment as assigned by the PPO Supervisor assigned.
7. Awardee must verify outlet locations prior to installation and connection.
8. The latest editions of the following Codes and Standards are considered the minimum requirement for materials, workmanship and safety unless they are specified herein:
- a) The Florida Building Code, or as amended from time to time and the following standards as adopted by the Code
 - b) National Electrical Code (NEC)
 - c) Life Safety Code, National Fire Protection Association, NFPA-101
 - d) Rule 4A-48, Florida Administrative Code (FAC)
 - e) The Americans with Disabilities Act (ADA)
 - f) Where materials and equipment are available under the continuing inspection and laboring service of UL, furnish materials and equipment bearing such labels
 - g) Public Law 91-596 Occupational Safety and Health Act
 - h) Ordinances of the local authorities having jurisdiction
 - i) ANSI A117.1
 - j) NFPA 70E Electrical Safety in the Work Place
9. Where equipment supports are on concrete construction, care must be taken not to weaken concrete or penetrate waterproofing. Obtain prior approval from the PPO Supervisor assigned for installation method of structural steel required to frame into building structural members for the support of the equipment and conduit. Welding will be permitted only when approved by the PPO Department. Coordinate dimensions of concrete housekeeping pads with requirements for equipment supplied.
10. Submit within 30 days of the "Notice to Proceed," four copies indexed, loose-leaf or bound copies of shop and detail drawings, factory-certified prints and material lists for items included by not limited to those listed below:
- a) Switchboards and panelboards
 - b) Disconnect switches, motor starters, fuses, time clocks, contactors and relays
 - c) Transformers
 - d) Terminal cabinets
 - e) Wiring devices and plates
 - f) Luminaires, dimmers and accessories
 - g) Conduit, fittings, supports, pull boxes, wire and cable
 - h) Clock and program system
 - i) Fire alarm system
 - j) ITV system
 - k) Intercom/paging system
 - l) Emergency generator and transfer switch system
11. Field painting of exposed conduit and hangers as specified and directed by the PPO Supervisor assigned. Clean all surfaces and hanger rods free of grease, scale, rust and other foreign matter ready for painting. Touch up all factory-finishes marred in construction with factory touch-up kits.
12. Awardee is responsible for thoroughly reviewing of all plans and specifications affecting any electrical project assigned. Awardee must coordinate with the PPO Supervisor assigned before the commencement of work so that routing of systems and clearances are adequate. Notify the PPO Supervisor assigned concerning any conflicts or deviations immediately. Do not proceed until approval is granted by the PPO Department.

13. Special attention given but not to be limited to the following systems:
 - a) Conduit and raceway for the telephone system
 - b) HVAC ductwork, piping, condensate and waste
 - c) Fire sprinkler system, waste and vent lines, hot and cold water lines and rain water leaders
14. Coordinate work with SBBC utility providers such as FPL, AT&T and municipal water agencies.
15. Awardee shall submit verification of compliance with OSHA requirements for Lock Out/Tag Out procedures.
16. All hardware and accessory fittings shall be U.S. Standard (USS) of a type designed, intended or appropriate for the use and complement the items with which they are used, and have corrosion protection suitable for the south Florida conditions in which they are installed.
17. Ensure that equipment of a similar nature is identical, i.e., all panelboards of the same manufacturer and style
18. Awardee will be responsible for storing and protecting all materials from injury prior to installation. Do not store materials directly on the ground or floor and keep as clean and dry as possible and free from damage or deteriorating elements. NEVER install damaged materials.
19. Provide ground fault protection in all temporary service.
20. Factory paint or finish all enclosures, panels, cabinets, relays, safety switches, fixtures, gutters and other exposed equipment or accessories except as indicated otherwise. Group mounted items should be of the similar finish and color.
21. Tag all conductors and identify major conduits in or at wire-ways, panels, pull boxes, switchboards, motor controllers, cabinets and similar items to assist in future circuit tracing. Conductor tags must be non-conductive. Identify all circuits and equipment to correspond with the plans and specifications. Use paint markers, or other approved methods except as indicated otherwise. All junction box covers should be labeled on both sides indicating type of system and voltage. All gutters, terminal cabinets, starters, transformers, panels and disconnects must be identified with stencil labels indicating type system, voltage and equipment being serviced. Labeling of all panel boards, junction boxes, pull boxes, outlets, and utilization equipment to include: panel, disconnect or equipment designation (if necessary). The panel, disconnect, or equipment from where it is fed, circuit designation, and location of the feeding panel (FISH number), disconnect or equipment.
22. Test that all circuits and devices are in good condition to operate and that each item of equipment will function not less than five times. Test all circuits for grounds, shorts and continuity. Provide all materials and equipment necessary for testing.
23. Demonstrate the essential features of the following electrical systems upon completion of satisfactory testing. The demonstration will be held in the presence of the PPO Supervisor assigned to show junction boxes, locations and relationships to the plans. Electrical systems are detailed in General Electrical Specification 1, above. In addition, the awardee will demonstrate how to "start-stop," reset, replace and emergency procedures, one system at a time. Submit a certificate of demonstration to the PPO Supervisor assigned for final acceptance.
24. Upon completion, the awardee must:
 - a) Coordinate final inspection with UBCI.
 - b) Identify all cables in junction boxes with name of equipment served.
 - c) Furnish warranty per Special Condition 18. Inspection and acceptance of the project by SBBC does not relieve the awardee of compliance with the warranty provisions.
 - d) Test finished project equipment and materials in the presence of the PPO Supervisor assigned and issue 4 copies of the certificate of test for all equipment in the project.

AS-BUILT DRAWINGS, TESTING AND MAINTENANCE INSTRUCTIONS

Substantial completion of the final inspection will not be held unless the following specifications are in full compliance.

1. Provide two indexed, bound copies of all maintenance manuals, wiring diagrams, control panel interconnect diagrams and the individual module wiring diagrams supplied with the control panel including all proprietary components and information. This submittal will be followed by a final revised submittal showing field adjustment, when required.
2. Provide upon completion of the system, a complete set of reproducible "as-builts" on CD-ROM in a compatible version of AutoCAD, showing installed, color-coded wiring, wire tag notations for exact locations of all installed equipment, specified interconnections between all equipment and internal wiring of the equipment. The manufacturer's representative shall provide a base drawing to the awardee.
3. The PPO does not have access to AutoCAD files and cannot provide these files to the awardee in order for the awardee to provide "as-built" records. AutoCAD documents are maintained by the SBBC Facilities and Construction Management Division.
4. Provide upon completion of the system, a complete, simple, comprehensive, step-by-step, set of testing instructions giving recommended and required testing frequency of all equipment, methods for testing each individual piece of equipment, complete trouble-shooting manuals explaining what might be wrong if a certain malfunction occurs and explaining how to test the primary internal parts of each piece of equipment.
5. Maintenance instructions must be provide the following information:
 - a) Instructions on replacing any components of the system, including internal parts.
 - b) Instructions on periodic cleaning and adjustment of equipment with a schedule of these functions.
 - c) A complete list of all equipment and components including the address and phone number of both the manufacturer and local supplier of each item.
 - d) Provide user operating instructions that are prominently displayed on the cabinet front or on a separate sheet located next to the control unit in accordance with UL 864.
 - e) Provide to SBBC all system manufacturer's software and all field configuration programming information necessary to perform all possible future servicing, testing, repairs, systems and component diagnostics and improvements. Include information on the availability of system software upgrades, regularly updated diagnostic tools and technical bulletins dealing with the particular system installed.

BASIC MATERIALS, METHODS AND QUALITY ASSURANCE

1. The design criteria are diagrammatic drawings. Due to the small scale, awardee will not show in detail all required features of the project. In order to supplement the drawings, the awardee's knowledge, trade experience, Codes and standards and the instructions of the PPO Department will be necessary for all items which are required to properly execute the full intent and meaning shall be considered as being shown and/or specified. The PPO Supervisor assigned reserves the right to make reasonable changes in outlet locations prior to roughing-in.
2. Documentation that may be required and submitted at the request of the PPO Department is:
 - a) Schematics and interconnection diagrams
 - b) Detail and shop drawings
 - c) Assembly, operation and maintenance drawings and manuals
 - d) Manufacturer's data
3. Keep all openings closed with plugs or caps to prevent intrusion of foreign matter.

4. Lay out openings for the PPO Department, as required. The awardee must provide all openings and close same.
5. Manufacturer's nameplates must be in a visible location for each major component of equipment with manufacturers name, address, model number and rating.
6. Sequenced scheduling must be determined between the awardee and the PPO Supervisor assigned.
 - a) Coordinate adequate clearances for installation and maintenance of equipment as well as the physical and electrical requirements of items and/or any equipment requiring connections.
 - b) Perform all necessary work to join with or receive project work, provide electrical service, extend conduits and make all necessary connections, as required, to prevent interruptions of service in any area.
 - c) Provide and extend as necessary, temporary electrical service for timely completion of project schedule
7. When required, install equipment provided to meet requirements of each respective section of the project sequence as indicated and suitable for installation shown.
8. Where two or more units of same equipment class are furnished, provide similar installation methods as practicable.
9. Install raceways and enclosures for conductors throughout all systems as shown and specified. Install equipment and devices appropriate for the environment and service intended, which are not constructed with housings for mounting and enclosing all live parts.
10. Pitch all excavation ducts away from the buildings.
11. Mount equipment, conduit, duct and raceway on, or suspended from, building structure as indicated and specified.
 - a) Install telephone mounting boards. Telephone equipment backboards shall be manufactured of exterior grade plywood, 3/4" minimum thickness, finished with one coat of primer and two coats of flat black alkyd-based paint. Galvanized Unistrut or equivalent for mounting of electrical equipment and any related materials would be preferred.
12. Assure adequate clearance in front equipment per NEC 110-26.
13. Locate with reference to finished buildings the installation of pull boxes, wire ways and other items requiring inspection, removal or replacement.
14. Retouch or refinish any shop coat damaged in delivery or during construction. DO NOT paint over any nameplate, label or tag for any equipment.
15. As a normal rule, the awardee and the PPO Supervisor assigned will coordinate with the existing facilities operation concerning alterations that affect any facility operations. Project work shall not start until all materials, supplies, equipment, labor, etc. are available so that continuous progress will be made to complete work in the shortest time possible. Project work that interferes with the existing facilities will be modified, suspended or rescheduled upon request of the PPO Supervisor assigned. Project work will be rescheduled at a time as required without additional cost to SBBC, unless such time involves overtime. In this case additional payment will be made as otherwise provided for herein.
16. The ownership of items removed during project work remains the property of SBBC unless a request is made by the PPO Supervisor assigned for removal and disposal.

INTERIOR FINISHING AND WIRING DEVICES

1. In general, the interior finish work includes a specific number of completely connected telephones, receptacles, and light switches, television, intercom and data outlets as shown on the drawings.
2. Electrical interior finish work is understood to start after all other electrical work in the area concerned has been completed and is to be performed in coordination and cooperation with other trades and/or PPO Department personnel that may be performing similar interior finish work during the same time period.
3. Apply the total amount of individual interior finish items over the building as a whole, without restriction, at the discretion of the PPO Supervisor assigned.
4. Arrange the specified number of receptacle outlets to be distributed over the branch circuits available such that no circuit will serve more than six outlets with no restriction placed on a minimum number of outlets, which may be assigned to an available branch circuit.
5. The maximum load for a 20-amp, 120V branch circuit is 1800W. 1920W for 20-amp circuits is allowed per the NEC. And figured on some existing engineered drawings.
6. Installation of wall receptacle outlets must include conduit in the wall, outlet box, and receptacle and completely connecting up wiring to the next fitting and back to the junction box located in the hung ceiling under provisions of the interior finish layout. The Installation of wall telephone outlets will be the same without the requirements of wiring.
7. Outlets should be complete with device plates, receptacles, both support and conduit fittings.
8. Installation of a wall local switch shall include the wall mounted device plate, outlet box, single pole switch, conduit, and related requirements in order to control a group of lighting fixtures under provisions of the interior finish drawings. Work includes the necessary switch and hot leg extensions and connections to accomplish the control desired.

GROUNDING

1. Install complete grounding system in accordance with NEC 250.
2. Measure ground grid resistance with earth test megger and install additional ground rods and conductors as required until resistance to ground does not exceed 5 ohms.
3. Ground bus shall be copper and be a minimum of 4" wide x 1/4" thick X length to allow for future connections, , mounted on insulating standoffs, complete with lugs for connecting grounding cables.
4. Ground rods shall be copper clad steel, 3/4" in diameter x 10' long, minimum.
5. All electrical systems shall have a complete equipment grounding system in accordance with the SBBC Design Specifications, modified as indicated and/or specified and the system must comply with NFPA 70, NEC Article 250.
6. The basic grounding system shall utilize the reinforcing bars in the footings of the building supplemented by ground rods and a connection to a cold water pipe where required to meet the test requirements specified.
7. Provide, in conduit, a green insulated copper ground conductor as required to the main metallic water service entrance and connect to the supply side of same by means of ground clamps with the conduit bonded to the ground conductor at each end.

8. Low voltage system neutrals shall be grounded at the related transformers to the feeder ground and to the nearest cold water line all in accordance with NEC.
9. Ground conductors, connections and straps must be provided in accordance with NEC.
 - a) Equipment grounding conductors must be provided with green insulation, the same type as the associated phase conductors.
 - b) The related feeder grounding conductors are to be connected to the grounding bar with compression indent-type connectors or as specified.
10. A feeder serving several panel boards must be provided with a continuous grounding conductor which is connected to each related cabinet grounding bar.
11. Low voltage distribution systems must be provided with a separate green insulated equipment-grounding conductor for each three-phase or single-phase feeder. The required grounding conductor shall be installed in the common conduit with the related phase conductors. Where there are parallel feeders installed in more than one raceway, provide each raceway with a green insulated equipment ground conductor.
12. All branch circuits required for lighting and receptacles shall consist of phase, neutral and grounding conductors installed in common metallic conduits. Provide flexible metallic conduit equipment connections utilized in conjunction with the branch circuits with approved grounding terminals at each end. Provide all circuits required for special equipment and all branch circuits that are installed in nonmetallic conduits with a separate grounding conductor.
13. Provide in panel boards and other electrical equipment the number and size of pressure connectors on all equipment grounding bars required for the termination of the equipment grounding conductors. In addition to the active circuits, provide pressure connectors for all spares and spaces.
14. Provide each electrical expansion fitting with a flexible copper ground securely bonded by approved grounding straps on each end of the fitting.
15. Provide ground conductor from equipment ground bus in motor control center through conduit and flexible metallic conduit to ground terminal in connection box mounted on motor. Where motor has separate starter and disconnect device, the ground conductor originates at the ground bar in the panel board or switchboard supplying these motors and be bonded to each starter and disconnect device enclosure.
16. Where electric devices such as electric heaters are installed in air ducts, provide a green insulated equipment ground conductor size based on the rating of the over current device supplying the unit. Bond the conductor to each unit air duct, and to the ground in the panel board.
17. For conduit ground continuity, locknuts, bushings, joiners and similar conduit fittings: made up sufficiently tight to assure a continuous and permanent metal-to-metal flow throughout each system. Where conduits terminate without mechanical connection to a metallic housing of electrical equipment, provide each conduit with a bonding bushing and each bonding bushing connected with the equipment grounding conductor and connected to the ground bus in the electrical equipment.
18. Provide an unspliced main bonding jumper to connect the equipment grounding conductor and the service equipment enclosure to the grounded conductor of the system within the service equipment or within the service conductor enclosure.
19. Communication grounding requirements are:
 - a. Telephone: Provide 1 no. 6 from main ground bus to ground bus on telephone equipment board
 - b. Television distribution system: Provide 1 no. 8 to nearest ground bus
 - c. Public address system: Provide 1 no. 8 to the nearest ground bus
 - d. Computer networking: Provide 1 no. 6 to the nearest ground bus.

20. Installation requirements:
- End-to-end luminaires shall be continuously bonded with the grounding equipment conductor.
 - Grounding contacts of receptacles shall connect to a system-grounding conductor, NOT the system neutral, by a minimum no. 12 AWG stranded copper wire. The resistance between the contacts and solid earth ground must not exceed 3 ohms.
 - Bond all non-current carrying metal parts. Make equipment and bus connections with suitable lugs or clamps. Cadweld all wire-to-ground rod joints.
 - Bond all conduits stubbing under switchboards, transformer and similar locations using bonding bushings.
 - Use PVC for sleeving grounding conductors, except that where sleeves are subject to extreme injury use rigid metal conduit bonded at both ends
 - The TV antenna ground wire shall be connected to the main grounding system
 - Paint buried joints with red glyptal
 - Ground all transformer secondaries per NEC 250 unless shown otherwise on the drawings
 - The resistance to ground must be tested and logged by the awardee in the presence of the PPO Supervisor assigned in order to assure less than 5 ohms resistance. Testing will be conducted per NEC and Institute of Electrical and Electronic Engineers (IEEE) 142 recommended practices after the complete system has been fully grounded.
 - For lighting, provide a ground rod driven near pole bases and cadweld a no. 8 THWN wire to the top of the rod and extend the wire to a grounding lug in the base and bond to all metal parts. Provide an insulated copper conductor, sized per NEC 250-95, in each power or lighting raceway.

ALTERATIONS AND ADDITIONS TO EXISTING WORK

- These specifications are in addition to the requirements of building modifications as specified in this document. Please note that existing buildings may or may not be occupied during construction.
- Provide all additions and alterations to existing work required to maintain a complete and proper electrical installation. Relocate existing electrical work for other trades required to complete the work and to maintain building in service in compliance with the schedule set between the awardee and the PPO Department.
- Relocate luminaires, pull boxes, electrical ducts and other related items, to permit the installation of new equipment.
- Install new conduits, conductors, wiring and wiring devices in order to maintain temporary and permanent use of electrical facilities.
- Remove existing surface mounted work that is not used and blank off concealed outlets.
- Reconnect existing work to be maintained and all outlet boxes and devices accessible after installation of all trades.
- Expose new work in existing areas on walls in unfinished areas and concealed in new installation. Where cutting and patching is necessary, match finishes with existing surface finishes as close as possible. In existing finished areas, conceal all work.
- Schedule electrical feeders, branch wiring, signal wiring and other similar work to correspond with the sequence of work necessary to demolish, remove and install new work.
- Awardee must verify exact locations and materials before performing installation work. The PPO Supervisor assigned must give written approval for cutting of structural members and bearing walls either onsite or in the approved work schedule.

10. Where shown on drawings, work which is "existing" is assumed to be in place and suitable for the necessary alterations and additions required. Field check items and alterations included as may be necessary for proper installation.
11. Awardee will remove existing electrical work where necessary and as directed by the PPO Supervisor assigned.

ELECTRICAL SUPPORTING DEVICES

1. Devices, including anchors, fasteners, hangers and supports supplied must be of a type designed and/or fabricated for adequate, safe and secure installation of the material and equipment and present a neat appearance. All USS fasteners should have appropriate heads.
2. Job-fabricated hangers or supports should be made from standard structural shapes and hardware.
3. Select devices using the following criteria:
 - a) The amount, weight and type of hangers, supports and enclosed materials is to be part of the load.
 - b) Devices must be suitable for shear, straight pull, vibration, impact or external load, as applicable.
 - c) Obtain determination of safe working load of devices or job-fabricated support assemblies from the published load data of the manufacturer.
 - d) Use devices with corrosion-resistant characteristics for the atmospheric conditions in south Florida.
4. Hanger and supports should be those manufactured by Unistrut, Powerstrut or Superstrut and must be galvanized at a minimum.
5. Install equipment, including switches, controllers, fixtures and transformers in order to facilitate removal or replacement without damage to equipment or fasteners.
6. Drill holes for devices under provisions of the manufacturer's recommendations, including diameter and depth. All parts of hanger and support assemblies, including all accessory hardware must be an integrated fastening system.
7. Internal and external threads of parts that are screwed or bolted together must be of the same material and applied coatings and method of application, i.e., if the threads of bolts or rods are hot-dipped galvanized, the nuts must also be the same. If they are electro-galvanized, the same applies.
8. All threads must be fully engaged.
9. All parts so intended are to be made up tight using tools intended for the purpose.
10. Use backboards for telephone terminal boards. The wall side of the backboards must be painted with an asphaltum coating when the walls are constructed of masonry.
11. Fasten all materials and equipment with approved devices. Generally fasteners, should be provided as follows:
 - a) Fasten to wood with screws, except that nails may be used on wood partitions for outlet boxes and raceways up to 1" diameter.
 - b) Fasten to masonry with threaded metal inserts, metal expansion screws, toggle bolts, powder-actuated fasteners or other approved means.

INSPECTIONS AND TESTING

1. MANDATORY periodic inspections must be coordinated with the SBBC Building Department, 2301 NW 26 Street, Building 9, Oakland Park, FL 33311, telephone (754) 321-4800, fax (754) 321-3389. Electrical inspections may include any of the following:
 - a) Temporary power
 - (1) Underground
 - (2) Transformers
 - (3) Panels
 - (4) Meter can
 - b) Duct Bank
 - (1) Conduits
 - (2) Concrete placement, in progress
 - (3) Marking tape, locator installed
 - (4) Manholes and pull boxes
 - c) Ground rough
 - (1) In progress, approximately every 25% complete
 - (2) Conduits
 - (3) Floor boxes
 - d) Grounding
 - (1) Footer steel
 - (2) Main switch gear
 - (3) ITV pole
 - (4) Lightning protection
 - (5) Light poles
 - e) Electrical service
 - (1) Meter/CT can
 - (2) Switch gear
 - (3) Transformers
 - (4) Panels
 - (5) Transfer switches
 - (6) Generators
 - (7) Disconnects
 - f) Wall Rough Inspections
 - (1) In progress, approximately every 25% complete
 - (2) Conduits, boxes and wire
 - (3) Door magnet supports
 - (4) Speaker cans
 - g) Above Ceiling Inspections
 - (1) In progress, approximately every 25% complete
 - (2) Conduits, boxes and wire
 - (3) Fire wall penetrations
 - (4) Fixture supports
 - h) Parking Lot Lighting
 - (1) Conduits
 - (2) Wire
 - (3) Pole bases, set per specifications
 - (4) Grounding
 - (5) Fuse holders
 - (6) Top of poles, head connection and air gap
 - i) Equipment Connections
 - (1) Air conditioning equipment
 - (2) Shop equipment
 - (3) Kitchen equipment
 - j) ITV Poles
 - (1) Prior to setting, top
 - (2) Conduits
 - k) Final Electrical

2. Additional inspections that may be required in addition to the required inspections, listed above, may be indicated on contract documents or be required by the Authority Having Jurisdiction. The awardee will be notified in advance of any additional inspections required.
3. Inspections are an integral part of invoicing procedures.

