APPENDIX A
TECHNICAL SPECIFICATIONS
Repair and Installation of Access Control Systems FY26
1412035446

1. Definitions:

a. Governing organization – This term refers to the organization that issued the contractor a purchase order to perform a service or task within the scope of this contract.

b. Contract manager – This term refers to the individual(s) identified by each governing organization as responsible for the management and enforcement of this contract.

2. Contractor Personnel:

a. Under the terms and conditions of this contract, all services rendered shall be by uniformed employees of the bidder and no part of the regular servicing or emergency call back service may be subcontracted. The contractor will maintain the entire access control system using skilled (factory trained and certified) technicians under direct employment and supervision.

b. The contractor is required to communicate any change in employment (termination, resignation, or termination for cause) for any of their personnel assigned to the account. This notification must be made to the contract manager and be issued no later than the end of the business day of the event. The contractor is required to retain proof of notification until the contract manager has confirmed the receipt of the communication.

c. **Conduct** - All contactor personnel shall be expected to conduct themselves in a courteous and professional manner. In addition, they are required to ensure that they adhere to all applicable JEA safety and security policies and procedures. Any questions related to these policies or procedures should be directed to the contract manager.

d. **Certification –** JEA Contractor personnel responsible for programming, modifications, repairs, or upgrades of any AMAG system components must possess an active AMAG Symmetry Certification. JAXPORT Contractor personnel responsible for programming, modifications, repairs, or upgrades of any Genetec system components must possess an active Genetec Certification or be able to obtain one within the first 6 months of contract award. The contract manager reserves the right to request evidence of this certification for all personnel performing these services.

e. **Qualifications** - The contractor is responsible for ensuring all personnel have sufficient knowledge and experience to perform the required duties. Contractor personnel who exhibit inadequate experience or incapability in their work assignment shall be replaced and not allowed on property. Failure on the part of the contractor to furnish such labor shall be sufficient cause for the cancellation of the contract. Employees of the governing organization shall not be employed by the contractor to work under this contract. The following defines each type of job duty and the minimum level of experience and knowledge areas for the position:

1) Project Management:

i. Job Duties: Responsible for the account management, documentation, scheduling, software programming, updating, development etc.

ii. Experience:
   1. (10) or more years' experience in security technologies
   2. (10) or more years' experience with access control systems
   3. (5) or more years' experience with AMAG Symmetry systems

iii. Knowledge Areas:

1. Project Management Principles
2. Physical Security Principles and Application
3. Technology Change Management Processes
4. Configuration Management Processes (Configuration changes documented, monitored, and consistent across as set type)
5. Asset Management (Listing of all assets and attributes)
6. Incident Response Procedures
7. Vulnerability Assessments

2) System Software Administrator:

i. Job Duties: Responsible for software programming, updating, development, etc.

ii. Experience:
   1. (8) or more years' experience in security technologies
   2. (8) or more years' experience in access control systems
   3. (5) or more years' experience with AMAG Symmetry systems

iii. Knowledge Areas:
   1. Microsoft Operating Systems
   2. Microsoft Activity Directory (LDAP Query/OU/Attributes/General GPO)
   3. Microsoft SQL Databases
   4. Microsoft Remote Desktop Services
   5. Identity Management Systems (General)
   6. Networking (OSI model, Ports and Services)
   7. Patch Management (Review patches for all installed software)

3) Technician Working Foreman:

i. Job Duties: Responsible for the management of technicians, jobsite efforts, sign-offs, etc.

ii. Experience:
   1. (6) or more years' experience in security technologies
   2. (6) or more years' experience in access control systems
   3. (5) or more years' experience with AMAG Symmetry systems

iii. Knowledge Areas:
   1. Site Supervision
   2. Task Scheduling and Organization
   3. Job Site Safe Work Practices
   4. Physical Security Principles and Application
   5. Low Voltage Wiring and Principles

4) Technician:

i. Job Duties: Responsible for system testing, repairs, evaluations, wiring, etc.

ii. Experience:
   1. (4) or more years' experience in security technologies
   2. (4) or more years' experience in access control systems

3. (2) or more years' experience with AMAG Symmetry systems

iii. Knowledge Areas:
1. Job Site Safe Work Practices
2. Physical Security Principles and Application
3. Low Voltage Wiring and Principles

f. **Compliance** – Due to the highly sensitive nature of this system, all contractor employees requiring logical access into the JEA (AMAG) and JAXPORT (Genetec) systems will be required to meet the following compliance requirements:

1) JEA NERC Critical Infrastructure Protection (CIP) Security Training – This training will be created, and provided, by JEA for the contractor personnel. All contractor personnel will be required to complete this training on an annual basis.