ACCEPTANCE TESTS AND PERFORMANCE VERIFICATION

1. Awardee must engage the services of a recognized independent electrical testing firm to perform short circuit and coordination studies, as specified.
2. Engage the services of a recognized corporate and financially independent testing firm for the purpose of performing inspections and tests on all new electrical equipment supplied in this contract and on existing equipment affected by the newly added systems and/or equipment or as specified.
3. The testing firm must provide all material, equipment, labor and technical supervision to perform such tests and inspections.
4. The purpose of the independent tests are to assure that all tested electrical equipment, is operational and within industry and manufacturers' tolerances and installed under the provisions of the design specifications and determine suitability for energization.
5. Ensure all inspections and testing are under provisions of the following codes and standards except as provided otherwise.
 - a) National Electrical Manufacturers' Association (NEMA)
 - b) American Society for Testing and Materials (ASTM)
 - c) Institute of Electrical and Electronic Engineers (IEEE)
 - d) International Electrical Testing Association (NETA) Acceptance Testing Specifications (ATS)
 - e) American National Standards Institute (ANSI) C2: National Electrical Safety Code
 - f) National Fire Protection Association (NFPA)
 - g) ANSI/National Fire Protection Association (NFPA) 70 National Electrical Code
 - h) ANSI/NFPA 70B Electrical Equipment Maintenance
 - i) NFPA 70E Electrical Safety Requirements for Employee Workplaces
 - j) ANSI/NFPA 78 Lightning Protection Code
 - k) ANSI/NFPA 101 Life Safety Code
 - l) Florida Building Code
 - m) Insulated Cable Engineers Association (ICEA)
 - n) Association of Edison Illuminating Companies (AEIC)
 - o) Occupational Safety and Health Administration (OSHA)
6. An itemized description of existing equipment to be inspected and tested is as follows:
 - a) Provide as-built one-line diagrams from the point of connection on the FPL transformer to the point of the first electrical sub-panel or disconnecting device, located outside the main electrical room throughout the facility, fed from the main electrical switchgear room indicated on the drawings. The one-line diagrams include:
 - (1) Switchgear and panel manufacturers and specifications.
 - (2) Equipment frame size.
 - (3) Overcurrent protection device rating, type and interrupting capacity.
 - (4) Conduit size and type.
 - (5) Conductor size, length and type.
 - (6) Transformer size, type and specifications
 - b) Provide plan view drawing indicating locations throughout the facility for all equipment indicated on the one-line diagram.

- c) Provide routing of all feeders shown on the one-line diagram with emphasis on the exact location of underground feeders.
 - d) Electronically locate routings with signal tracer equipment.
 - e) Provide expanded scale plan view drawings of the existing main electrical switchgear room and expanded scale drawings of the wall elevations of the main switchgear room. The drawing measurement standard shall be 3/4" equals 1'.
 - f) Ensure equipment identifications are consistent with that as shown on the one-line diagram.
 - g) Provide peak and average demand loads of all panels and major distribution equipment over a 1 week period during the normal occupied times. Indicate the test result information on the one-line diagram.
 - h) Provide testing for the following:
 - (1) All feeder cables indicated on the one-line diagram.
 - (2) All circuit breakers indicated on the one-line diagram.
 - (3) All dry type transformers indicated on the one-line diagram.
 - (4) Provide the one-line diagram and plan view equipment location drawings on standard 24 x 36" media; drawn with a computer aided design package, a compatible version of AutoCAD, minimum.
7. Partial site plan backgrounds of the facility shown on any contract documents will be available to the awardee upon request.
 8. Submit reproducible plots of the drawings in hardcopy as well as provide in digital format.
 9. Submit testing report in a bound hardcopy or CD-ROM format with all field test data in appendix form or files.
 10. The testing report must be signed and sealed by a registered Professional Engineer licensed in the State of Florida. Awardee may use any professional engineer awarded under this contract.
 11. Submit the above report and drawings within 30 days after the notice to proceed. Feeder routing information may be required prior to the submittal date to coordinate with PPO Department work schedules.
 12. Use the above existing facility report and drawings in order to develop the final as-built drawings and a report encompassing all new electrical equipment and testing, all to be submitted with the operation and maintenance manuals, disks or CD-ROMs prior to substantial completion of the project.
 13. For inspections and tests, utilize project design specifications, project design drawings and manufacturer's instruction manuals applicable to each particular apparatus.
 14. Awardee is to perform routine insulation-resistance, continuity, and rotation test for all distribution and utilization equipment prior to and in addition to tests performed by the testing firm specified herein.
 15. Apply a suitable and stable source of electrical power to each test site.
 16. Notify the testing firm when equipment becomes available for acceptance tests. Coordinate the final work with the PPO Department and the testing firm in order to expedite project scheduling. Notify the PPO Supervisor assigned prior to commencement of any testing.
 17. Awardee, in conjunction with the testing firm and the PPO Supervisor assigned, report any system, material or workmanship, which is found defective on the basis of acceptance test.
 18. Awardee must maintain a written record of all tests and, upon completion of project, assemble and certify a final test report.
 19. Safety practices and precautions are to include, but are not limited to, the following requirements:

- a) OSHA
 - b) National Safety Council's Accident Prevention Manual for Industrial Operations
 - c) Any applicable State of Florida, Broward County or SBBC safety and operating procedures
 - d) NFPA 70E
 - e) American National Standards for Personnel Protection
20. Perform all testing with the apparatus de-energized. Exceptions must be thoroughly reviewed to identify safety hazards and devise adequate safeguards.
21. Awardee should notify the testing firm to provide a designated safety representative on the project to supervise the testing operations and coordinate the schedule with the PPO Supervisor assigned.
22. The awardee and the PPO Supervisor assigned shall jointly agree on the choice of an independent testing organization, which can function as an unbiased testing authority, professionally independent of the manufacturers, supplier, and installers of equipment or systems evaluated by the testing firm. The firm must be normally engaged in the testing of electrical equipment devices, installations, and systems.
23. The agreed upon independent testing firm must:
- a) Meet OSHA criteria for accreditation of testing laboratories per, Title 29, Part 1907 or be a Full Member company of the National Electrical Testing Association (NETA).
 - b) Utilize engineers and technicians who are regularly employed by the firm for testing services.
 - c) Submit proof of the above qualifications when requested.
 - d) The lead, on-site, technician must be currently certified by NETA or the National Institute for Certification in Engineering Technologies (NICET) in electrical power distribution system testing.
 - e) Current NETA-certified testing firms for use are:
 - (1) Industrial Electrical Testing, Inc.
 - (2) Electrical Reliability Services, Inc. (formerly Electro-Test, Inc.)
 - f) Additional independent testing firms will be considered by the PPO Department upon submission of the firm's qualifications 10 days prior to final testing phase of a work project.
24. Ensure all test equipment is in good mechanical and electrical condition. Ensure the accuracy of metering in test equipment is appropriate for the test being performed but not in excess of 2% of the scale used.
25. Digital multimeters shall be RMS sensing when the variable measured contains harmonics or DC offset or any deviation from a pure sine wave.
26. The agreed upon independent testing firm must provide a test instrument calibration program which assures that all applicable test instruments are maintained within the rated accuracy, directly traceable to the National Institute of Standards and Technology. Field instruments shall be calibrated at 6-month intervals and calibration date must be visible on all test equipment.
27. The test report must include the following data:
- a) Summary of project
 - b) Listing of the equipment tested
 - c) Test results
 - d) Recommendations
 - e) Furnish copies of the complete report to the PPO Supervisor assigned.
 - f) A short-circuit analysis and coordination study is to be performed for all new electrical equipment and all existing electrical equipment shown on the as-built one-line diagram as defined above.
 - g) Provide a current and complete short-circuit study, equipment interrupting or withstand evaluation, and a protective device coordination study for the electrical distribution system.
 - (1) Ensure the study is under provisions of applicable ANSI and IEEE Standards.

- (2) Include the FPL short-circuit single and 3-phase contribution, with the X/R ratio, the resistance and reactance components of each branch impedance, motor and generator contributions, base quantities selected, and all other applicable circuit parameters.
 - (3) Calculate the short circuit momentary duties and interrupting duties on the basis of maximum available fault current at each switchgear bus, switchboard, motor control center, distribution panel board, pertinent branch circuit panel boards, and other significant locations through the system.
- h) The studies include all portions of the electrical distribution system from the normal and alternate sources of power throughout the low-voltage distribution system. Thoroughly cover a normal system operating method, alternate operation, and operations, which could result in maximum fault conditions in the study.
- i) The independent testing firm must submit the studies to the PPO Supervisor assigned prior to granting final approval of the distribution equipment shop drawings and prior to release of equipment for manufacture.
- j) Perform an equipment evaluation study to determine the adequacy of circuit breakers, controllers, surge arresters, busways, switches, and fuses by tabulating and comparing the short circuit ratings of these devices with the available fault currents. Document any problem areas or inadequacies in the equipment in the report.
- k) The testing company shall coordinate with the supplier of the new switchgear to assure all specifications of the new equipment meet or exceed the ratings required by the study at no additional cost to SBBC.
- l) Perform a protective device coordination study to select or to check the selections of power fuse rating, protective relay characteristics and settings, ratios and characteristics of associated voltage and current transformers, and low-voltage breaker trip characteristics and settings.
- m) Include all voltage classes of equipment from FPL's incoming line protective device down to and including each motor control center and panel board. Include the phase and ground overcurrent protection, as well as, settings for all other adjustable protective devices.
- n) Plot the time current characteristics of the specified protective devices on appropriate log-log paper which includes the following:
 - (1) Complete titles
 - (2) Representative one-line diagram and legends
 - (3) Associated power company's relays of fuse characteristics
 - (4) Significant motor starting characteristics
 - (5) Complete parameters of transformers
 - (6) Complete operating bands of low voltage circuit breaker trip curves
 - (7) Fuse curves
 - (8) Coordination plots shall indicate the types of protective devices selected, proposed relay taps, time dial and instantaneous trip settings, ANSI transformer magnetizing inrush and withstand curves per ANSI C37.91, cable damage curves, symmetrical and asymmetrical fault currents.
 - (9) Adhere to all requirements of the NEC.
 - (10) Maintain reasonable coordination intervals and separation of characteristic curves.
 - (11) Provide the coordination plots for phase and ground protective devices on a complete system basis.
 - (12) Use sufficient curves to clearly indicate the coordination achieved to each utility main breaker, primary feeder breaker, unit substation primary protective device rated or more.
 - (13) Provide a maximum of 8 protective devices per plot.
 - (14) Provide the selection and settings of the protective devices separately in a tabulated form using a circuit identification, IEEE device number, current transformer ratios, manufacturer, type, range of adjustment and recommended settings.
 - (15) Provide a tabulation of the recommended power fuse selection for all fuses in the system.
 - (16) Coordinate the discrepancies, problem areas or inadequacies with the equipment suppliers and resolved within the scope of the project at no additional cost to SBBC.

28. Summarize the results of the power system study in a final report and make a part of the operation and maintenance manuals and include the following sections in the report:
 - a) Description, purpose, basis written scope, and a single line diagram of the portion of the power system, which is included within the scope of study.
 - b) Tabulations of circuit breaker, fuse and other equipment ratings versus calculated short circuit duties and commentary regarding same.
 - c) Protective device time versus current coordination curves, tabulations of relay and circuit breaker trip settings, fuse selection and commentary regarding same.
 - d) Fault current tabulations including a definition of terms and a guide for interpretation.
29. Awardee's certified testing firm is responsible for the inspection, setting, testing, and calibrating the protective relays, circuit breakers, fuses and other applicable devices as recommended in the power systems study report.
30. Prior to energization, the independent testing firm shall perform visual and mechanical inspections and electrical tests on all newly-installed equipment supplied within this contract and included within the list of equipment types below. All inspections and tests shall be in accordance with the indicated test standard and section, the manufacturer's instruction manual, and the project design specifications.

<u>Equipment Type</u>	<u>NETA 1999 ATS Standard</u>
Switchgear and switchboard assemblies rated less than 600V	Section 7.1
Switchgear and switchboard assemblies rated greater than 600V	Section 7.1
Dry-type transformers rated less than 600V, equal or greater than 500 kVA	Section 7.2.1.1
Dry-type transformers rated less than 600V, greater than 500 kVA	Section 7.2.1.2
Cables rated less than 600V, equal or greater than size (specify) AWG	Section 7.3.2
Cables rated greater than 600V	Section 7.3.3
Metal-enclosed busways	Section 7.4
Switches rated less than 600V, equal or greater than (specify) amps	Section 7.5.1.1
Circuit breakers, insulated case or molded case type, rated less than 600V, equal or greater than (specify) amps	Section 7.6.1.1
Circuit breakers, draw out type, rated less than 600V	Section 7.6.1.2
Protective relays and associated transformers	Section 7.9
Meters and associated instrument transformers	Section 7.10
Grounding system	Section 7.13
Ground fault protection	Section 7.14
Related motors equal or greater than (specify) hp	Section 7.15
Motor starters rated less than 600V, equal or greater than size (specify)	Section 7.16.1.1
Motor control centers	Section 7.16.2
Batteries	Section 7.18.1
Surge arrestors rated less than 600V	Section 7.19.1
Emergency/Standby generators	Section 7.22.1
Uninterruptable Power Systems (UPS)	Section 7.22.2
Automatic Transfer Switches	Section 7.22.3

31. Upon completion of equipment acceptance testing, the independent testing firm shall perform system function tests on all new equipment supplied within this contract in the list of equipment type above and existing affected equipment to prove the correct interaction of all sensing, processing and action devices and evaluate the performance of all integral components and their functioning as a complete unit to effect the design result.
32. Any deficiencies identified by initial acceptance testing rectified by the awardee or PPO personnel and retested by the independent testing firm are at the awardee's expense until specified requirements are met. Final acceptance of the electrical power system by the PPO Department is contingent upon the satisfactory compliance of the acceptance testing.

33. After substantial completion, but not less than 60 days after final acceptance, the independent testing firm shall perform an infrared thermographic survey of all newly-installed equipment supplies within any given project and included in the list of the equipment types, below. The thermographic survey and report shall be in accordance with NETA 1999 ATS Section 9.

- a) Switchgear
- b) Bus ducts
- c) Transformers
- d) Points of power connection rated equal to or greater than (specify) amp
- e) Motor control centers
- f) Distribution panels
- g) Load centers

AGREEMENT

THIS AGREEMENT is made and entered into as of this ___ day of November 2017, by and between

THE SCHOOL BOARD OF BROWARD COUNTY, FLORIDA

(Hereinafter referred to as "SBBC"),

a body corporate and political subdivision of the State of Florida,

whose principal place of business is

600 Southeast Third Avenue, Fort Lauderdale, Florida 33301

and

BISMARCK ELECTRICAL SERVICES, INC.

(Hereinafter referred to as "VENDOR"),

whose principal place of business is

1067 SE Prineville Street, Port St. Lucie, FL 34983

WHEREAS, the SBBC is in need of certain services and has selected the VENDOR to provide such services; and

WHEREAS, VENDOR is willing to provide such services to the SBBC; and

WHEREAS, the SBBC and VENDOR desire to memorialize the terms and conditions of their agreement;

NOW, THEREFORE, in consideration of the premises and of the mutual covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereby agree as follows:

ARTICLE 1 – RECITALS

1.0 **Recitals.** The parties agree that the foregoing recitals are true and correct and that such recitals are incorporated herein by reference.

ARTICLE 2 – SPECIAL CONDITIONS

2.0 **Term of Agreement.** Unless terminated earlier pursuant to Section 3.06 of this Agreement, the term of this Agreement shall commence on **November 15, 2017** and conclude on **September 30, 2020**.

2.01 **Description of Goods or Services Provided.** VENDOR shall provide the services described in Attachment A (Statement of Work/Scope of Services).

2.02 **Priority Documents:** In the event of a conflict between documents, the following priority of documents shall govern.

First: This Agreement, then;
 Second: RFP 18-098C – Electrical Services
 Third: Proposal submitted in response to the RFP by Vendor

2.03 **Cost of Services.** SBBC shall pay VENDOR for services rendered under this Agreement at the rates below:

Hourly Labor Rate	Bismark Electrical Services, Inc.
Journeyman Electrician - Hourly Rate	\$44.50
Electrician's Helper - Hourly Rate	\$30.00

Overtime & Weekend Labor Rate	Bismark Electrical Services, Inc.
Journeyman Electrician - Hourly Rate	\$67.50
Electrician's Helper - Hourly Rate	\$52.50

Holiday Labor Rate	Bismark Electrical Services, Inc.
Journeyman Electrician - Hourly Rate	\$67.50
Electrician's Helper - Hourly Rate	\$52.50

2.04 **Services.** VENDOR will provide SBBC with services as proposed in its Proposal and in compliance with this Agreement and the RFP and its Addenda:

Service Level Agreement	Response Time
Routine	After Notice to Proceed (NTP) is issued, work must start within 5 business days, or as agreed with Physical Plant Operations (PPO)
Emergency	Response Time is 2 Hours and to begin Rectification of work within 12 hours of meeting onsite Supervisor

2.05 **Inspection of VENDOR Records by SBBC:** VENDOR shall establish and maintain books, records and documents (including electronic storage media) sufficient to reflect all income and expenditures of funds provided by SBBC under this Agreement. All VENDOR Records, regardless of the form in which they are kept, shall be open to inspection and subject to audit, inspection, examination, evaluation and/or reproduction, during normal working hours, by SBBC's agent or its authorized representative to permit SBBC to evaluate, analyze and verify the satisfactory performance of the terms and conditions of this Agreement and to evaluate, analyze and verify any and all invoices, billings, payments and/or claims submitted by VENDOR or any of VENDOR'S payees pursuant to this Agreement. VENDOR Records subject to examination shall include, without limitation, those records necessary to evaluate and verify direct and indirect costs (including overhead allocations) as they may apply to costs associated with this Agreement. VENDOR Records subject to this section shall include any and all documents pertinent to the evaluation, analysis, verification and reconciliation of any and all expenditures under this Agreement without regard to funding sources.

(a) **VENDOR Records Defined.** For the purposes of this Agreement, the term "VENDOR Records" shall include, without limitation, accounting records, payroll time sheets, cancelled payroll checks, W-2 forms, written policies and procedures, computer records, disks and software, videos, photographs, executed subcontracts, subcontract files (including proposals of successful and unsuccessful bidders), original estimates, estimating worksheets, correspondence, change order files (including sufficient supporting documentation and documentation covering negotiated settlements), and any other supporting documents that would substantiate, reconcile or refute any charges and/or expenditures related to this Agreement.

(b) **Duration of Right to Inspect.** For the purpose of such audits, inspections, examinations, evaluations and/or reproductions, SBBC's agent or authorized representative shall have access to VENDOR Records from the effective date of this Agreement, for the duration of the term of this Agreement, and until the later of five (5) years after the termination of this Agreement or five (5) years after the date of final payment by SBBC to VENDOR pursuant to this Agreement.

(c) **Notice of Inspection.** SBBC's agent or its authorized representative shall provide VENDOR reasonable advance notice (not to exceed two (2) weeks) of any intended audit, inspection, examination, evaluation and or reproduction.

(d) **Audit Site Conditions.** SBBC's agent or its authorized representative shall have access to the VENDOR'S facilities and to any and all records related to this Agreement, and shall be provided adequate and appropriate work space in order to exercise the rights permitted under this section.

(e) **Failure to Permit Inspection.** Failure by VENDOR to permit audit, inspection, examination, evaluation and/or reproduction as permitted under this Section shall constitute grounds for termination of this Agreement by SBBC for cause and shall be grounds for the denial of some or all of any VENDOR claims for payment by SBBC.

(f) Overcharges and Unauthorized Charges. If an audit conducted in accordance with this Section discloses overcharges or unauthorized charges to SBBC by VENDOR in excess of two percent (2%) of the total billings under this Agreement, the actual cost of SBBC's audit shall be paid by the VENDOR. If the audit discloses billings or charges to which the VENDOR is not contractually entitled, the VENDOR shall pay said sum to SBBC within twenty (20) days of receipt of written demand under otherwise agreed to in writing by both parties.

(g) Inspection of Subcontractor's Records. VENDOR shall require any and all subcontractors, insurance agents and material suppliers (hereafter referred to as "Payees") providing services or goods with regard to this Agreement to comply with the requirements of this section by insertion of such requirements in any written subcontract. Failure by VENDOR to include such requirements in any subcontract shall constitute grounds for termination of this Agreement by SBBC for cause and shall be grounds for the exclusion of some or all of any Payee's costs from amounts payable by SBBC to VENDOR pursuant to this Agreement and such excluded costs shall become the liability of the VENDOR.

(h) Inspector General Audits. VENDOR shall comply and cooperate immediately with any inspections, reviews, investigations, or audits deemed necessary by the Florida Office of the Inspector General or by any other state or federal officials.

2.06 **Notice:** When any of the parties desire to give notice to the other, such notice must be in writing, sent by U.S. Mail, postage prepaid, addressed to the party for whom it is intended at the place last specified; the place for giving notice shall remain such until it is changed by written notice in compliance with the provisions of this paragraph. For the present, the Parties designate the following as the respective places for giving notice:

To SBBC: Superintendent of Schools
The School Board of Broward County, Florida
600 Southeast Third Avenue
Fort Lauderdale, Florida 33301

With a Copy to: District Representative
Procurement & Warehousing Services
7720 West Oakland Park Boulevard
Sunrise, FL 33351

To VENDOR: Lloyd Maxhimer
Bismark Electrical Services, Inc.
1067 SE Prineville Street
Port St. Lucie, FL 34983

2.07 **BACKGROUND SCREENING.**

(a) For Non-Governmental Agencies. VENDOR agrees to comply with all requirements of Sections 1012.32 and 1012.465, Florida Statutes, and all of its personnel who (1) are to be permitted access to school grounds when students are present, (2) will have direct contact with students, or (3) have access or control of school funds, will successfully complete the background screening required by the referenced statutes and meet the standards established by the statutes. This background screening will be conducted by SBBC in advance of the VENDOR or its personnel providing any services under the conditions described in the previous sentence. VENDOR shall bear the cost of acquiring the background screening required by Section 1012.32, Florida Statutes, and any fee imposed by the Florida Department of Law Enforcement to maintain the fingerprints provided with respect to the VENDOR and its personnel. The parties agree that the failure of VENDOR to perform any of the duties described in this section shall constitute a material breach of this Agreement entitling SBBC to terminate immediately with no further responsibilities or duties to perform under this Agreement. VENDOR agrees to indemnify and hold harmless SBBC, its officers and employees from any liability in the form of physical or mental injury, death or property damage resulting from VENDOR'S failure to comply with the requirements of this Section or with Sections 1012.32 and 1012.465, Florida Statutes.

2.08 **Insurance Requirements.** Vendor shall comply with the following insurance requirements throughout the term of this Agreement.

- (a) General Liability. Limits not less than \$1,000,000 per occurrence for Bodily Injury/ Property Damage; \$1,000,000 General Aggregate. Limits not less than \$1,000,000 for Products/Completed Operations Aggregate.
- (b) Professional Liability/Errors & Omissions. Limit not less than \$1,000,000 per occurrence covering services provided under this Agreement.
- (c) Workers' Compensation. Florida Statutory limits in accordance with Chapter 440; Employer's Liability limits not less than \$100,000/\$100,000/\$500,000 (each accident/disease-each employee/disease-policy limit).
- (d) Auto Liability. Owned, Non-Owned and Hired Auto Liability with Bodily Injury and Property Damage limits of not less than \$1,000,000 Combined Single Limit.

If Awardee does not own any vehicles, hired and non-owned automobile liability coverage in the amount of \$1,000,000 shall be accepted. In addition, an affidavit signed by the Awardee must be furnished to SBBC indicating the following:

N/A (Awardee Name) does not own any vehicles. In the event insured acquires any vehicles throughout the term of this agreement, insured agrees to provide proof of "Any Auto" coverage effective the date of acquisition.

- (e) Acceptability of Insurance Carriers. The insurance policies shall be issued by companies qualified to do business in the State of Florida. The insurance companies must be rated at least A- VI by AM Best or Aa3 by Moody's Investor Service.
- (f) Verification of Coverage. Proof of Insurance must be furnished within 15 days of execution of this Agreement. To streamline this process, SBBC has partnered with EXIGIS RiskWorks to collect and verify insurance documentation. All certificates (and any required documents) must be received and approved by SBBC before any work commences to permit Awardee time to remedy any deficiencies. EXIGIS RiskWorks will send an email notification within three (3) business days after receipt of the award letter.
- New vendors will receive an email notification requesting account verification and insurance agent information.
 - Existing vendors will receive an email notification of current status.
- (g) Required Conditions. Liability policies must contain the following provisions. In addition, the following wording must be included on the Certificate of Insurance:
1. The School Board of Broward County, Florida, its members, officers, employees and agents are added as additional insured.
 2. All liability policies are primary of all other valid and collectable coverage maintained by the School Board of Broward County, Florida.
 3. Certificate Holder: The School Board of Broward County, Florida, c/o EXIGIS Risk Management Services, P. O. Box 4668-ECM, New York, New York 10163-4668
- (h) Cancellation of Insurance. Vendors are prohibited from providing services under this Agreement with SBBC without the minimum required insurance coverage and must notify SBBC within two business days if required insurance is cancelled.

The School Board of Broward County, Florida reserves the right to review, reject or accept any required policies of insurance, including limits, coverage's or endorsements, herein throughout the term of this agreement.

2.09 **Payment Method.** The District's preferred method of payment is via ACH electronic payments. An electronic payment can reduce processing time and administrative overhead costs for both parties, resulting in expedited payment upon invoice approval, and reduces exposure to check fraud. SBBC will not pay convenience fees, surcharges, or any additional costs for payments made by electronic payment.

If you are willing to accept payment via electronic payment as noted above, please check yes.

☒ YES ☐ NO

Please ensure that your ACH form is submitted with this agreement.

ARTICLE 3 – GENERAL CONDITIONS

3.01 **No Waiver of Sovereign Immunity.** Nothing herein is intended to serve as a waiver of sovereign immunity by any agency or political subdivision to which sovereign immunity may be applicable or of any rights or limits to liability existing under Section 768.28, Florida Statutes. This section shall survive the termination of all performance or obligations under this Agreement and shall be fully binding until such time as any proceeding brought on account of this Agreement is barred by any applicable statute of limitations.

3.02 **No Third Party Beneficiaries.** The parties expressly acknowledge that it is not their intent to create or confer any rights or obligations in or upon any third person or entity under this Agreement. None of the parties intend to directly or substantially benefit a third party by this Agreement. The parties agree that there are no third party beneficiaries to this Agreement and that no third party shall be entitled to assert a claim against any of the parties based upon this Agreement. Nothing herein shall be construed as consent by an agency or political subdivision of the State of Florida to be sued by third parties in any matter arising out of any contract.

3.03 **Independent Contractor.** The parties to this agreement shall at all times be acting in the capacity of independent contractors and not as an officer, employee or agent of one another. Neither party or its respective agents, employees, subcontractors or assignees shall represent to others that it has the authority to bind the other party unless specifically authorized in writing to do so. No right to SBBC retirement, leave benefits or any other benefits of SBBC employees shall exist as a result of the performance of any duties or responsibilities under this Agreement. SBBC shall not be responsible for social security, withholding taxes, and contributions to unemployment compensation funds or insurance for the other party or the other party's officers, employees, agents, subcontractors or assignees.

3.04 **Equal Opportunity Provision.** The parties agree that no person shall be subjected to discrimination because of age, race, color, disability, gender identity, gender expression marital status, national origin, religion, sex or sexual orientation in the performance of the parties' respective duties, responsibilities and obligations under this Agreement.

3.05 **M/WBE Commitment.** Throughout the term of the Agreement, VENDOR shall take commercially reasonable steps and use commercially reasonable resources to identify SBBC-certified M/WBE VENDORS who may be engaged to fulfill various aspects of the Agreement, including, for instance, without limitation, M/WBE VENDORS to provide office supplies, travel, printing, janitorial supplies/services, consulting services, trade services, installation and repair services, medical supplies, where feasible. VENDOR agrees to provide monthly reports and to conduct quarterly meetings with SBBC to discuss progress in meeting the SBBC's objectives regarding M/WBE participation, including dollars spent on M/WBE VENDORS for the quarter; and to continue to assess throughout the term of the Agreement new possibilities for M/WBE VENDOR participation suggested by SBBC. If at any time during the term the parties agree that it is reasonably feasible to include a specific dollar figure for M/WBE participation, the Agreement shall be amended to include the dollar participation objective.

3.06 **Termination.** This Agreement may be canceled with or without cause by SBBC during the term hereof upon thirty (30) days written notice to the other parties of its desire to terminate this Agreement. SBBC shall have no liability for any property left on SBBC's property by any party to this Agreement after the termination of this Agreement. Any party contracting with SBBC under this Agreement agrees that any of its property placed upon SBBC's facilities pursuant to this Agreement shall be removed within ten (10) business days following the termination, conclusion or cancellation of this Agreement and that any such property remaining upon SBBC's facilities after that time shall be deemed to be abandoned, title to such property shall pass to SBBC, and SBBC may use or dispose of such property as SBBC deems fit and appropriate.

3.07 **Default.** The parties agree that, in the event that either party is in default of its obligations under this Agreement, the non-defaulting party shall provide to the defaulting party (30) days written notice to cure the default. However, in the event said default cannot be cured within said thirty (30) day period and the defaulting party is diligently attempting in good faith to cure same, the time period shall be reasonably extended to allow the defaulting party additional cure time. Upon the occurrence of a default that is not cured during the applicable cure period, this Agreement may be terminated by the non-defaulting party upon thirty (30) days' notice. This remedy is not intended to be exclusive of any other remedy, and each and every such remedy shall be cumulative and shall be in addition to every other remedy now or hereafter existing at law or in equity or by statute or otherwise. No single or partial exercise by any party of any right, power, or remedy hereunder shall preclude any other or future exercise thereof. Nothing in this section shall be construed to preclude termination for convenience pursuant to Section 3.05.

3.08 **Annual Appropriation.** The performance and obligations of SBBC under this Agreement shall be contingent upon an annual budgetary appropriation by its governing body. If SBBC does not allocate funds for the payment of services or products to be provided under this Agreement, this Agreement may be terminated by SBBC at the end of the period for which funds have been allocated. SBBC shall notify the other party at the earliest possible time before such termination. No penalty shall accrue to SBBC in the event this provision is exercised, and SBBC shall not be obligated or liable for any future payments due or any damages as a result of termination under this section.

3.09 **Excess Funds.** Any party receiving funds paid by SBBC under this Agreement agrees to promptly notify SBBC of any funds erroneously received from SBBC upon the discovery of such erroneous payment or overpayment. Any such excess funds shall be refunded to SBBC.

3.10 **Public Records:** The following provisions are required by Section 119.0701, Florida Statutes, and may not be amended. VENDOR shall keep and maintain public records required by SBBC to perform the services required under this Agreement. Upon request from SBBC's custodian of public records, VENDOR shall provide SBBC with a copy of any requested public records or to allow the requested public records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes, or as otherwise provided by law. VENDOR shall ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the Agreement's term and following completion of the Agreement if VENDOR does not transfer the public records to SBBC. Upon completion of the Agreement, VENDOR shall transfer, at no cost, to SBBC all public records in possession of VENDOR or keep and maintain public records required by SBBC to perform the services required under the Agreement. If VENDOR transfer all public records to SBBC upon completion of the Agreement, VENDOR shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If VENDOR keeps and maintains public records upon completion of the Agreement, Insert Name shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to SBBC, upon request from SBBC's custodian of public records, in a format that is compatible with SBBC's information technology systems.

IF A PARTY TO THIS AGREEMENT HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO ITS DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THE AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT 754-321-1900, REQUEL.BELL@BROWARDSCHOOLS.COM, RISK MANAGEMENT DEPARTMENT, PUBLIC RECORDS DIVISION, 600 SOUTHEAST THIRD AVENUE, FORT LAUDERDALE, FLORIDA 33301.

3.11 **Student Records.** Notwithstanding any provision to the contrary within this Agreement, any party contracting with SBBC under this Agreement shall fully comply with the requirements of Sections 1002.22 and 1002.221, Florida Statutes; FERPA, and any other state or federal law or regulation regarding the confidentiality of student information and records. Each such party agrees, for itself, its officers, employees, agents, representatives, contractors or subcontractors, to fully indemnify and hold harmless SBBC and its officers and employees for any violation of this section, including, without limitation, defending SBBC and its officers and employees against any complaint, administrative or judicial proceeding, payment of any penalty imposed upon SBBC, or payment of any and all costs, damages, judgments or losses incurred by or imposed upon SBBC arising out of a breach of this covenant by the party, or an officer, employee, agent, representative, contractor, or sub-contractor of the party to the extent that the party or an officer, employee, agent, representative, contractor, or sub-contractor of the party shall

either intentionally or negligently violate the provisions of this section or of Sections 1002.22 and/or 1002.221, Florida Statutes.

3.12 **Compliance with Laws.** Each party shall comply with all applicable federal state and local laws, SBBC policies codes, rules and regulations in performing its duties, responsibilities and obligations pursuant to this Agreement.

3.13 **Place of Performance.** All obligations of SBBC under the terms of this Agreement are reasonably susceptible of being performed in Broward County, Florida and shall be payable and performable in Broward County, Florida.

3.14 **Governing Law and Venue.** This Agreement shall be interpreted and construed in accordance with and governed by the laws of the State of Florida. Any controversies or legal problems arising out of this Agreement and any action involving the enforcement or interpretation of any rights hereunder shall be submitted to the jurisdiction of the State courts of the Seventeenth Judicial Circuit of Broward County, Florida.

3.15 **Entirety of Agreement.** This document incorporates and includes all prior negotiations, correspondence, conversations, agreements and understandings applicable to the matters contained herein and the parties agree that there are no commitments, agreements or understandings concerning the subject matter of this Agreement that are not contained in this document. Accordingly, the parties agree that no deviation from the terms hereof shall be predicated upon any prior representations or agreements, whether oral or written.

3.16 **Binding Effect.** This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

3.17 **Assignment.** Neither this Agreement nor any interest herein may be assigned, transferred or encumbered by any party without the prior written consent of the other party. There shall be no partial assignments of this Agreement including, without limitation, the partial assignment of any right to receive payments from SBBC.

3.18 **Incorporation by Reference.** Attachment A, attached hereto and referenced herein shall be deemed to be incorporated into this Agreement by reference.

3.19 **Captions.** The captions, section designations, section numbers, article numbers, titles and headings appearing in this Agreement are inserted only as a matter of convenience, have no substantive meaning, and in no way define, limit, construe or describe the scope or intent of such articles or sections of this Agreement, nor in any way affect this Agreement and shall not be construed to create a conflict with the provisions of this Agreement.

3.20 **Severability.** In the event that any one or more of the sections, paragraphs, sentences, clauses or provisions contained in this Agreement is held by a court of competent jurisdiction to be invalid, illegal, unlawful, unenforceable or void in any respect, such shall not affect the remaining portions of this Agreement and the same shall remain in full force and effect as if such invalid, illegal, unlawful, unenforceable or void sections, paragraphs, sentences, clauses or provisions had never been included herein.

3.21 **Preparation of Agreement.** The parties acknowledge that they have sought and obtained whatever competent advice and counsel as was necessary for them to form a full and complete understanding of all rights and obligations herein and that the preparation of this Agreement has been their joint effort. The language agreed to herein expresses their mutual intent and the resulting document shall not, solely as a matter of judicial construction, be construed more severely against one of the parties than the other.

3.22 **Amendments.** No modification, amendment, or alteration in the terms or conditions contained herein shall be effective unless contained in a written document prepared with the same or similar formality as this Agreement and executed by each party hereto.

3.23 **Waiver.** The parties agree that each requirement, duty and obligation set forth herein is substantial and important to the formation of this Agreement and, therefore, is a material term hereof. Any party's failure to enforce any provision of this Agreement shall not be deemed a waiver of such provision or modification of this Agreement unless the waiver is in writing and signed by the party waiving such provision. A written waiver shall only be effective as to the specific instance for which it is obtained and shall not be deemed a continuing or future waiver.

3.24 **Force Majeure.** Neither party shall be obligated to perform any duty, requirement or obligation under this Agreement if such performance is prevented by fire, hurricane, earthquake, explosion, wars, sabotage, accident, flood, acts of God, strikes, or other labor disputes, riot or civil commotions, or by reason of any other matter or condition beyond the control of either party, and which cannot be overcome by reasonable diligence and without unusual expense ("Force Majeure"). In no event shall a lack of funds on the part of either party be deemed Force Majeure.

3.25 **Survival.** All representations and warranties made herein, indemnification obligations, obligations to reimburse SBBC, obligations to maintain and allow inspection and audit of records and property, obligations to maintain the confidentiality of records, reporting requirements, and obligations to return public funds shall survive the termination of this Agreement.

3.26 **Contract Administration.** SBBC has delegated authority to the Superintendent of Schools or his/her designee to take any actions necessary to implement and administer this Agreement.

3.27 **Liability.** This section shall survive the termination of all performance or obligations under this Agreement and shall be fully binding until such time as any proceeding brought on account of this Agreement is barred by any applicable statute of limitations.

A. By SBBC: SBBC agrees to be fully responsible up to the limits of Section 768.28, Florida Statutes, for its acts of negligence, or its employees' acts of negligence when acting within the scope of their employment and agrees to be liable for any damages resulting from said negligence.

B. By VENDOR: VENDOR agrees to indemnify, hold harmless and defend SBBC, its agents, servants and employees from any and all claims, judgments, costs, and expenses including, but not limited to, reasonable attorney's fees, reasonable investigative and discovery costs, court costs and all other sums which SBBC, its agents, servants and employees may pay or become obligated to pay on account of any, all and every claim or demand, or assertion of liability, or any claim or action founded thereon, arising or alleged to have arisen out of the products, goods or services furnished by VENDOR, its agents, servants or employees; the equipment of VENDOR, its agents, servants or employees while such equipment is on premises owned or controlled by SBBC; or the negligence of VENDOR or the negligence of VENDOR'S agents when acting within the scope of their employment, whether such claims, judgments, costs and expenses be for damages, damage to property including SBBC's property, and injury or death of any person whether employed by VENDOR, SBBC or otherwise.

3.28 **Authority.** Each person signing this Agreement on behalf of either party individually warrants that he or she has full legal power to execute this Agreement on behalf of the party for whom he or she is signing, and to bind and obligate such party with respect to all provisions contained in this Agreement.

IN WITNESS WHEREOF, the Parties hereto have made and executed this Agreement on the date first above written.

FOR SBBC

(Corporate Seal)

THE SCHOOL BOARD OF BROWARD
COUNTY, FLORIDA

ATTEST:

By _____
Abby M. Freedman, Chair

Robert W. Runcie, Superintendent of Schools

Approved as to Form and Legal Content:

Janette M. Smith

Digitally signed by Janette M.
Smith

Date: 2017.10.26 13:46:03 -04'00'

Office of the General Counsel

FOR VENDOR

(Corporate Seal)

INSERT VENDOR NAME

ATTEST:

By Lloyd Charles Maxhimer President
INSERT OFFICER NAME/TITLE

Lloyd Charles Maxhimer
, Secretary

-or-

[Signature]
Witness

[Signature]
Witness

The Following Notarization is Required for Every Agreement Without Regard to Whether the Party Chose to Use a Secretary's Attestation or Two (2) Witnesses.

STATE OF Florida

COUNTY OF Palm Beach

The foregoing instrument was acknowledged before me this 26th day of October, 2017 by Lloyd Charles Maxhimer of Bismark Electrical Services
Name of Person
Name of Corporation or Agency on behalf of the corporation/agency.

He/She is personally known to me or produced _____ as
identification and did/did not first take an oath. Type of Identification

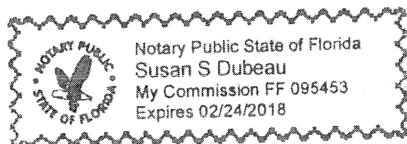
My Commission Expires:

2/24/18

Susan S Dubeau
Signature – Notary Public

Susan S. Dubeau
Printed Name of Notary

(SEAL)



FF 095453
Notary's Commission No.

ATTACHMENT A

STATEMENT OF WORK/SCOPE OF SERVICES

BASIC PARAMETERS

1. Awardee must provide a separate quote for each specific project / location. Blanket Purchase Order's for multiple locations and/or projects will not be allowed. All quotes must show the unit prices for labor, material equipment and other costs that may apply. The supplier's invoice for all material must be included with awardees' invoice for payment. In the case of an emergency, the Physical Plant Operations (PPO) Supervisor may waive this requirement.
2. Awardee must be licensed per Special Condition 1 and be able to perform any type of electrical installation, as appropriate, including but not limited to wiring, repair, maintenance and operations services as documented and required by the PPO Supervisor assigned and be in compliance with these Bid Specifications which are based upon the Guide Specification of the Facilities and Construction Division of the School Board of Broward County, Florida.
3. Awardee must provide all supervision, labor, equipment and materials, where required, for all work envisioned and specified in this bid for electrical service without restriction throughout the District. Blueprints will be furnished to the awardee by the PPO Supervisor assigned. Travel time to and from work projects will NOT be considered for reimbursement on any project.
4. A journeyman electrician must have completed a State of Florida-registered electrical apprenticeship program and possess either a State of Florida journeyman electrician's license or the equivalent County-issued Certificate of Competency, as appropriate. All awardee journeyman electricians must be in compliance with this provision and is subject to review at any time during the evaluation process of the bid prior to award or during the contract period.
5. All schedules and the necessary arrangements to implement the scope of work projects must be made with the review and approval of the PPO Supervisor assigned. An awardee representative is required to attend a pre-job conference prior to the commencement of work at each project. The PPO Department shall give the awardee a minimum of 48 hours notification of the date and time of each conference. ATTENDANCE IS MANDATORY, unless specifically waived by the PPO Supervisor assigned. Failure to attend may result in awardee being held in default of contract. All information specific to the project including completion schedules will be discussed at the conference. Failure to adhere to the specifics of the project discussed at this conference may result in the awardee being held in default of contract.
6. The majority of the work will be done during normal SBBC business hours, 7 am to 4 pm, weekdays. Nonetheless, there may be emergencies which require projects to be completed after normal SBBC business hours, on weekends or during holidays. In emergency situations, the requirement to provide a written estimate may be waived. Awardee must be available by phone 24 hours per day, 7 days per week in the event of such an emergency request. Once contacted, the awardee shall meet with the PPO Supervisor assigned and review the scope of the work required. When the awardee is issued an emergency request for repair or service, the awardee shall respond within 24 hours of receiving an "Emergency Notice to Proceed." Failure to respond in a timely manner to SBBC requests for service may constitute grounds for termination of this contract.
7. Awardees are to give prompt and efficient service to any SBBC location at the request of the PPO Department within five business days by mutual approval of the written project schedule by the awardee and the PPO Supervisor assigned.
8. All requested work must be completed within the timeframe and the written project schedule agreed upon between the awardee and the PPO Supervisor assigned. Additional time may be approved, if necessary, when requested, in writing, by the awardee.

9. Each project must be completed as quickly as reasonably possible, not to exceed the number of calendar days set forth in the "Notice to Proceed." The start date of each project shall be the date that the "Notice to Proceed" is issued. The completion date shall be the date mutually agreed upon between the PPO Supervisor assigned and the awardee prior to issuing the "Notice to Proceed." SBBC reserves the right to enforce \$150.00 per calendar day penalty for liquidated damages to be paid to SBBC by the awardee or deducted from the final invoice. Liquidated damages, if enforced, will begin the day after the agreed completion date and continue until the project is substantially complete.
10. Awardee shall check for proper voltages for each job assigned. All material shall bear Underwriters Laboratories, Inc. (UL) labels.
11. Awardee will be responsible for scheduling timely rough, in progress and final inspections with SBBC Building Department (BCI) for all new installations throughout the District. Awardee must provide copies of all approved inspection reports to the PPO Department. Invoices will not be approved for payment without completed, signed and approved inspection reports attached to the invoices.
12. All electrical work assigned MUST be tested and in working order PRIOR to the completion of the work required.
13. Awardees are responsible for contacting Sunshine State One Call of Florida at (800) 432-4770, www.callsunshine.com, for member public utility locations and must repair any and all member public damaged utility or service lines damaged by their excavation immediately upon notice of such damage. Failure to respond immediately for such repairs will bring back charges to the awardee for any and all cost for SBBC to repair damaged lines. Awardee must have the necessary materials and equipment to locate conduit and wires buried in the ground. All wiring installations in PVC conduit shall be buried at least 18" underground or as required by Code. All excavation for installation must be included in the total cost quoted for jobs specified. SBBC site representative will work with awardees when it is necessary to identify SBBC-owned underground service lines, repairs to which will NOT be the responsibility of awardee(s). The awardee(s) will give a one (1) week notice for SBBC to mark SBBC-owned underground services and lines. The awardee(s) shall take necessary precautions to limit the possibility of damaging existing installations, damage to any obvious, identified and/or marked items by the awardee(s) will be the responsibility of the awardee(s).
14. Awardee is responsible for providing a safe work area, proper barricades, warning signage, caution tape, temporary fencing and so forth to insure that awardee's personnel, students and faculty are not subject to safety violations. At no time should there be unsupervised, exposed and/or energized electrical wiring, panels or equipment which would be accessible to the public. Overhead work repairs and installation projects must not be made or installed in an unsecured work area or while unauthorized persons are below. All excavation drilling areas must be effectively barricaded and/or fenced off to safely prohibit entry into the work area and the fenced off areas must be maintained until the completion of the project.
15. Awardee will also be responsible for the prompt clean-up of job sites and the removal of all debris that is a result or part of all related work. All excavation or drilling areas must be backfilled with clean fill to the current or surrounding landscape conditions within five business days after completion of the assigned project.
16. Awardee MAY be requested to replace damaged materials in electrical projects as directed by the PPO Department at the stated hourly labor rate. Replacement of electrical materials MAY be purchased under this contract at the discretion of the PPO Department on a strictly cost-plus basis. These materials purchased under this contract must be verified by the submission of an itemized list of materials proposed for purchase from the identified source, each unit price by cost, the, total price and the awardee's cost-plus mark-up. Any remaining materials, after project completion, become the property of SBBC. The PPO Department is under NO OBLIGATION to purchase materials under this contract if the electrical supplies can be purchased on other SBBC contracts.