2) Personnel Risk Assessment (PRA) – The PRA must be completed by the contractor's company prior to hiring the subject individual for JEA or JAXPORT contract. The PRA must contain the following minimum verifications:

i. Identity verification (such as Social Security number verification in the U.S. or valid U.S. or state government photo identification).

ii. A seven-year criminal background checks to include all locations where the individual has been employed or resided in past seven years from the date of the PRA. Once the subject individual has been contracted on the JEA or JAXPORT project, the PRA will be renewed every seven (7) years as per the PRA terms specified above.

iii. JEA will require that proper evidence demonstrating the completion of the PRA is submitted to JEA HR department. Evidence may be redacted for non-relevant information; however, the evidence must demonstrate completion of terms specified above in this PRA section.

3) JAXPORT 33 CFR Part 105.215, Security Awareness Training – This training has been created to address specific requirements within JAXPORT's Facility Security Plans and is provided by JAXPORT Public Safety Department. All contractors must receive the training prior to beginning work. Classes can be scheduled by contacting JAXPORT Access Control at accesscontrol@jaxport.com or calling 904-357-3344.

4) JAXPORT projects will require contractors to obtain a valid Transportation Workers Identification Credential (TWIC) via the Transportation Security Administration (TSA) office located at 2121 Corporate Square Blvd. Bldg. A #165, Jacksonville, Florida 32226, prior to beginning any work inside JAXPORT's Restricted Access Areas (RAA). Contract personnel will then register their TWIC at the JAXPORT Access Control Center and receive a JAXPORT Business Purpose Credential. If a TWIC cannot be obtained, then JAXPORT can provide escort services. This will be at the expense of the contractor.

g. **Manufacturer Support** – In certain circumstances, the contractor may be required to employ manufacturer support in the programming and/or maintenance of the AMAG / Genetec system. These situations will be accommodated through a governing organization authorized remote access session, which will be limited to the Quality Assurance environment only. Remote access to any Production environment will only be allowed under the following conditions:

1) Governing organization declared emergency situation – OR:

   a. Governing organization authorized remote session.
   b. No remote system modifications will be allowed.
   c. Specific manufacturer personnel must be added to the contractor's listing of authorized personnel and complete the NERC CIP Training and PRA or JAXPORT Training and PRA.

3. Labor Rates:

a. Labor rates will be established for each identified job description located on the contract bid form. These rates will be used for all labor employed through the use of this contract.

b. *Standard Rate (SR)* – SR applies to all service work performed during the normal business hours of 8:00 a.m. – 5:00 p.m. - Monday through Friday, preventative maintenance efforts, and work performed in support of a capital project.

c. *Emergency Rate (ER)* – ER applies to all service work performed after normal business hours or in a governing organization declared emergency situation.

d. The unit cost identified in each labor rate must be inclusive of any administrative, overhead, and service repair charges. The contractor is not authorized to include additional charges such as a trip charge, management hours, minimum labor hours, mileage, etc. to the service request invoice. The hours charged must be the actual hours employed by the technician in support of the service request.

4. Contract Materials:

a. All replacement parts, or entire controls or components are to be from the original manufacturer. If the contractor finds parts or equipment is no longer available or recommends a different manufacturer, it will be submitted to the contract manager or designated representative, in writing or electronic message, for discussion and approval. The contractor must have a written statement giving approval to substitute parts or equipment from the contract manager or designated representative.

b. The contractor is required to use the unit pricing, identified on their contract pricing sheet, for all materials procured under this contract.

c. The contractor is authorized to charge their "other material mark-up" percentage, identified on their contract bid form, in addition to their base cost for all of the following additional expenses:

   1. Materials not specifically listed on the contract bid form.
   2. Equipment rental fees or charges.

   The governing organization reserves the right to request a copy of all estimates and/or invoices received by the contractor to validate the base cost. The contractor is not authorized to include any overhead, delivery, or burden expenses to the base cost. The "other material mark-up" percentage cannot exceed 25%.

5. Subcontractor Services:

a. Throughout the course of this contract, the contractor may be required to engage a subcontractor for specific tasks or services. The contractor is authorized to charge up to 10%, in addition to the base cost, for the subcontractor services. The governing organization reserves the right to request a copy of all estimates and/or invoices received by the contractor to validate the base cost.

b. A copy of the subcontractor quote and their scope must accompany any quotes submitted to the contract manager for approval and verification.

c. Subcontractor services should be limited to those services that are outside of the normal work provided by the contractor. Some examples are, but are not limited to, high voltage power connections, ground or vegetation clearing, etc.