GENERAL ELECTRICAL SPECIFICATIONS

1. Awardee must provide all labor, materials, necessary equipment and services to provide a complete electrical system as indicated on drawings, as specified herein or both, except the items specifically indicated as "NIC ITEMS" and described as follows:
 - a) Temporary electrical service for all trades.
 - b) Complete distribution system for lighting, electrical power, wiring devices, equipment, controls and panel boards as indicated or directed by the PPO Supervisor assigned.
 - c) A complete raceway system.
 - d) Transformer vault, bus stabs, underground duct bank, grounding, etc., as required for primary and secondary power system under the provisions of Florida Power and Light Company (FPL).
 - e) Empty raceway system and cabinets for the telephone system as indicated on drawings.
 - f) A complete clock & bell system and programming same.
 - g) A complete SBBC-owned instructional television system (ITV).
 - h) A complete intercom/paging system.
 - i) All conduit, outlets and junction boxes for a security system.
 - j) Wiring and hook-up of emergency standby generator and transfer switches.
 - k) Fuel transfer pumps, day tank, muffler, battery charger, control panel and related equipment.
 - l) Normal and emergency lighting system and luminaries.
 - m) Interior and exterior light and control systems.
 - n) Conduit and wiring system for A/C electrical controls.
 - o) Marking of all junction boxes with system voltage inside and outside of box.
 - p) Connect all equipment furnished by the PPO Supervisor assigned and provide caps, cords and other materials required to complete the installation.
 - q) Painting of electrical and special equipment.
 - r) Furnishing and installing necessary access panels.
 - s) Complete electrical testing.
 - t) All motors, unless otherwise specified, are to be furnished and set in place.
 - u) Temperature control equipment: furnished, installed, wired and tested.
2. Awardee(s) are to follow as closely as possible, the drawings and risers indicated in diagrammatic form the arrangements desired for the equipment fixtures, principal apparatus, kitchen equipment and so on. Awardee must include any additional conduit, boxes and wiring due to structural or other obstructions at no extra cost to SBBC.
3. The connection of all equipment even when furnished by the PPO Department.
4. Control wiring under the supervision of the PPO Supervisor assigned where required and install all associated equipment and wiring necessary for a complete system including motor starters, controllers, and control devices.
5. Wire all electrical equipment under this contract. Extras are not permissible for failure on the awardee to comply with Bid Specifications or the parameters of any project.
6. Install HVAC, plumbing and mechanical equipment power and control connections. The PPO Department may provide the following materials at their option or purchase from awardee on a discount from manufacturers' list prices:
 - a) Control wiring diagrams
 - b) Motor Starters
 - c) Contactors
 - d) Thermostats
 - e) Firestats (each fan and air handler unit (AHU)
 - f) Damper motors
 - g) Control devices
 - h) Safety switches

- i) Junction boxes
 - j) Wiring
 - k) Materials for the connection of all equipment and controls
 - l) Provide cord sets as required
 - m) Additional materials and equipment as assigned by the PPO Supervisor assigned.
7. Awardee must verify outlet locations prior to installation and connection.
8. The latest editions of the following Codes and Standards are considered the minimum requirement for materials, workmanship and safety unless they are specified herein:
- a) The Florida Building Code, or as amended from time to time and the following standards as adopted by the Code
 - b) National Electrical Code (NEC)
 - c) Life Safety Code, National Fire Protection Association, NFPA-101
 - d) Rule 4A-48, Florida Administrative Code (FAC)
 - e) The Americans with Disabilities Act (ADA)
 - f) Where materials and equipment are available under the continuing inspection and laboring service of UL, furnish materials and equipment bearing such labels
 - g) Public Law 91-596 Occupational Safety and Health Act
 - h) Ordinances of the local authorities having jurisdiction
 - i) ANSI A117.1
 - j) NFPA 70E Electrical Safety in the Work Place
9. Where equipment supports are on concrete construction, care must be taken not to weaken concrete or penetrate waterproofing. Obtain prior approval from the PPO Supervisor assigned for installation method of structural steel required to frame into building structural members for the support of the equipment and conduit. Welding will be permitted only when approved by the PPO Department. Coordinate dimensions of concrete housekeeping pads with requirements for equipment supplied.
10. Submit within 30 days of the "Notice to Proceed," four copies indexed, loose-leaf or bound copies of shop and detail drawings, factory-certified prints and material lists for items included by not limited to those listed below:
- a) Switchboards and panelboards
 - b) Disconnect switches, motor starters, fuses, time clocks, contactors and relays
 - c) Transformers
 - d) Terminal cabinets
 - e) Wiring devices and plates
 - f) Luminaires, dimmers and accessories
 - g) Conduit, fittings, supports, pull boxes, wire and cable
 - h) Clock and program system
 - i) Fire alarm system
 - j) ITV system
 - k) Intercom/paging system
 - l) Emergency generator and transfer switch system
11. Field painting of exposed conduit and hangers as specified and directed by the PPO Supervisor assigned. Clean all surfaces and hanger rods free of grease, scale, rust and other foreign matter ready for painting. Touch up all factory-finishes marred in construction with factory touch-up kits.
12. Awardee is responsible for thoroughly reviewing of all plans and specifications affecting any electrical project assigned. Awardee must coordinate with the PPO Supervisor assigned before the commencement of work so that routing of systems and clearances are adequate. Notify the PPO Supervisor assigned concerning any conflicts or deviations immediately. Do not proceed until approval is granted by the PPO Department.

13. Special attention given but not to be limited to the following systems:
 - a) Conduit and raceway for the telephone system
 - b) HVAC ductwork, piping, condensate and waste
 - c) Fire sprinkler system, waste and vent lines, hot and cold water lines and rain water leaders
14. Coordinate work with SBBC utility providers such as FPL, AT&T and municipal water agencies.
15. Awardee shall submit verification of compliance with OSHA requirements for Lock Out/Tag Out procedures.
16. All hardware and accessory fittings shall be U.S. Standard (USS) of a type designed, intended or appropriate for the use and complement the items with which they are used, and have corrosion protection suitable for the south Florida conditions in which they are installed.
17. Ensure that equipment of a similar nature is identical, i.e., all panelboards of the same manufacturer and style
18. Awardee will be responsible for storing and protecting all materials from injury prior to installation. Do not store materials directly on the ground or floor and keep as clean and dry as possible and free from damage or deteriorating elements. NEVER install damaged materials.
19. Provide ground fault protection in all temporary service.
20. Factory paint or finish all enclosures, panels, cabinets, relays, safety switches, fixtures, gutters and other exposed equipment or accessories except as indicated otherwise. Group mounted items should be of the similar finish and color.
21. Tag all conductors and identify major conduits in or at wire-ways, panels, pull boxes, switchboards, motor controllers, cabinets and similar items to assist in future circuit tracing. Conductor tags must be non-conductive. Identify all circuits and equipment to correspond with the plans and specifications. Use paint markers, or other approved methods except as indicated otherwise. All junction box covers should be labeled on both sides indicating type of system and voltage. All gutters, terminal cabinets, starters, transformers, panels and disconnects must be identified with stencil labels indicating type system, voltage and equipment being serviced. Labeling of all panel boards, junction boxes, pull boxes, outlets, and utilization equipment to include: panel, disconnect or equipment designation (if necessary). The panel, disconnect, or equipment from where it is fed, circuit designation, and location of the feeding panel (FISH number), disconnect or equipment.
22. Test that all circuits and devices are in good condition to operate and that each item of equipment will function not less than five times. Test all circuits for grounds, shorts and continuity. Provide all materials and equipment necessary for testing.
23. Demonstrate the essential features of the following electrical systems upon completion of satisfactory testing. The demonstration will be held in the presence of the PPO Supervisor assigned to show junction boxes, locations and relationships to the plans. Electrical systems are detailed in General Electrical Specification 1, above. In addition, the awardee will demonstrate how to "start-stop," reset, replace and emergency procedures, one system at a time. Submit a certificate of demonstration to the PPO Supervisor assigned for final acceptance.
24. Upon completion, the awardee must:
 - a) Coordinate final inspection with UBCI.
 - b) Identify all cables in junction boxes with name of equipment served.
 - c) Furnish warranty per Special Condition 18. Inspection and acceptance of the project by SBBC does not relieve the awardee of compliance with the warranty provisions.
 - d) Test finished project equipment and materials in the presence of the PPO Supervisor assigned and issue 4 copies of the certificate of test for all equipment in the project.

AS-BUILT DRAWINGS, TESTING AND MAINTENANCE INSTRUCTIONS

Substantial completion of the final inspection will not be held unless the following specifications are in full compliance.

1. Provide two indexed, bound copies of all maintenance manuals, wiring diagrams, control panel interconnect diagrams and the individual module wiring diagrams supplied with the control panel including all proprietary components and information. This submittal will be followed by a final revised submittal showing field adjustment, when required.
2. Provide upon completion of the system, a complete set of reproducible "as-builts" on CD-ROM in a compatible version of AutoCAD, showing installed, color-coded wiring, wire tag notations for exact locations of all installed equipment, specified interconnections between all equipment and internal wiring of the equipment. The manufacturer's representative shall provide a base drawing to the awardee.
3. The PPO does not have access to AutoCAD files and cannot provide these files to the awardee in order for the awardee to provide "as-built" records. AutoCAD documents are maintained by the SBBC Facilities and Construction Management Division.
4. Provide upon completion of the system, a complete, simple, comprehensive, step-by-step, set of testing instructions giving recommended and required testing frequency of all equipment, methods for testing each individual piece of equipment, complete trouble-shooting manuals explaining what might be wrong if a certain malfunction occurs and explaining how to test the primary internal parts of each piece of equipment.
5. Maintenance instructions must be provide the following information:
 - a) Instructions on replacing any components of the system, including internal parts.
 - b) Instructions on periodic cleaning and adjustment of equipment with a schedule of these functions.
 - c) A complete list of all equipment and components including the address and phone number of both the manufacturer and local supplier of each item.
 - d) Provide user operating instructions that are prominently displayed on the cabinet front or on a separate sheet located next to the control unit in accordance with UL 864.
 - e) Provide to SBBC all system manufacturer's software and all field configuration programming information necessary to perform all possible future servicing, testing, repairs, systems and component diagnostics and improvements. Include information on the availability of system software upgrades, regularly updated diagnostic tools and technical bulletins dealing with the particular system installed.

BASIC MATERIALS, METHODS AND QUALITY ASSURANCE

1. The design criteria are diagrammatic drawings. Due to the small scale, awardee will not show in detail all required features of the project. In order to supplement the drawings, the awardee's knowledge, trade experience, Codes and standards and the instructions of the PPO Department will be necessary for all items which are required to properly execute the full intent and meaning shall be considered as being shown and/or specified. The PPO Supervisor assigned reserves the right to make reasonable changes in outlet locations prior to roughing-in.
2. Documentation that may be required and submitted at the request of the PPO Department is:
 - a) Schematics and interconnection diagrams
 - b) Detail and shop drawings
 - c) Assembly, operation and maintenance drawings and manuals
 - d) Manufacturer's data
3. Keep all openings closed with plugs or caps to prevent intrusion of foreign matter.

4. Lay out openings for the PPO Department, as required. The awardee must provide all openings and close same.
5. Manufacturer's nameplates must be in a visible location for each major component of equipment with manufacturers name, address, model number and rating.
6. Sequenced scheduling must be determined between the awardee and the PPO Supervisor assigned.
 - a) Coordinate adequate clearances for installation and maintenance of equipment as well as the physical and electrical requirements of items and/or any equipment requiring connections.
 - b) Perform all necessary work to join with or receive project work, provide electrical service, extend conduits and make all necessary connections, as required, to prevent interruptions of service in any area.
 - c) Provide and extend as necessary, temporary electrical service for timely completion of project schedule
7. When required, install equipment provided to meet requirements of each respective section of the project sequence as indicated and suitable for installation shown.
8. Where two or more units of same equipment class are furnished, provide similar installation methods as practicable.
9. Install raceways and enclosures for conductors throughout all systems as shown and specified. Install equipment and devices appropriate for the environment and service intended, which are not constructed with housings for mounting and enclosing all live parts.
10. Pitch all excavation ducts away from the buildings.
11. Mount equipment, conduit, duct and raceway on, or suspended from, building structure as indicated and specified.
 - a) Install telephone mounting boards. Telephone equipment backboards shall be manufactured of exterior grade plywood, 3/4" minimum thickness, finished with one coat of primer and two coats of flat black alkyd-based paint. Galvanized Unistrut or equivalent for mounting of electrical equipment and any related materials would be preferred.
12. Assure adequate clearance in front equipment per NEC 110-26.
13. Locate with reference to finished buildings the installation of pull boxes, wire ways and other items requiring inspection, removal or replacement.
14. Retouch or refinish any shop coat damaged in delivery or during construction. DO NOT paint over any nameplate, label or tag for any equipment.
15. As a normal rule, the awardee and the PPO Supervisor assigned will coordinate with the existing facilities operation concerning alterations that affect any facility operations. Project work shall not start until all materials, supplies, equipment, labor, etc. are available so that continuous progress will be made to complete work in the shortest time possible. Project work that interferes with the existing facilities will be modified, suspended or rescheduled upon request of the PPO Supervisor assigned. Project work will be rescheduled at a time as required without additional cost to SBBC, unless such time involves overtime. In this case additional payment will be made as otherwise provided for herein.
16. The ownership of items removed during project work remains the property of SBBC unless a request is made by the PPO Supervisor assigned for removal and disposal.

INTERIOR FINISHING AND WIRING DEVICES

1. In general, the interior finish work includes a specific number of completely connected telephones, receptacles, and light switches, television, intercom and data outlets as shown on the drawings.
2. Electrical interior finish work is understood to start after all other electrical work in the area concerned has been completed and is to be performed in coordination and cooperation with other trades and/or PPO Department personnel that may be performing similar interior finish work during the same time period.
3. Apply the total amount of individual interior finish items over the building as a whole, without restriction, at the discretion of the PPO Supervisor assigned.
4. Arrange the specified number of receptacle outlets to be distributed over the branch circuits available such that no circuit will serve more than six outlets with no restriction placed on a minimum number of outlets, which may be assigned to an available branch circuit.
5. The maximum load for a 20-amp, 120V branch circuit is 1800W. 1920W for 20-amp circuits is allowed per the NEC. And figured on some existing engineered drawings.
6. Installation of wall receptacle outlets must include conduit in the wall, outlet box, and receptacle and completely connecting up wiring to the next fitting and back to the junction box located in the hung ceiling under provisions of the interior finish layout. The Installation of wall telephone outlets will be the same without the requirements of wiring.
7. Outlets should be complete with device plates, receptacles, both support and conduit fittings.
8. Installation of a wall local switch shall include the wall mounted device plate, outlet box, single pole switch, conduit, and related requirements in order to control a group of lighting fixtures under provisions of the interior finish drawings. Work includes the necessary switch and hot leg extensions and connections to accomplish the control desired.

GROUNDING

1. Install complete grounding system in accordance with NEC 250.
2. Measure ground grid resistance with earth test megger and install additional ground rods and conductors as required until resistance to ground does not exceed 5 ohms.
3. Ground bus shall be copper and be a minimum of 4" wide x 1/4" thick X length to allow for future connections, , mounted on insulating standoffs, complete with lugs for connecting grounding cables.
4. Ground rods shall be copper clad steel, 3/4" in diameter x 10' long, minimum.
5. All electrical systems shall have a complete equipment grounding system in accordance with the SBBC Design Specifications, modified as indicated and/or specified and the system must comply with NFPA 70, NEC Article 250.
6. The basic grounding system shall utilize the reinforcing bars in the footings of the building supplemented by ground rods and a connection to a cold water pipe where required to meet the test requirements specified.
7. Provide, in conduit, a green insulated copper ground conductor as required to the main metallic water service entrance and connect to the supply side of same by means of ground clamps with the conduit: bonded to the ground conductor at each end.

8. Low voltage system neutrals shall be grounded at the related transformers to the feeder ground and to the nearest cold water line all in accordance with NEC.
9. Ground conductors, connections and straps must be provided in accordance with NEC.
 - a) Equipment grounding conductors must be provided with green insulation, the same type as the associated phase conductors.
 - b) The related feeder grounding conductors are to be connected to the grounding bar with compression indent-type connectors or as specified.
10. A feeder serving several panel boards must be provided with a continuous grounding conductor which is connected to each related cabinet grounding bar.
11. Low voltage distribution systems must be provided with a separate green insulated equipment-grounding conductor for each three-phase or single-phase feeder. The required grounding conductor shall be installed in the common conduit with the related phase conductors. Where there are parallel feeders installed in more than one raceway, provide each raceway with a green insulated equipment ground conductor.
12. All branch circuits required for lighting and receptacles shall consist of phase, neutral and grounding conductors installed in common metallic conduits. Provide flexible metallic conduit equipment connections utilized in conjunction with the branch circuits with approved grounding terminals at each end. Provide all circuits required for special equipment and all branch circuits that are installed in nonmetallic conduits with a separate grounding conductor.
13. Provide in panel boards and other electrical equipment the number and size of pressure connectors on all equipment grounding bars required for the termination of the equipment grounding conductors. In addition to the active circuits, provide pressure connectors for all spares and spaces.
14. Provide each electrical expansion fitting with a flexible copper ground securely bonded by approved grounding straps on each end of the fitting.
15. Provide ground conductor from equipment ground bus in motor control center through conduit and flexible metallic conduit to ground terminal in connection box mounted on motor. Where motor has separate starter and disconnect device, the ground conductor originates at the ground bar in the panel board or switchboard supplying these motors and be bonded to each starter and disconnect device enclosure.
16. Where electric devices such as electric heaters are installed in air ducts, provide a green insulated equipment ground conductor size based on the rating of the over current device supplying the unit. Bond the conductor to each unit air duct, and to the ground in the panel board.
17. For conduit ground continuity, locknuts, bushings, joiners and similar conduit fittings: made up sufficiently tight to assure a continuous and permanent metal-to-metal flow throughout each system. Where conduits terminate without mechanical connection to a metallic housing of electrical equipment, provide each conduit with a bonding bushing and each bonding bushing connected with the equipment grounding conductor and connected to the ground bus in the electrical equipment.
18. Provide an unspliced main bonding jumper to connect the equipment grounding conductor and the service equipment enclosure to the grounded conductor of the system within the service equipment or within the service conductor enclosure.
19. Communication grounding requirements are:
 - a. Telephone: Provide 1 no. 6 from main ground bus to ground bus on telephone equipment board
 - b. Television distribution system: Provide 1 no. 8 to nearest ground bus
 - c. Public address system: Provide 1 no. 8 to the nearest ground bus
 - d. Computer networking: Provide 1 no. 6 to the nearest ground bus.

20. Installation requirements:
- End-to-end luminaires shall be continuously bonded with the grounding equipment conductor.
 - Grounding contacts of receptacles shall connect to a system-grounding conductor, NOT the system neutral, by a minimum no. 12 AWG stranded copper wire. The resistance between the contacts and solid earth ground must not exceed 3 ohms.
 - Bond all non-current carrying metal parts. Make equipment and bus connections with suitable lugs or clamps. Cadweld all wire-to-ground rod joints.
 - Bond all conduits stubbing under switchboards, transformer and similar locations using bonding bushings.
 - Use PVC for sleeving grounding conductors, except that where sleeves are subject to extreme injury use rigid metal conduit bonded at both ends
 - The TV antenna ground wire shall be connected to the main grounding system
 - Paint buried joints with red glyptal
 - Ground all transformer secondaries per NEC 250 unless shown otherwise on the drawings
 - The resistance to ground must be tested and logged by the awardee in the presence of the PPO Supervisor assigned in order to assure less than 5 ohms resistance. Testing will be conducted per NEC and Institute of Electrical and Electronic Engineers (IEEE) 142 recommended practices after the complete system has been fully grounded.
 - For lighting, provide a ground rod driven near pole bases and cadweld a no. 8 THWN wire to the top of the rod and extend the wire to a grounding lug in the base and bond to all metal parts. Provide an insulated copper conductor, sized per NEC 250-95, in each power or lighting raceway.

ALTERATIONS AND ADDITIONS TO EXISTING WORK

- These specifications are in addition to the requirements of building modifications as specified in this document. Please note that existing buildings may or may not be occupied during construction.
- Provide all additions and alterations to existing work required to maintain a complete and proper electrical installation. Relocate existing electrical work for other trades required to complete the work and to maintain building in service in compliance with the schedule set between the awardee and the PPO Department.
- Relocate luminaires, pull boxes, electrical ducts and other related items, to permit the installation of new equipment.
- Install new conduits, conductors, wiring and wiring devices in order to maintain temporary and permanent use of electrical facilities.
- Remove existing surface mounted work that is not used and blank off concealed outlets.
- Reconnect existing work to be maintained and all outlet boxes and devices accessible after installation of all trades.
- Expose new work in existing areas on walls in unfinished areas and concealed in new installation. Where cutting and patching is necessary, match finishes with existing surface finishes as close as possible. In existing finished areas, conceal all work.
- Schedule electrical feeders, branch wiring, signal wiring and other similar work to correspond with the sequence of work necessary to demolish, remove and install new work.
- Awardee must verify exact locations and materials before performing installation work. The PPO Supervisor assigned must give written approval for cutting of structural members and bearing walls either onsite or in the approved work schedule.

10. Where shown on drawings, work which is "existing" is assumed to be in place and suitable for the necessary alterations and additions required. Field check Items and alterations included as may be necessary for proper installation.
11. Awardee will remove existing electrical work where necessary and as directed by the PPO Supervisor assigned.

ELECTRICAL SUPPORTING DEVICES

1. Devices, including anchors, fasteners, hangers and supports supplied must be of a type designed and/or fabricated for adequate, safe and secure installation of the material and equipment and present a neat appearance. All USS fasteners should have appropriate heads.
2. Job-fabricated hangers or supports should be made from standard structural shapes and hardware.
3. Select devices using the following criteria:
 - a) The amount, weight and type of hangers, supports and enclosed materials is to be part of the load.
 - b) Devices must be suitable for shear, straight pull, vibration, impact or external load, as applicable.
 - c) Obtain determination of safe working load of devices or job-fabricated support assemblies from the published load data of the manufacturer.
 - d) Use devices with corrosion-resistant characteristics for the atmospheric conditions in south Florida.
4. Hanger and supports should be those manufactured by Unistrut, Powerstrut or Superstrut and must be galvanized at a minimum.
5. Install equipment, including switches, controllers, fixtures and transformers in order to facilitate removal or replacement without damage to equipment or fasteners.
6. Drill holes for devices under provisions of the manufacturer's recommendations, including diameter and depth. All parts of hanger and support assemblies, including all accessory hardware must be an integrated fastening system.
7. Internal and external threads of parts that are screwed or bolted together must be of the same material and applied coatings and method of application, i.e., if the threads of bolts or rods are hot-dipped galvanized, the nuts must also be the same. If they are electro-galvanized, the same applies.
8. All threads must be fully engaged.
9. All parts so intended are to be made up tight using tools intended for the purpose.
10. Use backboards for telephone terminal boards. The wall side of the backboards must be painted with an asphaltum coating when the walls are constructed of masonry.
11. Fasten all materials and equipment with approved devices. Generally fasteners, should be provided as follows:
 - a) Fasten to wood with screws, except that nails may be used on wood partitions for outlet boxes and raceways up to 1" diameter.
 - b) Fasten to masonry with threaded metal inserts, metal expansion screws, toggle bolts, powder-actuated fasteners or other approved means.

INSPECTIONS AND TESTING

1. MANDATORY periodic inspections must be coordinated with the SBBC Building Department, 2301 NW 26 Street, Building 9, Oakland Park, FL 33311, telephone (754) 321-4800, fax (754) 321-3389. Electrical inspections may include any of the following:
 - a) Temporary power
 - (1) Underground
 - (2) Transformers
 - (3) Panels
 - (4) Meter can
 - b) Duct Bank
 - (1) Conduits
 - (2) Concrete placement, in progress
 - (3) Marking tape, locator installed
 - (4) Manholes and pull boxes
 - c) Ground rough
 - (1) In progress, approximately every 25% complete
 - (2) Conduits
 - (3) Floor boxes
 - d) Grounding
 - (1) Footer steel
 - (2) Main switch gear
 - (3) ITV pole
 - (4) Lightning protection
 - (5) Light poles
 - e) Electrical service
 - (1) Meter/CT can
 - (2) Switch gear
 - (3) Transformers
 - (4) Panels
 - (5) Transfer switches
 - (6) Generators
 - (7) Disconnects
 - f) Wall Rough Inspections
 - (1) In progress, approximately every 25% complete
 - (2) Conduits, boxes and wire
 - (3) Door magnet supports
 - (4) Speaker cans
 - g) Above Ceiling Inspections
 - (1) In progress, approximately every 25% complete
 - (2) Conduits, boxes and wire
 - (3) Fire wall penetrations
 - (4) Fixture supports
 - h) Parking Lot Lighting
 - (1) Conduits
 - (2) Wire
 - (3) Pole bases, set per specifications
 - (4) Grounding
 - (5) Fuse holders
 - (6) Top of poles, head connection and air gap
 - i) Equipment Connections
 - (1) Air conditioning equipment
 - (2) Shop equipment
 - (3) Kitchen equipment
 - j) ITV Poles
 - (1) Prior to setting, top
 - (2) Conduits
 - k) Final Electrical

2. Additional inspections that may be required in addition to the required inspections, listed above, may be indicated on contract documents or be required by the Authority Having Jurisdiction. The awardee will be notified in advance of any additional inspections required.
3. Inspections are an integral part of invoicing procedures.

ACCEPTANCE TESTS AND PERFORMANCE VERIFICATION

1. Awardee must engage the services of a recognized independent electrical testing firm to perform short circuit and coordination studies, as specified.
2. Engage the services of a recognized corporately and financially independent testing firm for the purpose of performing inspections and tests on all new electrical equipment supplied in this contract and on existing equipment affected by the newly added systems and/or equipment or as specified.
3. The testing firm must provide all material, equipment, labor and technical supervision to perform such tests and inspections.
4. The purpose of the independent tests are to assure that all tested electrical equipment, is operational and within industry and manufacturers' tolerances and installed under the provisions of the design specifications and determine suitability for energization.
5. Ensure all inspections and testing are under provisions of the following codes and standards except as provided otherwise.
 - a) National Electrical Manufacturers' Association (NEMA)
 - b) American Society for Testing and Materials (ASTM)
 - c) Institute of Electrical and Electronic Engineers (IEEE)
 - d) International Electrical Testing Association (NETA) Acceptance Testing Specifications (ATS)
 - e) American National Standards Institute (ANSI) C2: National Electrical Safety Code
 - f) National Fire Protection Association (NFPA)
 - g) ANSI/National Fire Protection Association (NFPA) 70 National Electrical Code
 - h) ANSI/NFPA 70B Electrical Equipment Maintenance
 - i) NFPA 70E Electrical Safety Requirements for Employee Workplaces
 - j) ANSI/NFPA 78 Lightning Protection Code
 - k) ANSI/NFPA 101 Life Safety Code
 - l) Florida Building Code
 - m) Insulated Cable Engineers Association (ICEA)
 - n) Association of Edison Illuminating Companies (AEIC)
 - o) Occupational Safety and Health Administration (OSHA)
6. An itemized description of existing equipment to be inspected and tested is as follows:
 - a) Provide as-built one-line diagrams from the point of connection on the FPL transformer to the point of the first electrical sub-panel or disconnecting device, located outside the main electrical room throughout the facility, fed from the main electrical switchgear room indicated on the drawings. The one-line diagrams include:
 - (1) Switchgear and panel manufacturers and specifications.
 - (2) Equipment frame size.
 - (3) Overcurrent protection device rating, type and interrupting capacity.
 - (4) Conduit size and type.
 - (5) Conductor size, length and type.
 - (6) Transformer size, type and specifications
 - b) Provide plan view drawing indicating locations throughout the facility for all equipment indicated on the one-line diagram.

- c) Provide routing of all feeders shown on the one-line diagram with emphasis on the exact location of underground feeders.
 - d) Electronically locate routings with signal tracer equipment.
 - e) Provide expanded scale plan view drawings of the existing main electrical switchgear room and expanded scale drawings of the wall elevations of the main switchgear room. The drawing measurement standard shall be 3/4" equals 1'.
 - f) Ensure equipment identifications are consistent with that as shown on the one-line diagram.
 - g) Provide peak and average demand loads of all panels and major distribution equipment over a 1 week period during the normal occupied times. Indicate the test result information on the one-line diagram.
 - h) Provide testing for the following:
 - (1) All feeder cables indicated on the one-line diagram.
 - (2) All circuit breakers indicated on the one-line diagram.
 - (3) All dry type transformers indicated on the one-line diagram.
 - (4) Provide the one-line diagram and plan view equipment location drawings on standard 24 x 36" media; drawn with a computer aided design package, a compatible version of AutoCAD, minimum.
7. Partial site plan backgrounds of the facility shown on any contract documents will be available to the awardee upon request.
 8. Submit reproducible plots of the drawings in hardcopy as well as provide in digital format.
 9. Submit testing report in a bound hardcopy or CD-ROM format with all field test data in appendix form or files.
 10. The testing report must be signed and sealed by a registered Professional Engineer licensed in the State of Florida. Awardee may use any professional engineer awarded under this contract.
 11. Submit the above report and drawings within 30 days after the notice to proceed. Feeder routing information may be required prior to the submittal date to coordinate with PPO Department work schedules.
 12. Use the above existing facility report and drawings in order to develop the final as-built drawings and a report encompassing all new electrical equipment and testing, all to be submitted with the operation and maintenance manuals, disks or CD-ROMs prior to substantial completion of the project.
 13. For inspections and tests, utilize project design specifications, project design drawings and manufacturer's instruction manuals applicable to each particular apparatus.
 14. Awardee is to perform routine insulation-resistance, continuity, and rotation test for all distribution and utilization equipment prior to and in addition to tests performed by the testing firm specified herein.
 15. Apply a suitable and stable source of electrical power to each test site.
 16. Notify the testing firm when equipment becomes available for acceptance tests. Coordinate the final work with the PPO Department and the testing firm in order to expedite project scheduling. Notify the PPO Supervisor assigned prior to commencement of any testing.
 17. Awardee, in conjunction with the testing firm and the PPO Supervisor assigned, report any system, material or workmanship, which is found defective on the basis of acceptance test.
 18. Awardee must maintain a written record of all tests and, upon completion of project, assemble and certify a final test report.
 19. Safety practices and precautions are to include, but are not limited to, the following requirements:

- a) OSHA
 - b) National Safety Council's Accident Prevention Manual for Industrial Operations
 - c) Any applicable State of Florida, Broward County or SBBC safety and operating procedures
 - d) NFPA 70E
 - e) American National Standards for Personnel Protection
20. Perform all testing with the apparatus de-energized. Exceptions must be thoroughly reviewed to identify safety hazards and devise adequate safeguards.
21. Awardee should notify the testing firm to provide a designated safety representative on the project to supervise the testing operations and coordinate the schedule with the PPO Supervisor assigned.
22. The awardee and the PPO Supervisor assigned shall jointly agree on the choice of an independent testing organization, which can function as an unbiased testing authority, professionally independent of the manufacturers, supplier, and installers of equipment or systems evaluated by the testing firm. The firm must be normally engaged in the testing of electrical equipment devices, installations, and systems.
23. The agreed upon independent testing firm must:
- a) Meet OSHA criteria for accreditation of testing laboratories per, Title 29, Part 1907 or be a Full Member company of the National Electrical Testing Association (NETA).
 - b) Utilize engineers and technicians who are regularly employed by the firm for testing services.
 - c) Submit proof of the above qualifications when requested.
 - d) The lead, on-site, technician must be currently certified by NETA or the National Institute for Certification in Engineering Technologies (NICET) in electrical power distribution system testing.
 - e) Current NETA-certified testing firms for use are:
 - (1) Industrial Electrical Testing, Inc.
 - (2) Electrical Reliability Services, Inc. (formerly Electro-Test, Inc.)
 - f) Additional independent testing firms will be considered by the PPO Department upon submission of the firm's qualifications 10 days prior to final testing phase of a work project.
24. Ensure all test equipment is in good mechanical and electrical condition. Ensure the accuracy of metering in test equipment is appropriate for the test being performed but not in excess of 2% of the scale used.
25. Digital multimeters shall be RMS sensing when the variable measured contains harmonics or DC offset or any deviation from a pure sine wave.
26. The agreed upon independent testing firm must provide a test instrument calibration program which assures that all applicable test instruments are maintained within the rated accuracy, directly traceable to the National Institute of Standards and Technology. Field instruments shall be calibrated at 6-month intervals and calibration date must be visible on all test equipment.
27. The test report must include the following data:
- a) Summary of project
 - b) Listing of the equipment tested
 - c) Test results
 - d) Recommendations
 - e) Furnish copies of the complete report to the PPO Supervisor assigned.
 - f) A short-circuit analysis and coordination study is to be performed for all new electrical equipment and all existing electrical equipment shown on the as-built one-line diagram as defined above.
 - g) Provide a current and complete short-circuit study, equipment interrupting or withstand evaluation, and a protective device coordination study for the electrical distribution system.
 - (1) Ensure the study is under provisions of applicable ANSI and IEEE Standards.

- (2) Include the FPL short-circuit single and 3-phase contribution, with the X/R ratio, the resistance and reactance components of each branch impedance, motor and generator contributions, base quantities selected, and all other applicable circuit parameters.
 - (3) Calculate the short circuit momentary duties and interrupting duties on the basis of maximum available fault current at each switchgear bus, switchboard, motor control center, distribution panel board, pertinent branch circuit panel boards, and other significant locations through the system.
- h) The studies include all portions of the electrical distribution system from the normal and alternate sources of power throughout the low-voltage distribution system. Thoroughly cover a normal system operating method, alternate operation, and operations, which could result in maximum fault conditions in the study.
- i) The independent testing firm must submit the studies to the PPO Supervisor assigned prior to granting final approval of the distribution equipment shop drawings and prior to release of equipment for manufacture.
- j) Perform an equipment evaluation study to determine the adequacy of circuit breakers, controllers, surge arresters, busways, switches, and fuses by tabulating and comparing the short circuit ratings of these devices with the available fault currents. Document any problem areas or inadequacies in the equipment in the report.
- k) The testing company shall coordinate with the supplier of the new switchgear to assure all specifications of the new equipment meet or exceed the ratings required by the study at no additional cost to SBBC.
- l) Perform a protective device coordination study to select or to check the selections of power fuse rating, protective relay characteristics and settings, ratios and characteristics of associated voltage and current transformers, and low-voltage breaker trip characteristics and settings.
- m) Include all voltage classes of equipment from FPL's incoming line protective device down to and including each motor control center and panel board. Include the phase and ground overcurrent protection, as well as, settings for all other adjustable protective devices.
- n) Plot the time current characteristics of the specified protective devices on appropriate log-log paper which includes the following:
 - (1) Complete titles
 - (2) Representative one-line diagram and legends
 - (3) Associated power company's relays of fuse characteristics
 - (4) Significant motor starting characteristics
 - (5) Complete parameters of transformers
 - (6) Complete operating bands of low voltage circuit breaker trip curves
 - (7) Fuse curves
 - (8) Coordination plots shall indicate the types of protective devices selected, proposed relay taps, time dial and instantaneous trip settings, ANSI transformer magnetizing inrush and withstand curves per ANSI C37.91, cable damage curves, symmetrical and asymmetrical fault currents.
 - (9) Adhere to all requirements of the NEC.
 - (10) Maintain reasonable coordination intervals and separation of characteristic curves.
 - (11) Provide the coordination plots for phase and ground protective devices on a complete system basis.
 - (12) Use sufficient curves to clearly indicate the coordination achieved to each utility main breaker, primary feeder breaker, unit substation primary protective device rated or more.
 - (13) Provide a maximum of 8 protective devices per plot.
 - (14) Provide the selection and settings of the protective devices separately in a tabulated form using a circuit identification, IEEE device number, current transformer ratios, manufacturer, type, range of adjustment and recommended settings.
 - (15) Provide a tabulation of the recommended power fuse selection for all fuses in the system.
 - (16) Coordinate the discrepancies, problem areas or inadequacies with the equipment suppliers and resolved within the scope of the project at no additional cost to SBBC.

28. Summarize the results of the power system study in a final report and make a part of the operation and maintenance manuals and include the following sections in the report:
 - a) Description, purpose, basis written scope, and a single line diagram of the portion of the power system, which is included within the scope of study.
 - b) Tabulations of circuit breaker, fuse and other equipment ratings versus calculated short circuit duties and commentary regarding same.
 - c) Protective device time versus current coordination curves, tabulations of relay and circuit breaker trip settings, fuse selection and commentary regarding same.
 - d) Fault current tabulations including a definition of terms and a guide for interpretation.
29. Awardee's certified testing firm is responsible for the inspection, setting, testing, and calibrating the protective relays, circuit breakers, fuses and other applicable devices as recommended in the power systems study report.
30. Prior to energization, the independent testing firm shall perform visual and mechanical inspections and electrical tests on all newly-installed equipment supplied within this contract and included within the list of equipment types below. All inspections and tests shall be in accordance with the indicated test standard and section, the manufacturer's instruction manual, and the project design specifications.

<u>Equipment Type</u>	<u>NETA 1999 ATS Standard</u>
Switchgear and switchboard assemblies rated less than 600V	Section 7.1
Switchgear and switchboard assemblies rated greater than 600V	Section 7.1
Dry-type transformers rated less than 600V, equal or greater than 500 kVA	Section 7.2.1.1
Dry-type transformers rated less than 600V, greater than 500 kVA	Section 7.2.1.2
Cables rated less than 600V, equal or greater than size (specify) AWG	Section 7.3.2
Cables rated greater than 600V	Section 7.3.3
Metal-enclosed busways	Section 7.4
Switches rated less than 600V, equal or greater than (specify) amps	Section 7.5.1.1
Circuit breakers, insulated case or molded case type, rated less than 600V, equal or greater than (specify) amps	Section 7.6.1.1
Circuit breakers, draw out type, rated less than 600V	Section 7.6.1.2
Protective relays and associated transformers	Section 7.9
Meters and associated instrument transformers	Section 7.10
Grounding system	Section 7.13
Ground fault protection	Section 7.14
Related motors equal or greater than (specify) hp	Section 7.15
Motor starters rated less than 600V, equal or greater than size (specify)	Section 7.16.1.1
Motor control centers	Section 7.16.2
Batteries	Section 7.18.1
Surge arrestors rated less than 600V	Section 7.19.1
Emergency/Standby generators	Section 7.22.1
Uninterruptible Power Systems (UPS)	Section 7.22.2
Automatic Transfer Switches	Section 7.22.3

31. Upon completion of equipment acceptance testing, the independent testing firm shall perform system function tests on all new equipment supplied within this contract in the list of equipment type above and existing affected equipment to prove the correct interaction of all sensing, processing and action devices and evaluate the performance of all integral components and their functioning as a complete unit to effect the design result.
32. Any deficiencies identified by initial acceptance testing rectified by the awardee or PPO personnel and retested by the independent testing firm are at the awardee's expense until specified requirements are met. Final acceptance of the electrical power system by the PPO Department is contingent upon the satisfactory compliance of the acceptance testing.

33. After substantial completion, but not less than 60 days after final acceptance, the independent testing firm shall perform an infrared thermographic survey of all newly-installed equipment supplies within any given project and included in the list of the equipment types, below. The thermographic survey and report shall be in accordance with NETA 1999 ATS Section 9.
- a) Switchgear
 - b) Bus ducts
 - c) Transformers
 - d) Points of power connection rated equal to or greater than (specify) amp
 - e) Motor control centers
 - f) Distribution panels
 - g) Load centers

AGREEMENT

THIS AGREEMENT is made and entered into as of this ____ day of November 2017, by and between

THE SCHOOL BOARD OF BROWARD COUNTY, FLORIDA

(Hereinafter referred to as "SBBC"),
a body corporate and political subdivision of the State of Florida,
whose principal place of business is
600 Southeast Third Avenue, Fort Lauderdale, Florida 33301

and

UNIVERSAL ELECTRIC OF FLORIDA, INC.

(Hereinafter referred to as "VENDOR"),
whose principal place of business is
6784 NW 17th Ave, Fort Lauderdale, FL 33309

WHEREAS, the SBBC is in need of certain services and has selected the VENDOR to provide such services; and

WHEREAS, VENDOR is willing to provide such services to the SBBC; and

WHEREAS, the SBBC and VENDOR desire to memorialize the terms and conditions of their agreement;

NOW, THEREFORE, in consideration of the premises and of the mutual covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereby agree as follows:

ARTICLE 1 – RECITALS

1.0 **Recitals.** The parties agree that the foregoing recitals are true and correct and that such recitals are incorporated herein by reference.

ARTICLE 2 – SPECIAL CONDITIONS

2.0 **Term of Agreement.** Unless terminated earlier pursuant to Section 3.06 of this Agreement, the term of this Agreement shall commence on **November 15, 2017** and conclude on **September 30, 2020**.

2.01 **Description of Goods or Services Provided.** VENDOR shall provide the services described in Attachment A (Statement of Work/Scope of Services).

2.02 **Priority Documents:** In the event of a conflict between documents, the following priority of documents shall govern.

First: This Agreement, then;
 Second: RFP 18-098C – Electrical Services
 Third: Proposal submitted in response to the RFP by Vendor

2.03 **Cost of Services.** SBBC shall pay VENDOR for services rendered under this Agreement at the rates below:

Hourly Labor Rate	Universal Electric of Florida, Inc.
Journeyman Electrician - Hourly Rate	\$44.50
Electrician's Helper - Hourly Rate	\$30.00

Overtime & Weekend Labor Rate	Universal Electric of Florida, Inc.
Journeyman Electrician - Hourly Rate	\$58.00
Electrician's Helper - Hourly Rate	\$41.80

Holiday Labor Rate	Universal Electric of Florida, Inc.
Journeyman Electrician - Hourly Rate	\$58.00
Electrician's Helper - Hourly Rate	\$41.80

2.04 **Services.** VENDOR will provide SBBC with services as proposed in its Proposal and in compliance with this Agreement and the RFP and its Addenda:

Service Level Agreement	Response Time
Routine	After Notice to Proceed (NTP) is issued, work must start within 5 business days, or as agreed with Physical Plant Operations (PPO)
Emergency	Response Time is 2 Hours and to begin Rectification of work within 12 hours of meeting onsite Supervisor

2.05 **Inspection of VENDOR Records by SBBC:** VENDOR shall establish and maintain books, records and documents (including electronic storage media) sufficient to reflect all income and expenditures of funds provided by SBBC under this Agreement. All VENDOR Records, regardless of the form in which they are kept, shall be open to inspection and subject to audit, inspection, examination, evaluation and/or reproduction, during normal working hours, by SBBC's agent or its authorized representative to permit SBBC to evaluate, analyze and verify the satisfactory performance of the terms and conditions of this Agreement and to evaluate, analyze and verify any and all invoices, billings, payments and/or claims submitted by VENDOR or any of VENDOR'S payees pursuant to this Agreement. VENDOR Records subject to examination shall include, without limitation, those records necessary to evaluate and verify direct and indirect costs (including overhead allocations) as they may apply to costs associated with this Agreement. VENDOR Records subject to this section shall include any and all documents pertinent to the evaluation, analysis, verification and reconciliation of any and all expenditures under this Agreement without regard to funding sources.

(a) **VENDOR Records Defined.** For the purposes of this Agreement, the term "VENDOR Records" shall include, without limitation, accounting records, payroll time sheets, cancelled payroll checks, W-2 forms, written policies and procedures, computer records, disks and software, videos, photographs, executed subcontracts, subcontract files (including proposals of successful and unsuccessful bidders), original estimates, estimating worksheets, correspondence, change order files (including sufficient supporting documentation and documentation covering negotiated settlements), and any other supporting documents that would substantiate, reconcile or refute any charges and/or expenditures related to this Agreement.