6. System Repair Services:

a. System repair services are defined as providing a prompt response to a request for trouble service or repairs from the contract manager, or a designated representative.

b. At the onset of the contract, the contractor is required to develop, and submit for approval, a service request and notification plan. At a minimum, the contractor shall provide personnel to answer request for service phone calls and electronic mail during normal and after business hours. After business working hours, the contractor may use an answering service with personnel for a direct contact. The contractor will still be required to adhere to all service notification and response times. The contractor is not authorized to employ any type of answer machine for phone services.

c. Within (5) business days of the initiation of the contract, the contract manager will provide the contractor with a listing of personnel at each governing organization authorized to place any service requests under this contract. The contractor is not authorized to perform requests for any service without the prior approval from an individual on this list. It is the responsibility of the contractor to record the information of the authorized individual that approved and/or issued the request for service. If the contractor performs a service request, without prior approval, the contractor is responsible for absorbing, without reimbursement, all labor and materials utilized in the performance of the request. The listing of authorized personnel will be updated on an "as needed" basis.

d. The contractor will be required to generate, and maintain, an on-going electronic record and/or database of all maintenance and repairs performed on any access control system. This tracking will be utilized to identify equipment that requires placement on the on-hand parts inventory and to identify problematic system locations. The contractor will be required to provide a copy of this record and/or database, and any recommendations, at the end of each fiscal year.

e. All system repair requests during business hours will be considered a "Standard Request" unless specifically identified as an "Emergency Request" by the governing organization's representative. All requests issued after business hours will automatically be considered an "Emergency Request". In the event a standard request is issued at the start of a weekend, the required on-site time will exclude the weekend and carry into the next business day.

f. The unit cost identified in each labor rate must be inclusive of any administrative, or overhead, service repair charges. The contractor is not authorized to include additional charges such as a trip charge, management hours, minimum labor hours, mileage, etc. to the service request invoice. The hours charged must be the actual hours employed by the technician in support of the service request.

7. System Repair Procedure:

a. After the initial request has been placed, the contractor is required to contact the governing organization representative and be on-site in accordance with the required service notification and response times identified in this contract. If requested, the contractor may be required to take digital photographs of the condition of the system, or issue, as discovered upon their arrival.

b. When the contractor has evaluated the scope of the service request, and on-site conditions, they are required to contact the individual that placed the original service request and provide a verbal estimation of the total repair cost while on-site. The contractor is not authorized to proceed with repairs and/or replacements until authorization has been received from the governing organization. If the governing organization decides not to proceed with the repair/replacement, the contractor will be authorized to invoice for the labor used in responding to and evaluating the request. If the governing organization authorizes the repair/replacement, then these costs will be incorporated into the total service invoice. The governing organization reserves the right to waive this requirement based upon the situation and perceived repair cost.

c. Upon completion of the service request, the contractor is required to provide a service report that includes the number of hours, service personnel, and types of equipment utilized in the performance of the request. This report can be provided in hard copy to the authorized individual that requested the service and/or sent via electronic copy to the contract manager within (1) business day. If requested, the contractor may be required to take digital photographs of the condition of the system, or issue, after the completion of the repair. The before and after photographs will then be included in the contractor's service report. All labor and material rates, established in this contract, will be reflected on the service report with the applicable service charges. The type of labor rate charged will be based upon type of service performed, not the position held by the individual within the contractor's organization. The brief job descriptions, listed above, identify the concepts of each labor category in this contract.

d. The contractor is required to complete all requested repairs based upon the priority issued and in accordance with the service notification and response times identified in this contract.

e. For standard request types where possible, the contract shall provide 24-hour notice prior to showing up to complete service request work.

f. The contractor is responsible for bearing the full cost of all materials and labor on any "return" requests for service in which the original issue remains or has not been properly corrected. Any service request, within (15) business days, on an issue that was reported resolved by the contractor to be a "return" request.

8. Service Notification and Response Time:

Request Type	Priority	Labor Rate	Contact Organization	Required On Site	Required Completion
Emergency	1	ER	30 Minutes	2 Hours	4 Hours
Standard	2	SR	60 Minutes	N/A	Next Business Day
	3	SR	24 Hours	N/A	2 Business Days
	4	SR	24 Hours	N/A	14 Calendar Days
	5	SR	24 Hours	N/A	30 Calendar Days

9. Preventative Maintenance (PM) Service:

a. PM Service is defined as a request for specific testing, evaluations, and preventative maintenance measures on a specific access control system. These requests will be conducted during normal business hours and will be submitted by the contract manager. The contractor is required to coordinate

the scheduling of the maintenance service, with the contract manager, to ensure the impact to standard operations is minimized to the greatest extent possible.

b. The standard service, provided within a PM request, includes cleaning, examination, adjustment and lubrication as required, and an evaluation/testing of the existing access control system in comparison to the specifications of the system by the manufacturer. This applies to all components of the access control system.

c. In addition to the manufacturer specification maintenance, the following minimum maintenance procedures will be performed in the course of conducting preventative maintenance for an access control system:

1) Visually inspect panel components and batteries.