(b) **Duration of Right to Inspect.** For the purpose of such audits, inspections, examinations, evaluations and/or reproductions, SBBC's agent or authorized representative shall have access to VENDOR Records from the effective date of this Agreement, for the duration of the term of this Agreement, and until the later of five (5) years after the termination of this Agreement or five (5) years after the date of final payment by SBBC to VENDOR pursuant to this Agreement.

(c) **Notice of Inspection.** SBBC's agent or its authorized representative shall provide VENDOR reasonable advance notice (not to exceed two (2) weeks) of any intended audit, inspection, examination, evaluation and or reproduction.

(d) **Audit Site Conditions.** SBBC's agent or its authorized representative shall have access to the VENDOR'S facilities and to any and all records related to this Agreement, and shall be provided adequate and appropriate work space in order to exercise the rights permitted under this section.

(e) **Failure to Permit Inspection.** Failure by VENDOR to permit audit, inspection, examination, evaluation and/or reproduction as permitted under this Section shall constitute grounds for termination of this Agreement by SBBC for cause and shall be grounds for the denial of some or all of any VENDOR claims for payment by SBBC.

(f) Overcharges and Unauthorized Charges. If an audit conducted in accordance with this Section discloses overcharges or unauthorized charges to SBBC by VENDOR in excess of two percent (2%) of the total billings under this Agreement, the actual cost of SBBC's audit shall be paid by the VENDOR. If the audit discloses billings or charges to which the VENDOR is not contractually entitled, the VENDOR shall pay said sum to SBBC within twenty (20) days of receipt of written demand under otherwise agreed to in writing by both parties.

(g) Inspection of Subcontractor's Records. VENDOR shall require any and all subcontractors, insurance agents and material suppliers (hereafter referred to as "Payees") providing services or goods with regard to this Agreement to comply with the requirements of this section by insertion of such requirements in any written subcontract. Failure by VENDOR to include such requirements in any subcontract shall constitute grounds for termination of this Agreement by SBBC for cause and shall be grounds for the exclusion of some or all of any Payee's costs from amounts payable by SBBC to VENDOR pursuant to this Agreement and such excluded costs shall become the liability of the VENDOR.

(h) Inspector General Audits. VENDOR shall comply and cooperate immediately with any inspections, reviews, investigations, or audits deemed necessary by the Florida Office of the Inspector General or by any other state or federal officials.

2.06 **Notice:** When any of the parties desire to give notice to the other, such notice must be in writing, sent by U.S. Mail, postage prepaid, addressed to the party for whom it is intended at the place last specified; the place for giving notice shall remain such until it is changed by written notice in compliance with the provisions of this paragraph. For the present, the Parties designate the following as the respective places for giving notice:

To SBBC:	Superintendent of Schools The School Board of Broward County, Florida 600 Southeast Third Avenue Fort Lauderdale, Florida 33301
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With a Copy to:	District Representative Procurement & Warehousing Services 7720 West Oakland Park Boulevard Sunrise, FL 33351
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To VENDOR:	Phillip L. Kroyman Jr. Universal Electric of Florida, Inc. 6784 NW 17th Ave Fort Lauderdale, FL 33309
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2.07 **BACKGROUND SCREENING.**

(a) For Non-Governmental Agencies. VENDOR agrees to comply with all requirements of Sections 1012.32 and 1012.465, Florida Statutes, and all of its personnel who (1) are to be permitted access to school grounds when students are present, (2) will have direct contact with students, or (3) have access or control of school funds, will successfully complete the background screening required by the referenced statutes and meet the standards established by the statutes. This background screening will be conducted by SBBC in advance of the VENDOR or its personnel providing any services under the conditions described in the previous sentence. VENDOR shall bear the cost of acquiring the background screening required by Section 1012.32, Florida Statutes, and any fee imposed by the Florida Department of Law Enforcement to maintain the fingerprints provided with respect to the VENDOR and its personnel. The parties agree that the failure of VENDOR to perform any of the duties described in this section shall constitute a material breach of this Agreement entitling SBBC to terminate immediately with no further responsibilities or duties to perform under this Agreement. VENDOR agrees to indemnify and hold harmless SBBC, its officers and employees from any liability in the form of physical or mental injury, death or property damage resulting from VENDOR'S failure to comply with the requirements of this Section or with Sections 1012.32 and 1012.465, Florida Statutes.

2.08 **Insurance Requirements.** Vendor shall comply with the following insurance requirements throughout the term of this Agreement.

- (a) General Liability. Limits not less than \$1,000,000 per occurrence for Bodily Injury/ Property Damage; \$1,000,000 General Aggregate. Limits not less than \$1,000,000 for Products/Completed Operations Aggregate.
- (b) Professional Liability/Errors & Omissions. Limit not less than \$1,000,000 per occurrence covering services provided under this Agreement.
- (c) Workers' Compensation. Florida Statutory limits in accordance with Chapter 440; Employer's Liability limits not less than \$100,000/\$100,000/\$500,000 (each accident/disease-each employee/disease-policy limit).
- (d) Auto Liability. Owned, Non-Owned and Hired Auto Liability with Bodily Injury and Property Damage limits of not less than \$1,000,000 Combined Single Limit.

If Awardee does not own any vehicles, hired and non-owned automobile liability coverage in the amount of \$1,000,000 shall be accepted. In addition, an affidavit signed by the Awardee must be furnished to SBBC indicating the following:

N/A (Awardee Name) does not own any vehicles. In the event insured acquires any vehicles throughout the term of this agreement, insured agrees to provide proof of "Any Auto" coverage effective the date of acquisition.

- (e) Acceptability of Insurance Carriers. The insurance policies shall be issued by companies qualified to do business in the State of Florida. The insurance companies must be rated at least A- VI by AM Best or Aa3 by Moody's Investor Service.
- (f) Verification of Coverage. Proof of Insurance must be furnished within 15 days of execution of this Agreement. To streamline this process, SBBC has partnered with EXIGIS RiskWorks to collect and verify insurance documentation. All certificates (and any required documents) must be received and approved by SBBC before any work commences to permit Awardee time to remedy any deficiencies. EXIGIS RiskWorks will send an email notification within three (3) business days after receipt of the award letter.
- New vendors will receive an email notification requesting account verification and insurance agent information.
 - Existing vendors will receive an email notification of current status.
- (g) Required Conditions. Liability policies must contain the following provisions. In addition, the following wording must be included on the Certificate of Insurance:
1. The School Board of Broward County, Florida, its members, officers, employees and agents are added as additional insured.
 2. All liability policies are primary of all other valid and collectable coverage maintained by the School Board of Broward County, Florida.
 3. Certificate Holder: The School Board of Broward County, Florida, c/o EXIGIS Risk Management Services, P. O. Box 4668-ECM, New York, New York 10163-4668
- (h) Cancellation of Insurance. Vendors are prohibited from providing services under this Agreement with SBBC without the minimum required insurance coverage and must notify SBBC within two business days if required insurance is cancelled.

The School Board of Broward County, Florida reserves the right to review, reject or accept any required policies of insurance, including limits, coverage's or endorsements, herein throughout the term of this agreement.

2.09 **Payment Method.** The District's preferred method of payment is via ACH electronic payments. An electronic payment can reduce processing time and administrative overhead costs for both parties, resulting in expedited payment upon invoice approval, and reduces exposure to check fraud. SBBC will not pay convenience fees, surcharges, or any additional costs for payments made by electronic payment.

If you are willing to accept payment via electronic payment as noted above, please check yes.

☐ YES ☐ NO

Please ensure that your ACH form is submitted with this agreement.

ARTICLE 3 – GENERAL CONDITIONS

3.01 **No Waiver of Sovereign Immunity.** Nothing herein is intended to serve as a waiver of sovereign immunity by any agency or political subdivision to which sovereign immunity may be applicable or of any rights or limits to liability existing under Section 768.28, Florida Statutes. This section shall survive the termination of all performance or obligations under this Agreement and shall be fully binding until such time as any proceeding brought on account of this Agreement is barred by any applicable statute of limitations.

3.02 **No Third Party Beneficiaries.** The parties expressly acknowledge that it is not their intent to create or confer any rights or obligations in or upon any third person or entity under this Agreement. None of the parties intend to directly or substantially benefit a third party by this Agreement. The parties agree that there are no third party beneficiaries to this Agreement and that no third party shall be entitled to assert a claim against any of the parties based upon this Agreement. Nothing herein shall be construed as consent by an agency or political subdivision of the State of Florida to be sued by third parties in any matter arising out of any contract.

3.03 **Independent Contractor.** The parties to this agreement shall at all times be acting in the capacity of independent contractors and not as an officer, employee or agent of one another. Neither party or its respective agents, employees, subcontractors or assignees shall represent to others that it has the authority to bind the other party unless specifically authorized in writing to do so. No right to SBBC retirement, leave benefits or any other benefits of SBBC employees shall exist as a result of the performance of any duties or responsibilities under this Agreement. SBBC shall not be responsible for social security, withholding taxes, and contributions to unemployment compensation funds or insurance for the other party or the other party's officers, employees, agents, subcontractors or assignees.

3.04 **Equal Opportunity Provision.** The parties agree that no person shall be subjected to discrimination because of age, race, color, disability, gender identity, gender expression marital status, national origin, religion, sex or sexual orientation in the performance of the parties' respective duties, responsibilities and obligations under this Agreement.

3.05 **M/WBE Commitment.** Throughout the term of the Agreement, VENDOR shall take commercially reasonable steps and use commercially reasonable resources to identify SBBC-certified M/WBE VENDORS who may be engaged to fulfill various aspects of the Agreement, including, for instance, without limitation, M/WBE VENDORS to provide office supplies, travel, printing, janitorial supplies/services, consulting services, trade services, installation and repair services, medical supplies, where feasible. VENDOR agrees to provide monthly reports and to conduct quarterly meetings with SBBC to discuss progress in meeting the SBBC's objectives regarding M/WBE participation, including dollars spent on M/WBE VENDORS for the quarter; and to continue to assess throughout the term of the Agreement new possibilities for M/WBE VENDOR participation suggested by SBBC. If at any time during the term the parties agree that it is reasonably feasible to include a specific dollar figure for M/WBE participation, the Agreement shall be amended to include the dollar participation objective.

3.06 **Termination.** This Agreement may be canceled with or without cause by SBBC during the term hereof upon thirty (30) days written notice to the other parties of its desire to terminate this Agreement. SBBC shall have no liability for any property left on SBBC's property by any party to this Agreement after the termination of this Agreement. Any party contracting with SBBC under this Agreement agrees that any of its property placed upon SBBC's facilities pursuant to this Agreement shall be removed within ten (10) business days following the termination, conclusion or cancellation of this Agreement and that any such property remaining upon SBBC's facilities after that time shall be deemed to be abandoned, title to such property shall pass to SBBC, and SBBC may use or dispose of such property as SBBC deems fit and appropriate.

3.07 **Default.** The parties agree that, in the event that either party is in default of its obligations under this Agreement, the non-defaulting party shall provide to the defaulting party (30) days written notice to cure the default. However, in the event said default cannot be cured within said thirty (30) day period and the defaulting party is diligently attempting in good faith to cure same, the time period shall be reasonably extended to allow the defaulting party additional cure time. Upon the occurrence of a default that is not cured during the applicable cure period, this Agreement may be terminated by the non-defaulting party upon thirty (30) days' notice. This remedy is not intended to be exclusive of any other remedy, and each and every such remedy shall be cumulative and shall be in addition to every other remedy now or hereafter existing at law or in equity or by statute or otherwise. No single or partial exercise by any party of any right, power, or remedy hereunder shall preclude any other or future exercise thereof. Nothing in this section shall be construed to preclude termination for convenience pursuant to Section 3.05.

3.08 **Annual Appropriation.** The performance and obligations of SBBC under this Agreement shall be contingent upon an annual budgetary appropriation by its governing body. If SBBC does not allocate funds for the payment of services or products to be provided under this Agreement, this Agreement may be terminated by SBBC at the end of the period for which funds have been allocated. SBBC shall notify the other party at the earliest possible time before such termination. No penalty shall accrue to SBBC in the event this provision is exercised, and SBBC shall not be obligated or liable for any future payments due or any damages as a result of termination under this section.

3.09 **Excess Funds.** Any party receiving funds paid by SBBC under this Agreement agrees to promptly notify SBBC of any funds erroneously received from SBBC upon the discovery of such erroneous payment or overpayment. Any such excess funds shall be refunded to SBBC.

3.10 **Public Records:** The following provisions are required by Section 119.0701, Florida Statutes, and may not be amended. VENDOR shall keep and maintain public records required by SBBC to perform the services required under this Agreement. Upon request from SBBC's custodian of public records, VENDOR shall provide SBBC with a copy of any requested public records or to allow the requested public records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes, or as otherwise provided by law. VENDOR shall ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the Agreement's term and following completion of the Agreement if VENDOR does not transfer the public records to SBBC. Upon completion of the Agreement, VENDOR shall transfer, at no cost, to SBBC all public records in possession of VENDOR or keep and maintain public records required by SBBC to perform the services required under the Agreement. If VENDOR transfer all public records to SBBC upon completion of the Agreement, VENDOR shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If VENDOR keeps and maintains public records upon completion of the Agreement, Insert Name shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to SBBC, upon request from SBBC's custodian of public records, in a format that is compatible with SBBC's information technology systems.

IF A PARTY TO THIS AGREEMENT HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO ITS DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THE AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT 754-321-1900, REQUEL.BELL@BROWARDSCHOOLS.COM, RISK MANAGEMENT DEPARTMENT, PUBLIC RECORDS DIVISION, 600 SOUTHEAST THIRD AVENUE, FORT LAUDERDALE, FLORIDA 33301.

3.11 **Student Records.** Notwithstanding any provision to the contrary within this Agreement, any party contracting with SBBC under this Agreement shall fully comply with the requirements of Sections 1002.22 and 1002.221, Florida Statutes; FERPA, and any other state or federal law or regulation regarding the confidentiality of student information and records. Each such party agrees, for itself, its officers, employees, agents, representatives, contractors or subcontractors, to fully indemnify and hold harmless SBBC and its officers and employees for any violation of this section, including, without limitation, defending SBBC and its officers and employees against any complaint, administrative or judicial proceeding, payment of any penalty imposed upon SBBC, or payment of any and all costs, damages, judgments or losses incurred by or imposed upon SBBC arising out of a breach of this covenant by the party, or an officer, employee, agent, representative, contractor, or sub-contractor of the party to the extent that the party or an officer, employee, agent, representative, contractor, or sub-contractor of the party shall

either intentionally or negligently violate the provisions of this section or of Sections 1002.22 and/or 1002.221, Florida Statutes.

3.12 **Compliance with Laws.** Each party shall comply with all applicable federal state and local laws, SBBC policies codes, rules and regulations in performing its duties, responsibilities and obligations pursuant to this Agreement.

3.13 **Place of Performance.** All obligations of SBBC under the terms of this Agreement are reasonably susceptible of being performed in Broward County, Florida and shall be payable and performable in Broward County, Florida.

3.14 **Governing Law and Venue.** This Agreement shall be interpreted and construed in accordance with and governed by the laws of the State of Florida. Any controversies or legal problems arising out of this Agreement and any action involving the enforcement or interpretation of any rights hereunder shall be submitted to the jurisdiction of the State courts of the Seventeenth Judicial Circuit of Broward County, Florida.

3.15 **Entirety of Agreement.** This document incorporates and includes all prior negotiations, correspondence, conversations, agreements and understandings applicable to the matters contained herein and the parties agree that there are no commitments, agreements or understandings concerning the subject matter of this Agreement that are not contained in this document. Accordingly, the parties agree that no deviation from the terms hereof shall be predicated upon any prior representations or agreements, whether oral or written.

3.16 **Binding Effect.** This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

3.17 **Assignment.** Neither this Agreement nor any interest herein may be assigned, transferred or encumbered by any party without the prior written consent of the other party. There shall be no partial assignments of this Agreement including, without limitation, the partial assignment of any right to receive payments from SBBC.

3.18 **Incorporation by Reference.** **Attachment A**, attached hereto and referenced herein shall be deemed to be incorporated into this Agreement by reference.

3.19 **Captions.** The captions, section designations, section numbers, article numbers, titles and headings appearing in this Agreement are inserted only as a matter of convenience, have no substantive meaning, and in no way define, limit, construe or describe the scope or intent of such articles or sections of this Agreement, nor in any way affect this Agreement and shall not be construed to create a conflict with the provisions of this Agreement.

3.20 **Severability.** In the event that any one or more of the sections, paragraphs, sentences, clauses or provisions contained in this Agreement is held by a court of competent jurisdiction to be invalid, illegal, unlawful, unenforceable or void in any respect, such shall not affect the remaining portions of this Agreement and the same shall remain in full force and effect as if such invalid, illegal, unlawful, unenforceable or void sections, paragraphs, sentences, clauses or provisions had never been included herein.

3.21 **Preparation of Agreement.** The parties acknowledge that they have sought and obtained whatever competent advice and counsel as was necessary for them to form a full and complete understanding of all rights and obligations herein and that the preparation of this Agreement has been their joint effort. The language agreed to herein expresses their mutual intent and the resulting document shall not, solely as a matter of judicial construction, be construed more severely against one of the parties than the other.

3.22 **Amendments.** No modification, amendment, or alteration in the terms or conditions contained herein shall be effective unless contained in a written document prepared with the same or similar formality as this Agreement and executed by each party hereto.

3.23 **Waiver.** The parties agree that each requirement, duty and obligation set forth herein is substantial and important to the formation of this Agreement and, therefore, is a material term hereof. Any party's failure to enforce any provision of this Agreement shall not be deemed a waiver of such provision or modification of this Agreement unless the waiver is in writing and signed by the party waiving such provision. A written waiver shall only be effective as to the specific instance for which it is obtained and shall not be deemed a continuing or future waiver.

3.24 **Force Majeure.** Neither party shall be obligated to perform any duty, requirement or obligation under this Agreement if such performance is prevented by fire, hurricane, earthquake, explosion, wars, sabotage, accident, flood, acts of God, strikes, or other labor disputes, riot or civil commotions, or by reason of any other matter or condition beyond the control of either party, and which cannot be overcome by reasonable diligence and without unusual expense ("Force Majeure"). In no event shall a lack of funds on the part of either party be deemed Force Majeure.

3.25 **Survival.** All representations and warranties made herein, indemnification obligations, obligations to reimburse SBBC, obligations to maintain and allow inspection and audit of records and property, obligations to maintain the confidentiality of records, reporting requirements, and obligations to return public funds shall survive the termination of this Agreement.

3.26 **Contract Administration.** SBBC has delegated authority to the Superintendent of Schools or his/her designee to take any actions necessary to implement and administer this Agreement.

3.27 **Liability.** This section shall survive the termination of all performance or obligations under this Agreement and shall be fully binding until such time as any proceeding brought on account of this Agreement is barred by any applicable statute of limitations.

A. By SBBC: SBBC agrees to be fully responsible up to the limits of Section 768.28, Florida Statutes, for its acts of negligence, or its employees' acts of negligence when acting within the scope of their employment and agrees to be liable for any damages resulting from said negligence.

B. By **VENDOR**: **VENDOR** agrees to indemnify, hold harmless and defend **SBBC**, its agents, servants and employees from any and all claims, judgments, costs, and expenses including, but not limited to, reasonable attorney's fees, reasonable investigative and discovery costs, court costs and all other sums which **SBBC**, its agents, servants and employees may pay or become obligated to pay on account of any, all and every claim or demand, or assertion of liability, or any claim or action founded thereon, arising or alleged to have arisen out of the products, goods or services furnished by **VENDOR**, its agents, servants or employees; the equipment of **VENDOR**, its agents, servants or employees while such equipment is on premises owned or controlled by **SBBC**; or the negligence of **VENDOR** or the negligence of **VENDOR'S** agents when acting within the scope of their employment, whether such claims, judgments, costs and expenses be for damages, damage to property including **SBBC's** property, and injury or death of any person whether employed by **VENDOR**, **SBBC** or otherwise.

3.28 **Authority.** Each person signing this Agreement on behalf of either party individually warrants that he or she has full legal power to execute this Agreement on behalf of the party for whom he or she is signing, and to bind and obligate such party with respect to all provisions contained in this Agreement.

IN WITNESS WHEREOF, the Parties hereto have made and executed this Agreement on the date first above written.

FOR SBBC

(Corporate Seal)

THE SCHOOL BOARD OF BROWARD
COUNTY, FLORIDA

ATTEST:

By _____
Abby M. Freedman, Chair

Robert W. Runcie, Superintendent of Schools

Approved as to Form and Legal Content:

Janette M. Smith

Digitally signed by Janette M.

Smith

Date: 2017.10.26 13:44:46 -04'00'

Office of the General Counsel

FOR VENDOR

(Corporate Seal)

ATTEST:

INSERT VENDOR NAME

By

INSERT OFFICER NAME/ TITLE

, Secretary

-or-

Witness

Witness

The Following Notarization is Required for Every Agreement Without Regard to Whether the Party Chose to Use a Secretary's Attestation or Two (2) Witnesses.

STATE OF FLORIDA

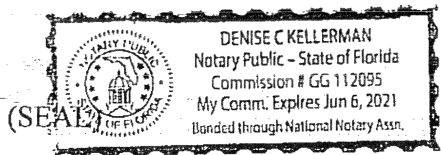
COUNTY OF Broward

The foregoing instrument was acknowledged before me this 25th day of OCTOBER, 2017 by PHILIP L. KROYMAN JR. of UNIVERSAL ELECTRIC OF FL. INC., on behalf of the corporation/agency.

Name of Corporation or Agency

He/She is personally known to me or produced identification and did not first take an oath. as President Type of Identification

My Commission Expires:



Signature - Notary Public

Denise Kellerman
Printed Name of Notary

GG 112095
Notary's Commission No.

ATTACHMENT A

STATEMENT OF WORK/SCOPE OF SERVICES

BASIC PARAMETERS

1. Awardee must provide a separate quote for each specific project / location. Blanket Purchase Order's for multiple locations and/or projects will not be allowed. All quotes must show the unit prices for labor, material equipment and other costs that may apply. The supplier's invoice for all material must be included with awardees' invoice for payment. In the case of an emergency, the Physical Plant Operations (PPO) Supervisor may waive this requirement.
2. Awardee must be licensed per Special Condition 1 and be able to perform any type of electrical installation, as appropriate, including but not limited to wiring, repair, maintenance and operations services as documented and required by the PPO Supervisor assigned and be in compliance with these Bid Specifications which are based upon the Guide Specification of the Facilities and Construction Division of the School Board of Broward County, Florida.
3. Awardee must provide all supervision, labor, equipment and materials, where required, for all work envisioned and specified in this bid for electrical service without restriction throughout the District. Blueprints will be furnished to the awardee by the PPO Supervisor assigned. Travel time to and from work projects will NOT be considered for reimbursement on any project.
4. A journeyman electrician must have completed a State of Florida-registered electrical apprenticeship program and possess either a State of Florida journeyman electrician's license or the equivalent County-issued Certificate of Competency, as appropriate. All awardee journeyman electricians must be in compliance with this provision and is subject to review at any time during the evaluation process of the bid prior to award or during the contract period.
5. All schedules and the necessary arrangements to implement the scope of work projects must be made with the review and approval of the PPO Supervisor assigned. An awardee representative is required to attend a pre-job conference prior to the commencement of work at each project. The PPO Department shall give the awardee a minimum of 48 hours notification of the date and time of each conference. ATTENDANCE IS MANDATORY, unless specifically waived by the PPO Supervisor assigned. Failure to attend may result in awardee being held in default of contract. All information specific to the project including completion schedules will be discussed at the conference. Failure to adhere to the specifics of the project discussed at this conference may result in the awardee being held in default of contract.
6. The majority of the work will be done during normal SBBC business hours, 7 am to 4 pm, weekdays. Nonetheless, there may be emergencies which require projects to be completed after normal SBBC business hours, on weekends or during holidays. In emergency situations, the requirement to provide a written estimate may be waived. Awardee must be available by phone 24 hours per day, 7 days per week in the event of such an emergency request. Once contacted, the awardee shall meet with the PPO Supervisor assigned and review the scope of the work required. When the awardee is issued an emergency request for repair or service, the awardee shall respond within 24 hours of receiving an "Emergency Notice to Proceed." Failure to respond in a timely manner to SBBC requests for service may constitute grounds for termination of this contract.
7. Awardees are to give prompt and efficient service to any SBBC location at the request of the PPO Department within five business days by mutual approval of the written project schedule by the awardee and the PPO Supervisor assigned.
8. All requested work must be completed within the timeframe and the written project schedule agreed upon between the awardee and the PPO Supervisor assigned. Additional time may be approved, if necessary, when requested, in writing, by the awardee.

9. Each project must be completed as quickly as reasonably possible, not to exceed the number of calendar days set forth in the "Notice to Proceed." The start date of each project shall be the date that the "Notice to Proceed" is issued. The completion date shall be the date mutually agreed upon between the PPO Supervisor assigned and the awardee prior to issuing the "Notice to Proceed." SBBC reserves the right to enforce \$150.00 per calendar day penalty for liquidated damages to be paid to SBBC by the awardee or deducted from the final invoice. Liquidated damages, if enforced, will begin the day after the agreed completion date and continue until the project is substantially complete.
10. Awardee shall check for proper voltages for each job assigned. All material shall bear Underwriters Laboratories, Inc. (UL) labels.
11. Awardee will be responsible for scheduling timely rough, in progress and final inspections with SBBC Building Department (BCI) for all new installations throughout the District. Awardee must provide copies of all approved inspection reports to the PPO Department. Invoices will not be approved for payment without completed, signed and approved inspection reports attached to the invoices.
12. All electrical work assigned MUST be tested and in working order PRIOR to the completion of the work required.
13. Awardees are responsible for contacting Sunshine State One Call of Florida at (800) 432-4770, www.callsunshine.com, for member public utility locations and must repair any and all member public damaged utility or service lines damaged by their excavation immediately upon notice of such damage. Failure to respond immediately for such repairs will bring back charges to the awardee for any and all cost for SBBC to repair damaged lines. Awardee must have the necessary materials and equipment to locate conduit and wires buried in the ground. All wiring installations in PVC conduit shall be buried at least 18" underground or as required by Code. All excavation for installation must be included in the total cost quoted for jobs specified. SBBC site representative will work with awardees when it is necessary to identify SBBC-owned underground service lines, repairs to which will NOT be the responsibility of awardee(s). The awardee(s) will give a one (1) week notice for SBBC to mark SBBC-owned underground services and lines. The awardee(s) shall take necessary precautions to limit the possibility of damaging existing installations, damage to any obvious, identified and/or marked items by the awardee(s) will be the responsibility of the awardee(s).
14. Awardee is responsible for providing a safe work area, proper barricades, warning signage, caution tape, temporary fencing and so forth to insure that awardee's personnel, students and faculty are not subject to safety violations. At no time should there be unsupervised, exposed and/or energized electrical wiring, panels or equipment which would be accessible to the public. Overhead work repairs and installation projects must not be made or installed in an unsecured work area or while unauthorized persons are below. All excavation drilling areas must be effectively barricaded and/or fenced off to safely prohibit entry into the work area and the fenced off areas must be maintained until the completion of the project.
15. Awardee will also be responsible for the prompt clean-up of job sites and the removal of all debris that is a result or part of all related work. All excavation or drilling areas must be backfilled with clean fill to the current or surrounding landscape conditions within five business days after completion of the assigned project.
16. Awardee MAY be requested to replace damaged materials in electrical projects as directed by the PPO Department at the stated hourly labor rate. Replacement of electrical materials MAY be purchased under this contract at the discretion of the PPO Department on a strictly cost-plus basis. These materials purchased under this contract must be verified by the submission of an itemized list of materials proposed for purchase from the identified source, each unit price by cost, the, total price and the awardee's cost-plus mark-up. Any remaining materials, after project completion, become the property of SBBC. The PPO Department is under NO OBLIGATION to purchase materials under this contract if the electrical supplies can be purchased on other SBBC contracts.

GENERAL ELECTRICAL SPECIFICATIONS

1. Awardee must provide all labor, materials, necessary equipment and services to provide a complete electrical system as indicated on drawings, as specified herein or both, except the items specifically indicated as "NIC ITEMS" and described as follows:
 - a) Temporary electrical service for all trades.
 - b) Complete distribution system for lighting, electrical power, wiring devices, equipment, controls and panel boards as indicated or directed by the PPO Supervisor assigned.
 - c) A complete raceway system.
 - d) Transformer vault, bus stabs, underground duct bank, grounding, etc., as required for primary and secondary power system under the provisions of Florida Power and Light Company (FPL).
 - e) Empty raceway system and cabinets for the telephone system as indicated on drawings.
 - f) A complete clock & bell system and programming same.
 - g) A complete SBBC-owned instructional television system (ITV).
 - h) A complete intercom/paging system.
 - i) All conduit, outlets and junction boxes for a security system.
 - j) Wiring and hook-up of emergency standby generator and transfer switches.
 - k) Fuel transfer pumps, day tank, muffler, battery charger, control panel and related equipment.
 - l) Normal and emergency lighting system and luminaries.
 - m) Interior and exterior light and control systems.
 - n) Conduit and wiring system for A/C electrical controls.
 - o) Marking of all junction boxes with system voltage inside and outside of box.
 - p) Connect all equipment furnished by the PPO Supervisor assigned and provide caps, cords and other materials required to complete the installation.
 - q) Painting of electrical and special equipment.
 - r) Furnishing and installing necessary access panels.
 - s) Complete electrical testing.
 - t) All motors, unless otherwise specified, are to be furnished and set in place.
 - u) Temperature control equipment: furnished, installed, wired and tested.
2. Awardee(s) are to follow as closely as possible, the drawings and risers indicated in diagrammatic form the arrangements desired for the equipment fixtures, principal apparatus, kitchen equipment and so on. Awardee must include any additional conduit, boxes and wiring due to structural or other obstructions at no extra cost to SBBC.
3. The connection of all equipment even when furnished by the PPO Department.
4. Control wiring under the supervision of the PPO Supervisor assigned where required and install all associated equipment and wiring necessary for a complete system including motor starters, controllers, and control devices.
5. Wire all electrical equipment under this contract. Extras are not permissible for failure on the awardee to comply with Bid Specifications or the parameters of any project.
6. Install HVAC, plumbing and mechanical equipment power and control connections. The PPO Department may provide the following materials at their option or purchase from awardee on a discount from manufacturers' list prices:
 - a) Control wiring diagrams
 - b) Motor Starters
 - c) Contactors
 - d) Thermostats
 - e) Firestats (each fan and air handler unit (AHU))
 - f) Damper motors
 - g) Control devices
 - h) Safety switches

- i) Junction boxes
 - j) Wiring
 - k) Materials for the connection of all equipment and controls
 - l) Provide cord sets as required
 - m) Additional materials and equipment as assigned by the PPO Supervisor assigned.
7. Awardee must verify outlet locations prior to installation and connection.
8. The latest editions of the following Codes and Standards are considered the minimum requirement for materials, workmanship and safety unless they are specified herein:
- a) The Florida Building Code, or as amended from time to time and the following standards as adopted by the Code
 - b) National Electrical Code (NEC)
 - c) Life Safety Code, National Fire Protection Association, NFPA-101
 - d) Rule 4A-48, Florida Administrative Code (FAC)
 - e) The Americans with Disabilities Act (ADA)
 - f) Where materials and equipment are available under the continuing inspection and laboring service of UL, furnish materials and equipment bearing such labels
 - g) Public Law 91-596 Occupational Safety and Health Act
 - h) Ordinances of the local authorities having jurisdiction
 - i) ANSI A117.1
 - j) NFPA 70E Electrical Safety in the Work Place
9. Where equipment supports are on concrete construction, care must be taken not to weaken concrete or penetrate waterproofing. Obtain prior approval from the PPO Supervisor assigned for installation method of structural steel required to frame into building structural members for the support of the equipment and conduit. Welding will be permitted only when approved by the PPO Department. Coordinate dimensions of concrete housekeeping pads with requirements for equipment supplied.
10. Submit within 30 days of the "Notice to Proceed," four copies indexed, loose-leaf or bound copies of shop and detail drawings, factory-certified prints and material lists for items included by not limited to those listed below:
- a) Switchboards and panelboards
 - b) Disconnect switches, motor starters, fuses, time clocks, contactors and relays
 - c) Transformers
 - d) Terminal cabinets
 - e) Wiring devices and plates
 - f) Luminaires, dimmers and accessories
 - g) Conduit, fittings, supports, pull boxes, wire and cable
 - h) Clock and program system
 - i) Fire alarm system
 - j) ITV system
 - k) Intercom/paging system
 - l) Emergency generator and transfer switch system
11. Field painting of exposed conduit and hangers as specified and directed by the PPO Supervisor assigned. Clean all surfaces and hanger rods free of grease, scale, rust and other foreign matter ready for painting. Touch up all factory-finishes marred in construction with factory touch-up kits.
12. Awardee is responsible for thoroughly reviewing of all plans and specifications affecting any electrical project assigned. Awardee must coordinate with the PPO Supervisor assigned before the commencement of work so that routing of systems and clearances are adequate. Notify the PPO Supervisor assigned concerning any conflicts or deviations immediately. Do not proceed until approval is granted by the PPO Department.

13. Special attention given but not to be limited to the following systems:
 - a) Conduit and raceway for the telephone system
 - b) HVAC ductwork, piping, condensate and waste
 - c) Fire sprinkler system, waste and vent lines, hot and cold water lines and rain water leaders
14. Coordinate work with SBBC utility providers such as FPL, AT&T and municipal water agencies.
15. Awardee shall submit verification of compliance with OSHA requirements for Lock Out/Tag Out procedures.
16. All hardware and accessory fittings shall be U.S. Standard (USS) of a type designed, intended or appropriate for the use and complement the items with which they are used, and have corrosion protection suitable for the south Florida conditions in which they are installed.
17. Ensure that equipment of a similar nature is identical, i.e., all panelboards of the same manufacturer and style
18. Awardee will be responsible for storing and protecting all materials from injury prior to installation. Do not store materials directly on the ground or floor and keep as clean and dry as possible and free from damage or deteriorating elements. NEVER install damaged materials.
19. Provide ground fault protection in all temporary service.
20. Factory paint or finish all enclosures, panels, cabinets, relays, safety switches, fixtures, gutters and other exposed equipment or accessories except as indicated otherwise. Group mounted items should be of the similar finish and color.
21. Tag all conductors and identify major conduits in or at wire-ways, panels, pull boxes, switchboards, motor controllers, cabinets and similar items to assist in future circuit tracing. Conductor tags must be non-conductive. Identify all circuits and equipment to correspond with the plans and specifications. Use paint markers, or other approved methods except as indicated otherwise. All junction box covers should be labeled on both sides indicating type of system and voltage. All gutters, terminal cabinets, starters, transformers, panels and disconnects must be identified with stencil labels indicating type system, voltage and equipment being serviced. Labeling of all panel boards, junction boxes, pull boxes, outlets, and utilization equipment to include: panel, disconnect or equipment designation (if necessary). The panel, disconnect, or equipment from where it is fed, circuit designation, and location of the feeding panel (FISH number), disconnect or equipment.
22. Test that all circuits and devices are in good condition to operate and that each item of equipment will function not less than five times. Test all circuits for grounds, shorts and continuity. Provide all materials and equipment necessary for testing.
23. Demonstrate the essential features of the following electrical systems upon completion of satisfactory testing. The demonstration will be held in the presence of the PPO Supervisor assigned to show junction boxes, locations and relationships to the plans. Electrical systems are detailed in General Electrical Specification 1, above. In addition, the awardee will demonstrate how to "start-stop," reset, replace and emergency procedures, one system at a time. Submit a certificate of demonstration to the PPO Supervisor assigned for final acceptance.
24. Upon completion, the awardee must:
 - a) Coordinate final inspection with UBCI.
 - b) Identify all cables in junction boxes with name of equipment served.
 - c) Furnish warranty per Special Condition 18. Inspection and acceptance of the project by SBBC does not relieve the awardee of compliance with the warranty provisions.
 - d) Test finished project equipment and materials in the presence of the PPO Supervisor assigned and issue 4 copies of the certificate of test for all equipment in the project.

AS-BUILT DRAWINGS, TESTING AND MAINTENANCE INSTRUCTIONS

Substantial completion of the final inspection will not be held unless the following specifications are in full compliance.

1. Provide two indexed, bound copies of all maintenance manuals, wiring diagrams, control panel interconnect diagrams and the individual module wiring diagrams supplied with the control panel including all proprietary components and information. This submittal will be followed by a final revised submittal showing field adjustment, when required.
2. Provide upon completion of the system, a complete set of reproducible “as-builts” on CD-ROM in a compatible version of AutoCAD, showing installed, color-coded wiring, wire tag notations for exact locations of all installed equipment, specified interconnections between all equipment and internal wiring of the equipment. The manufacturer’s representative shall provide a base drawing to the awardee.
3. The PPO does not have access to AutoCAD files and cannot provide these files to the awardee in order for the awardee to provide “as-built” records. AutoCAD documents are maintained by the SBBC Facilities and Construction Management Division.
4. Provide upon completion of the system, a complete, simple, comprehensive, step-by-step, set of testing instructions giving recommended and required testing frequency of all equipment, methods for testing each individual piece of equipment, complete trouble-shooting manuals explaining what might be wrong if a certain malfunction occurs and explaining how to test the primary internal parts of each piece of equipment.
5. Maintenance instructions must be provide the following information:
 - a) Instructions on replacing any components of the system, including internal parts.
 - b) Instructions on periodic cleaning and adjustment of equipment with a schedule of these functions.
 - c) A complete list of all equipment and components including the address and phone number of both the manufacturer and local supplier of each item.
 - d) Provide user operating instructions that are prominently displayed on the cabinet front or on a separate sheet located next to the control unit in accordance with UL 864.
 - e) Provide to SBBC all system manufacturer’s software and all field configuration programming information necessary to perform all possible future servicing, testing, repairs, systems and component diagnostics and improvements. Include information on the availability of system software upgrades, regularly updated diagnostic tools and technical bulletins dealing with the particular system installed.

BASIC MATERIALS, METHODS AND QUALITY ASSURANCE

1. The design criteria are diagrammatic drawings. Due to the small scale, awardee will not show in detail all required features of the project. In order to supplement the drawings, the awardee’s knowledge, trade experience, Codes and standards and the instructions of the PPO Department will be necessary for all items which are required to properly execute the full intent and meaning shall be considered as being shown and/or specified. The PPO Supervisor assigned reserves the right to make reasonable changes in outlet locations prior to roughing-in.
2. Documentation that may be required and submitted at the request of the PPO Department is:
 - a) Schematics and interconnection diagrams
 - b) Detail and shop drawings
 - c) Assembly, operation and maintenance drawings and manuals
 - d) Manufacturer’s data
3. Keep all openings closed with plugs or caps to prevent intrusion of foreign matter.

4. Lay out openings for the PPO Department, as required. The awardee must provide all openings and close same.
5. Manufacturer's nameplates must be in a visible location for each major component of equipment with manufacturers name, address, model number and rating.
6. Sequenced scheduling must be determined between the awardee and the PPO Supervisor assigned.
 - a) Coordinate adequate clearances for installation and maintenance of equipment as well as the physical and electrical requirements of items and/or any equipment requiring connections.
 - b) Perform all necessary work to join with or receive project work, provide electrical service, extend conduits and make all necessary connections, as required, to prevent interruptions of service in any area.
 - c) Provide and extend as necessary, temporary electrical service for timely completion of project schedule
7. When required, install equipment provided to meet requirements of each respective section of the project sequence as indicated and suitable for installation shown.
8. Where two or more units of same equipment class are furnished, provide similar installation methods as practicable.
9. Install raceways and enclosures for conductors throughout all systems as shown and specified. Install equipment and devices appropriate for the environment and service intended, which are not constructed with housings for mounting and enclosing all live parts.
10. Pitch all excavation ducts away from the buildings.
11. Mount equipment, conduit, duct and raceway on, or suspended from, building structure as indicated and specified.
 - a) Install telephone mounting boards. Telephone equipment backboards shall be manufactured of exterior grade plywood, 3/4" minimum thickness, finished with one coat of primer and two coats of flat black alkyd-based paint. Galvanized Unistrut or equivalent for mounting of electrical equipment and any related materials would be preferred.
12. Assure adequate clearance in front equipment per NEC 110-26.
13. Locate with reference to finished buildings the installation of pull boxes, wire ways and other items requiring inspection, removal or replacement.
14. Retouch or refinish any shop coat damaged in delivery or during construction. DO NOT paint over any nameplate, label or tag for any equipment.
15. As a normal rule, the awardee and the PPO Supervisor assigned will coordinate with the existing facilities operation concerning alterations that affect any facility operations. Project work shall not start until all materials, supplies, equipment, labor, etc. are available so that continuous progress will be made to complete work in the shortest time possible. Project work that interferes with the existing facilities will be modified, suspended or rescheduled upon request of the PPO Supervisor assigned. Project work will be rescheduled at a time as required without additional cost to SBBC, unless such time involves overtime. In this case additional payment will be made as otherwise provided for herein.
16. The ownership of items removed during project work remains the property of SBBC unless a request is made by the PPO Supervisor assigned for removal and disposal.

INTERIOR FINISHING AND WIRING DEVICES

1. In general, the interior finish work includes a specific number of completely connected telephones, receptacles, and light switches, television, intercom and data outlets as shown on the drawings.
2. Electrical interior finish work is understood to start after all other electrical work in the area concerned has been completed and is to be performed in coordination and cooperation with other trades and/or PPO Department personnel that may be performing similar interior finish work during the same time period.
3. Apply the total amount of individual interior finish items over the building as a whole, without restriction, at the discretion of the PPO Supervisor assigned.
4. Arrange the specified number of receptacle outlets to be distributed over the branch circuits available such that no circuit will serve more than six outlets with no restriction placed on a minimum number of outlets, which may be assigned to an available branch circuit.
5. The maximum load for a 20-amp, 120V branch circuit is 1800W. 1920W for 20-amp circuits is allowed per the NEC. And figured on some existing engineered drawings.
6. Installation of wall receptacle outlets must include conduit in the wall, outlet box, and receptacle and completely connecting up wiring to the next fitting and back to the junction box located in the hung ceiling under provisions of the interior finish layout. The Installation of wall telephone outlets will be the same without the requirements of wiring.
7. Outlets should be complete with device plates, receptacles, both support and conduit fittings.
8. Installation of a wall local switch shall include the wall mounted device plate, outlet box, single pole switch, conduit, and related requirements in order to control a group of lighting fixtures under provisions of the interior finish drawings. Work includes the necessary switch and hot leg extensions and connections to accomplish the control desired.

GROUNDING

1. Install complete grounding system in accordance with NEC 250.
2. Measure ground grid resistance with earth test megger and install additional ground rods and conductors as required until resistance to ground does not exceed 5 ohms.
3. Ground bus shall be copper and be a minimum of 4" wide x 1/4" thick X length to allow for future connections, , mounted on insulating standoffs, complete with lugs for connecting grounding cables.
4. Ground rods shall be copper clad steel, 3/4" in diameter x 10' long, minimum.
5. All electrical systems shall have a complete equipment grounding system in accordance with the SBBC Design Specifications, modified as indicated and/or specified and the system must comply with NFPA 70, NEC Article 250.
6. The basic grounding system shall utilize the reinforcing bars in the footings of the building supplemented by ground rods and a connection to a cold water pipe where required to meet the test requirements specified.
7. Provide, in conduit, a green insulated copper ground conductor as required to the main metallic water service entrance and connect to the supply side of same by means of ground clamps with the conduit: bonded to the ground conductor at each end.

8. Low voltage system neutrals shall be grounded at the related transformers to the feeder ground and to the nearest cold water line all in accordance with NEC.
9. Ground conductors, connections and straps must be provided in accordance with NEC.
 - a) Equipment grounding conductors must be provided with green insulation, the same type as the associated phase conductors.
 - b) The related feeder grounding conductors are to be connected to the grounding bar with compression indent-type connectors or as specified.
10. A feeder serving several panel boards must be provided with a continuous grounding conductor which is connected to each related cabinet grounding bar.
11. Low voltage distribution systems must be provided with a separate green insulated equipment-grounding conductor for each three-phase or single-phase feeder. The required grounding conductor shall be installed in the common conduit with the related phase conductors. Where there are parallel feeders installed in more than one raceway, provide each raceway with a green insulated equipment ground conductor.
12. All branch circuits required for lighting and receptacles shall consist of phase, neutral and grounding conductors installed in common metallic conduits. Provide flexible metallic conduit equipment connections utilized in conjunction with the branch circuits with approved grounding terminals at each end. Provide all circuits required for special equipment and all branch circuits that are installed in nonmetallic conduits with a separate grounding conductor.
13. Provide in panel boards and other electrical equipment the number and size of pressure connectors on all equipment grounding bars required for the termination of the equipment grounding conductors. In addition to the active circuits, provide pressure connectors for all spares and spaces.
14. Provide each electrical expansion fitting with a flexible copper ground securely bonded by approved grounding straps on each end of the fitting.
15. Provide ground conductor from equipment ground bus in motor control center through conduit and flexible metallic conduit to ground terminal in connection box mounted on motor. Where motor has separate starter and disconnect device, the ground conductor originates at the ground bar in the panel board or switchboard supplying these motors and be bonded to each starter and disconnect device enclosure.
16. Where electric devices such as electric heaters are installed in air ducts, provide a green insulated equipment ground conductor size based on the rating of the over current device supplying the unit. Bond the conductor to each unit air duct, and to the ground in the panel board.
17. For conduit ground continuity, locknuts, bushings, joiners and similar conduit fittings: made up sufficiently tight to assure a continuous and permanent metal-to-metal flow throughout each system. Where conduits terminate without mechanical connection to a metallic housing of electrical equipment, provide each conduit with a bonding bushing and each bonding bushing connected with the equipment grounding conductor and connected to the ground bus in the electrical equipment.
18. Provide an unspliced main bonding jumper to connect the equipment grounding conductor and the service equipment enclosure to the grounded conductor of the system within the service equipment or within the service conductor enclosure.
19. Communication grounding requirements are:
 - a. Telephone: Provide 1 no. 6 from main ground bus to ground bus on telephone equipment board
 - b. Television distribution system: Provide 1 no. 8 to nearest ground bus
 - c. Public address system: Provide 1 no. 8 to the nearest ground bus
 - d. Computer networking: Provide 1 no. 6 to the nearest ground bus.