2) Contact the appropriate Security Dispatch Center and verify monitoring functions. This includes, but is not limited to, alarm transmission, digital input status changes, and card activity.

3) Clean enclosures of debris, bugs, and dirt. The level of cleanliness should be sufficient to ensure proper operation of equipment and prevent potential future issues.

4) Check date of batteries, disconnect and check charger voltage, reconnect batteries. Replace batteries if required. At a minimum, batteries will be replaced every three years.

5) Perform load test to ensure all batteries have sufficient amp hours remaining to support the system.

6) Disconnect A.C. power and verify system functionality under battery power.

7) For each access control panel, test an associated card reader for Type I and Type II errors with an authorized and unauthorized proximity card. This process will consist of (5) Type I tests with an authorized card and (5) Type II tests with an unauthorized card. NOTE: <u>All</u> card readers connected to an access control panel, designated as a Critical Cyber Asset (CCA), must receive the full testing process.

8) Perform functional testing of all number buttons on the proximity reader, if applicable.

9) Activate fire alarm relay to test disconnect of electromagnetic locks on all applicable doors. This testing includes the verification, and adjustment if required, that all electromagnetic locks reside on a power supply controlled by the fire alarm relay.

10) Verify and adjust alignment of all electronic locking hardware to ensure proper holding force, latching and/or other functionality of the device. Perform adjustments and minor repairs as required.

11) Verify and update proper labeling of all major wire components; i.e. card readers, inputs, outputs, within the access controller.

12) Inspect weather sealing of all access control equipment and repair if required.

13) Test functionality of all access controlled mechanical door hardware to ensure proper closures and seals of the doors. Perform adjustments and minor repairs as required.

14) Test functionality of all sensors to ensure proper alarm states are activated.

15) Verify proper alignment and voltage of all LOS sensors in exterior environments.

16) Evaluate sensor's coverage area for any potential nuisance alarm concerns or developing problems.

17) Perform walk test of sensor coverage area to ensure proper performance of the sensing device.

18) Inspect weather sealing of all intrusion detection equipment and repair if required.

19) Inspect all alarm wiring for proper connections and protection of cabling from tampering and/or vandalism.

20) Check to make sure all wiring is routed away from moving parts to prevent damage, free of corrosion, abrasions, cuts, and connections are secure.

21) Make sure all components are properly grounded to manufactures recommendations or as needed due to installation environment.

d. The contractor is required to submit, for approval by the contract manager, a listing of any additional recommended testing, cleaning, and maintenance tasks that should be performed on access control systems. This listing, in conjunction with the standard PM services, will be designed to be utilized by field technicians for the recording of equipment statistics and information that should be accurately tracked.

e. When the PM is completed, the contractor will furnish to the contract manager, or a designated representative, a written report detailing the conditions of the access control system with any recommendations or needed corrections. The PM report will include recommendations for additional service work or replacement parts, analysis report, and recommendations to the governing organization personnel for improving operating techniques and maintenance procedures.

10. On-Hand Parts Inventory

a. Due to the criticality of the systems, and to reduce downtime of specific components, each governing organization reserves the right to institute an on-hand parts inventory in support of servicing their access control system. This inventory will consist of system components selected based upon their frequency of replacement, difficulty in obtaining, and criticality to the system. The contractor is authorized to make recommendations for any additional equipment, not selected by the governing organization, based upon their experience with access control systems. The governing organization will procure this equipment under the terms of this contract.

b. The on-hand parts inventory is subject to the following conditions:

1) The contractor is responsible for storing this equipment at their warehouse in a secure location.

2) The contractor is responsible for any theft or damage to this equipment while in their possession.

3) The contractor is responsible for maintaining the identified quantities of material at all times.

4) The on-hand material is only to be used on the respective governing organization's properties and may not be used for any other projects without the expressed written permission from the associated contract manager.

5) All on-hand material used in the performance of a service request will be identified on the resulting service report.

6) If the on-hand material is used in the performance of a warranty service request, the contractor is responsible for all costs associated with replenishing the on-hand inventory. The material must be replenished within (10) business days.

7) If the on-hand material is used in the performance of a billable service request, the contractor will charge the service purchase order for the amount required to replenish the on-hand inventory. The material must be replenished within (10) business days.