20. Installation requirements:
 - a. End-to-end luminaires shall be continuously bonded with the grounding equipment conductor.
 - b. Grounding contacts of receptacles shall connect to a system-grounding conductor, NOT the system neutral, by a minimum no. 12 AWG stranded copper wire. The resistance between the contacts and solid earth ground must not exceed 3 ohms.
 - c. Bond all non-current carrying metal parts. Make equipment and bus connections with suitable lugs or clamps. Cadweld all wire-to-ground rod joints.
 - d. Bond all conduits stubbing under switchboards, transformer and similar locations using bonding bushings.
 - e. Use PVC for sleeving grounding conductors, except that where sleeves are subject to extreme injury use rigid metal conduit bonded at both ends
 - f. The TV antenna ground wire shall be connected to the main grounding system
 - g. Paint buried joints with red glyptal
 - h. Ground all transformer secondaries per NEC 250 unless shown otherwise on the drawings
 - i. The resistance to ground must be tested and logged by the awardee in the presence of the PPO Supervisor assigned in order to assure less than 5 ohms resistance. Testing will be conducted per NEC and Institute of Electrical and Electronic Engineers (IEEE) 142 recommended practices after the complete system has been fully grounded.
 - j. For lighting, provide a ground rod driven near pole bases and cadweld a no. 8 THWN wire to the top of the rod and extend the wire to a grounding lug in the base and bond to all metal parts. Provide an insulated copper conductor, sized per NEC 250-95, in each power or lighting raceway.

ALTERATIONS AND ADDITIONS TO EXISTING WORK

1. These specifications are in addition to the requirements of building modifications as specified in this document. Please note that existing buildings may or may not be occupied during construction.
2. Provide all additions and alterations to existing work required to maintain a complete and proper electrical installation. Relocate existing electrical work for other trades required to complete the work and to maintain building in service in compliance with the schedule set between the awardee and the PPO Department.
3. Relocate luminaires, pull boxes, electrical ducts and other related items, to permit the installation of new equipment.
4. Install new conduits, conductors, wiring and wiring devices in order to maintain temporary and permanent use of electrical facilities.
5. Remove existing surface mounted work that is not used and blank off concealed outlets.
6. Reconnect existing work to be maintained and all outlet boxes and devices accessible after installation of all trades.
7. Expose new work in existing areas on walls in unfinished areas and concealed in new installation. Where cutting and patching is necessary, match finishes with existing surface finishes as close as possible. In existing finished areas, conceal all work.
8. Schedule electrical feeders, branch wiring, signal wiring and other similar work to correspond with the sequence of work necessary to demolish, remove and install new work.
9. Awardee must verify exact locations and materials before performing installation work. The PPO Supervisor assigned must give written approval for cutting of structural members and bearing walls either onsite or in the approved work schedule.

10. Where shown on drawings, work which is “existing” is assumed to be in place and suitable for the necessary alterations and additions required. Field check Items and alterations included as may be necessary for proper installation.
11. Awardee will remove existing electrical work where necessary and as directed by the PPO Supervisor assigned.

ELECTRICAL SUPPORTING DEVICES

1. Devices, including anchors, fasteners, hangers and supports supplied must be of a type designed and/or fabricated for adequate, safe and secure installation of the material and equipment and present a neat appearance. All USS fasteners should have appropriate heads.
2. Job-fabricated hangers or supports should be made from standard structural shapes and hardware.
3. Select devices using the following criteria:
 - a) The amount, weight and type of hangers, supports and enclosed materials is to be part of the load.
 - b) Devices must be suitable for shear, straight pull, vibration, impact or external load, as applicable.
 - c) Obtain determination of safe working load of devices or job-fabricated support assemblies from the published load data of the manufacturer.
 - d) Use devices with corrosion-resistant characteristics for the atmospheric conditions in south Florida.
4. Hanger and supports should be those manufactured by Unistrut, Powerstrut or Superstrut and must be galvanized at a minimum.
5. Install equipment, including switches, controllers, fixtures and transformers in order to facilitate removal or replacement without damage to equipment or fasteners.
6. Drill holes for devices under provisions of the manufacturer’s recommendations, including diameter and depth. All parts of hanger and support assemblies, including all accessory hardware must be an integrated fastening system.
7. Internal and external threads of parts that are screwed or bolted together must be of the same material and applied coatings and method of application, i.e., if the threads of bolts or rods are hot-dipped galvanized, the nuts must also be the same. If they are electro-galvanized, the same applies.
8. All threads must be fully engaged.
9. All parts so intended are to be made up tight using tools intended for the purpose.
10. Use backboards for telephone terminal boards. The wall side of the backboards must be painted with an asphaltum coating when the walls are constructed of masonry.
11. Fasten all materials and equipment with approved devices. Generally fasteners, should be provided as follows:
 - a) Fasten to wood with screws, except that nails may be used on wood partitions for outlet boxes and raceways up to 1” diameter.
 - b) Fasten to masonry with threaded metal inserts, metal expansion screws, toggle bolts, powder-actuated fasteners or other approved means.

INSPECTIONS AND TESTING

1. MANDATORY periodic inspections must be coordinated with the SBBC Building Department, 2301 NW 26 Street, Building 9, Oakland Park, FL 33311, telephone (754) 321-4800, fax (754) 321-3389. Electrical inspections may include any of the following:
 - a) Temporary power
 - (1) Underground
 - (2) Transformers
 - (3) Panels
 - (4) Meter can
 - b) Duct Bank
 - (1) Conduits
 - (2) Concrete placement, in progress
 - (3) Marking tape, locator installed
 - (4) Manholes and pull boxes
 - c) Ground rough
 - (1) In progress, approximately every 25% complete
 - (2) Conduits
 - (3) Floor boxes
 - d) Grounding
 - (1) Footer steel
 - (2) Main switch gear
 - (3) ITV pole
 - (4) Lightning protection
 - (5) Light poles
 - e) Electrical service
 - (1) Meter/CT can
 - (2) Switch gear
 - (3) Transformers
 - (4) Panels
 - (5) Transfer switches
 - (6) Generators
 - (7) Disconnects
 - f) Wall Rough Inspections
 - (1) In progress, approximately every 25% complete
 - (2) Conduits, boxes and wire
 - (3) Door magnet supports
 - (4) Speaker cans
 - g) Above Ceiling Inspections
 - (1) In progress, approximately every 25% complete
 - (2) Conduits, boxes and wire
 - (3) Fire wall penetrations
 - (4) Fixture supports
 - h) Parking Lot Lighting
 - (1) Conduits
 - (2) Wire
 - (3) Pole bases, set per specifications
 - (4) Grounding
 - (5) Fuse holders
 - (6) Top of poles, head connection and air gap
 - i) Equipment Connections
 - (1) Air conditioning equipment
 - (2) Shop equipment
 - (3) Kitchen equipment
 - j) ITV Poles
 - (1) Prior to setting, top
 - (2) Conduits
 - k) Final Electrical

2. Additional inspections that may be required in addition to the required inspections, listed above, may be indicated on contract documents or be required by the Authority Having Jurisdiction. The awardee will be notified in advance of any additional inspections required.
3. Inspections are an integral part of invoicing procedures.

ACCEPTANCE TESTS AND PERFORMANCE VERIFICATION

1. Awardee must engage the services of a recognized independent electrical testing firm to perform short circuit and coordination studies, as specified.
2. Engage the services of a recognized corporately and financially independent testing firm for the purpose of performing inspections and tests on all new electrical equipment supplied in this contract and on existing equipment affected by the newly added systems and/or equipment or as specified.
3. The testing firm must provide all material, equipment, labor and technical supervision to perform such tests and inspections.
4. The purpose of the independent tests are to assure that all tested electrical equipment, is operational and within industry and manufacturers' tolerances and installed under the provisions of the design specifications and determine suitability for energization.
5. Ensure all inspections and testing are under provisions of the following codes and standards except as provided otherwise.
 - a) National Electrical Manufacturers' Association (NEMA)
 - b) American Society for Testing and Materials (ASTM)
 - c) Institute of Electrical and Electronic Engineers (IEEE)
 - d) International Electrical Testing Association (NETA) Acceptance Testing Specifications (ATS)
 - e) American National Standards Institute (ANSI) C2: National Electrical Safety Code
 - f) National Fire Protection Association (NFPA)
 - g) ANSI/National Fire Protection Association (NFPA) 70 National Electrical Code
 - h) ANSI/NFPA 70B Electrical Equipment Maintenance
 - i) NFPA 70E Electrical Safety Requirements for Employee Workplaces
 - j) ANSI/NFPA 78 Lightning Protection Code
 - k) ANSI/NFPA 101 Life Safety Code
 - l) Florida Building Code
 - m) Insulated Cable Engineers Association (ICEA)
 - n) Association of Edison Illuminating Companies (AEIC)
 - o) Occupational Safety and Health Administration (OSHA)
6. An itemized description of existing equipment to be inspected and tested is as follows:
 - a) Provide as-built one-line diagrams from the point of connection on the FPL transformer to the point of the first electrical sub-panel or disconnecting device, located outside the main electrical room throughout the facility, fed from the main electrical switchgear room indicated on the drawings. The one-line diagrams include:
 - (1) Switchgear and panel manufacturers and specifications.
 - (2) Equipment frame size.
 - (3) Overcurrent protection device rating, type and interrupting capacity.
 - (4) Conduit size and type.
 - (5) Conductor size, length and type.
 - (6) Transformer size, type and specifications
 - b) Provide plan view drawing indicating locations throughout the facility for all equipment indicated on the one-line diagram.

- c) Provide routing of all feeders shown on the one-line diagram with emphasis on the exact location of underground feeders.
 - d) Electronically locate routings with signal tracer equipment.
 - e) Provide expanded scale plan view drawings of the existing main electrical switchgear room and expanded scale drawings of the wall elevations of the main switchgear room. The drawing measurement standard shall be 3/4" equals 1'.
 - f) Ensure equipment identifications are consistent with that as shown on the one-line diagram.
 - g) Provide peak and average demand loads of all panels and major distribution equipment over a 1 week period during the normal occupied times. Indicate the test result information on the one-line diagram.
 - h) Provide testing for the following:
 - (1) All feeder cables indicated on the one-line diagram.
 - (2) All circuit breakers indicated on the one-line diagram.
 - (3) All dry type transformers indicated on the one-line diagram.
 - (4) Provide the one-line diagram and plan view equipment location drawings on standard 24 x 36" media; drawn with a computer aided design package, a compatible version of AutoCAD, minimum.
7. Partial site plan backgrounds of the facility shown on any contract documents will be available to the awardee upon request.
 8. Submit reproducible plots of the drawings in hardcopy as well as provide in digital format.
 9. Submit testing report in a bound hardcopy or CD-ROM format with all field test data in appendix form or files.
 10. The testing report must be signed and sealed by a registered Professional Engineer licensed in the State of Florida. Awardee may use any professional engineer awarded under this contract.
 11. Submit the above report and drawings within 30 days after the notice to proceed. Feeder routing information may be required prior to the submittal date to coordinate with PPO Department work schedules.
 12. Use the above existing facility report and drawings in order to develop the final as-built drawings and a report encompassing all new electrical equipment and testing, all to be submitted with the operation and maintenance manuals, disks or CD-ROMs prior to substantial completion of the project.
 13. For inspections and tests, utilize project design specifications, project design drawings and manufacturer's instruction manuals applicable to each particular apparatus.
 14. Awardee is to perform routine insulation-resistance, continuity, and rotation test for all distribution and utilization equipment prior to and in addition to tests performed by the testing firm specified herein.
 15. Apply a suitable and stable source of electrical power to each test site.
 16. Notify the testing firm when equipment becomes available for acceptance tests. Coordinate the final work with the PPO Department and the testing firm in order to expedite project scheduling. Notify the PPO Supervisor assigned prior to commencement of any testing.
 17. Awardee, in conjunction with the testing firm and the PPO Supervisor assigned, report any system, material or workmanship, which is found defective on the basis of acceptance test.
 18. Awardee must maintain a written record of all tests and, upon completion of project, assemble and certify a final test report.
 19. Safety practices and precautions are to include, but are not limited to, the following requirements:

- a) OSHA
 - b) National Safety Council's Accident Prevention Manual for Industrial Operations
 - c) Any applicable State of Florida, Broward County or SBBC safety and operating procedures
 - d) NFPA 70E
 - e) American National Standards for Personnel Protection
20. Perform all testing with the apparatus de-energized. Exceptions must be thoroughly reviewed to identify safety hazards and devise adequate safeguards.
21. Awardee should notify the testing firm to provide a designated safety representative on the project to supervise the testing operations and coordinate the schedule with the PPO Supervisor assigned.
22. The awardee and the PPO Supervisor assigned shall jointly agree on the choice of an independent testing organization, which can function as an unbiased testing authority, professionally independent of the manufacturers, supplier, and installers of equipment or systems evaluated by the testing firm. The firm must be normally engaged in the testing of electrical equipment devices, installations, and systems.
23. The agreed upon independent testing firm must:
- a) Meet OSHA criteria for accreditation of testing laboratories per, Title 29, Part 1907 or be a Full Member company of the National Electrical Testing Association (NETA).
 - b) Utilize engineers and technicians who are regularly employed by the firm for testing services.
 - c) Submit proof of the above qualifications when requested.
 - d) The lead, on-site, technician must be currently certified by NETA or the National Institute for Certification in Engineering Technologies (NICET) in electrical power distribution system testing.
 - e) Current NETA-certified testing firms for use are:
 - (1) Industrial Electrical Testing, Inc.
 - (2) Electrical Reliability Services, Inc. (formerly Electro-Test, Inc.)
 - f) Additional independent testing firms will be considered by the PPO Department upon submission of the firm's qualifications 10 days prior to final testing phase of a work project.
24. Ensure all test equipment is in good mechanical and electrical condition. Ensure the accuracy of metering in test equipment is appropriate for the test being performed but not in excess of 2% of the scale used.
25. Digital multimeters shall be RMS sensing when the variable measured contains harmonics or DC offset or any deviation from a pure sine wave.
26. The agreed upon independent testing firm must provide a test instrument calibration program which assures that all applicable test instruments are maintained within the rated accuracy, directly traceable to the National Institute of Standards and Technology. Field instruments shall be calibrated at 6-month intervals and calibration date must be visible on all test equipment.
27. The test report must include the following data:
- a) Summary of project
 - b) Listing of the equipment tested
 - c) Test results
 - d) Recommendations
 - e) Furnish copies of the complete report to the PPO Supervisor assigned.
 - f) A short-circuit analysis and coordination study is to be performed for all new electrical equipment and all existing electrical equipment shown on the as-built one-line diagram as defined above.
 - g) Provide a current and complete short-circuit study, equipment interrupting or withstand evaluation, and a protective device coordination study for the electrical distribution system.
 - (1) Ensure the study is under provisions of applicable ANSI and IEEE Standards.

- (2) Include the FPL short-circuit single and 3-phase contribution, with the X/R ratio, the resistance and reactance components of each branch impedance, motor and generator contributions, base quantities selected, and all other applicable circuit parameters.
 - (3) Calculate the short circuit momentary duties and interrupting duties on the basis of maximum available fault current at each switchgear bus, switchboard, motor control center, distribution panel board, pertinent branch circuit panel boards, and other significant locations through the system.
- h) The studies include all portions of the electrical distribution system from the normal and alternate sources of power throughout the low-voltage distribution system. Thoroughly cover a normal system operating method, alternate operation, and operations, which could result in maximum fault conditions in the study.
- i) The independent testing firm must submit the studies to the PPO Supervisor assigned prior to granting final approval of the distribution equipment shop drawings and prior to release of equipment for manufacture.
- j) Perform an equipment evaluation study to determine the adequacy of circuit breakers, controllers, surge arresters, busways, switches, and fuses by tabulating and comparing the short circuit ratings of these devices with the available fault currents. Document any problem areas or inadequacies in the equipment in the report.
- k) The testing company shall coordinate with the supplier of the new switchgear to assure all specifications of the new equipment meet or exceed the ratings required by the study at no additional cost to SBBC.
- l) Perform a protective device coordination study to select or to check the selections of power fuse rating, protective relay characteristics and settings, ratios and characteristics of associated voltage and current transformers, and low-voltage breaker trip characteristics and settings.
- m) Include all voltage classes of equipment from FPL's incoming line protective device down to and including each motor control center and panel board. Include the phase and ground overcurrent protection, as well as, settings for all other adjustable protective devices.
- n) Plot the time current characteristics of the specified protective devices on appropriate log-log paper which includes the following:
 - (1) Complete titles
 - (2) Representative one-line diagram and legends
 - (3) Associated power company's relays of fuse characteristics
 - (4) Significant motor starting characteristics
 - (5) Complete parameters of transformers
 - (6) Complete operating bands of low voltage circuit breaker trip curves
 - (7) Fuse curves
 - (8) Coordination plots shall indicate the types of protective devices selected, proposed relay taps, time dial and instantaneous trip settings, ANSI transformer magnetizing inrush and withstand curves per ANSI C37.91, cable damage curves, symmetrical and asymmetrical fault currents.
 - (9) Adhere to all requirements of the NEC.
 - (10) Maintain reasonable coordination intervals and separation of characteristic curves.
 - (11) Provide the coordination plots for phase and ground protective devices on a complete system basis.
 - (12) Use sufficient curves to clearly indicate the coordination achieved to each utility main breaker, primary feeder breaker, unit substation primary protective device rated or more.
 - (13) Provide a maximum of 8 protective devices per plot.
 - (14) Provide the selection and settings of the protective devices separately in a tabulated form using a circuit identification, IEEE device number, current transformer ratios, manufacturer, type, range of adjustment and recommended settings.
 - (15) Provide a tabulation of the recommended power fuse selection for all fuses in the system.
 - (16) Coordinate the discrepancies, problem areas or inadequacies with the equipment suppliers and resolved within the scope of the project at no additional cost to SBBC.

28. Summarize the results of the power system study in a final report and make a part of the operation and maintenance manuals and include the following sections in the report:
 - a) Description, purpose, basis written scope, and a single line diagram of the portion of the power system, which is included within the scope of study.
 - b) Tabulations of circuit breaker, fuse and other equipment ratings versus calculated short circuit duties and commentary regarding same.
 - c) Protective device time versus current coordination curves, tabulations of relay and circuit breaker trip settings, fuse selection and commentary regarding same.
 - d) Fault current tabulations including a definition of terms and a guide for interpretation.
29. Awardee's certified testing firm is responsible for the inspection, setting, testing, and calibrating the protective relays, circuit breakers, fuses and other applicable devices as recommended in the power systems study report.
30. Prior to energization, the independent testing firm shall perform visual and mechanical inspections and electrical tests on all newly-installed equipment supplied within this contract and included within the list of equipment types below. All inspections and tests shall be in accordance with the indicated test standard and section, the manufacturer's instruction manual, and the project design specifications.

<u>Equipment Type</u>	<u>NETA 1999 ATS Standard</u>
Switchgear and switchboard assemblies rated less than 600V	Section 7.1
Switchgear and switchboard assemblies rated greater than 600V	Section 7.1
Dry-type transformers rated less than 600V, equal or greater than 500 kVA	Section 7.2.1.1
Dry-type transformers rated less than 600V, greater than 500 kVA	Section 7.2.1.2
Cables rated less than 600V, equal or greater than size (specify) AWG	Section 7.3.2
Cables rated greater than 600V	Section 7.3.3
Metal-enclosed busways	Section 7.4
Switches rated less than 600V, equal or greater than (specify) amps	Section 7.5.1.1
Circuit breakers, insulated case or molded case type, rated less than 600V, equal or greater than (specify) amps	Section 7.6.1.1
Circuit breakers, draw out type, rated less than 600V	Section 7.6.1.2
Protective relays and associated transformers	Section 7.9
Meters and associated instrument transformers	Section 7.10
Grounding system	Section 7.13
Ground fault protection	Section 7.14
Related motors equal or greater than (specify) hp	Section 7.15
Motor starters rated less than 600V, equal or greater than size (specify)	Section 7.16.1.1
Motor control centers	Section 7.16.2
Batteries	Section 7.18.1
Surge arrestors rated less than 600V	Section 7.19.1
Emergency/Standby generators	Section 7.22.1
Uninterruptible Power Systems (UPS)	Section 7.22.2
Automatic Transfer Switches	Section 7.22.3

31. Upon completion of equipment acceptance testing, the independent testing firm shall perform system function tests on all new equipment supplied within this contract in the list of equipment type above and existing affected equipment to prove the correct interaction of all sensing, processing and action devices and evaluate the performance of all integral components and their functioning as a complete unit to effect the design result.
32. Any deficiencies identified by initial acceptance testing rectified by the awardee or PPO personnel and retested by the independent testing firm are at the awardee's expense until specified requirements are met. Final acceptance of the electrical power system by the PPO Department is contingent upon the satisfactory compliance of the acceptance testing.

33. After substantial completion, but not less than 60 days after final acceptance, the independent testing firm shall perform an infrared thermographic survey of all newly-installed equipment supplies within any given project and included in the list of the equipment types, below. The thermographic survey and report shall be in accordance with NETA 1999 ATS Section 9.
- a) Switchgear
 - b) Bus ducts
 - c) Transformers
 - d) Points of power connection rated equal to or greater than (specify) amp
 - e) Motor control centers
 - f) Distribution panels
 - g) Load centers