8) Each governing organization reserves the right to inspect or recover the on-hand inventory at any time. The contractor is required to relinquish the on-hand inventory at the completion, or in the event of a termination, of their governing contract.

11. AMAG Symmetry System Software:

a. **Programming -** The contractor is required to program all AMAG system components in accordance with the established governing organization programming standard. Each governing organization will provide the contractor with programming checklist for ensuring accuracy and consistency with this standard.

b. **Change Management –** The contractor is required to adhere to all change management policies and procedures for the AMAG Symmetry system. These policies include, but are not limited to, documentation of all configurations and/or application changes. All changes require approval by the contract manager and any other appropriate governing organization personnel prior to implementation.

c. **Software Maintenance** - The contractor will be responsible for maintenance of all regulatory compliance requirements including documentation of applicable processes such as cyber security configuration and testing, patching, account maintenance, and user access activity log maintenance. In addition, the contractor will be responsible for performing all software updates, patches, firmware updates, and system upgrades that occur during the contract period. The contractor will be required to notify the respective governing organization of the release of any of these items within a specified time period. This includes the planning, and coordination, of the released software item. The item must be applied to the AMAG system within a pre-designated time period of the release date. All time periods will be governed by the current regulatory compliance requirements. The contractor will be authorized to bill at the system administrator rate for these services when the software modifications are not covered by a warranty period.

d. **Incident Response and Recovery** - The contractor is required to adhere to all applicable incident response and recovery procedures for the AMAG Symmetry system. This includes, but is not limited to, active participation in the development, and support of, a system incident response and recovery

plan. These plans are designed to ensure the governing organization's priorities are met when performing incident response and recovery. JEA and JAXPORT is required to maintain 24X7 monitoring of various assets and the contractor may be required to provide support during some emergency conditions.

e. Any hours, expended by the contractor, for system recovery due to the governing organization's and/or other contractor's implementation of software updates and upgrades that are not AMAG approved for the system shall be charged to that respective governing organization at contractor's standard rates for system administrator.

f. Any changes to the Operating System and/or database software, employed by the governing organization, will require an amendment to the contract to allow for the contractor to present revised pricing for providing support.

g. The contractor is required to use the unit pricing, identified on their contract pricing sheet, for all software support services procured under this contract.

h. The contractor will be responsible for procuring a Software Support Agreement (SSA) with AMAG / Genetec on behalf of the JEA and JAXPORT systems on an annual basis. This SSA will cover all procured software licenses, updates, patches, and upgrades on the quality assurance and production environments. The following is the current configuration of the JEA SSAs with AMAG:

1) JEA Quality Assurance (QA) Environment
2) JEA Production Environment

The following is the current configuration of the JAXPORT SSAs with Genetec:

1) JAXPORT Quality Assurance (QA) and Testing Environment
2) JAXPORT Production Environment

The contractor will be required to obtain the SSA with AMAG, on behalf of JEA, at the point of expiration. The contractor will also be required to assume "Vendor of Record" for JAXPORT's Genetec SSAs from date of this contract to expiration. In addition, JEA and JAXPORT may procure additional AMAG / Genetec support services to ensure the integrity and functionality of the system.

The SSA agreement may be marked up by no more than 10% of the actual cost provided by AMAG / Genetec. A baseline will be established by the contractor of the governing agencies current system configuration. Prior to the SSA expiration date the contractor will provide the governing organization a quote for the upcoming renewal and note any additional licenses that may differ from the previous year.

12. Contract Meetings

a. Throughout the contract term, the contractor will be required to attend various meetings and provide periodic status reports. The following is a listing of the planned meetings, and required attendees, for this contract:

- *Annual Contract Meeting* – This meeting will be conducted at the end of each fiscal year. The purpose of this meeting is to discuss contractor performance over the course of the previous year, contract status, planned future work for the next fiscal year, any performance improvement, and any suggestions for contract procedures and processes.

- Required Attendees – Contract manager, security manager, officer of contractor's company, contractor project manager, and contractor service manager.

- *Annual Service Meeting* – This meeting will be conducted at the end of each fiscal year. The purpose of this meeting is to discuss contractor performance in the specific area of service over the course of the previous year. This will include a discussion of the previous years' service requests, analysis of repair methods, suggestions for the upcoming year, and potential system improvements.

    - Required Attendees – Contract manager, security technicians and support staff, contractor service manager.

- *Quarterly Contract Meeting* – This meeting will be conducted during each quarter of the fiscal year. The fourth quarter meeting may be consolidated with the annual meeting. The purpose of this meeting is to discuss contractor performance during the recent quarter, project scheduling, service issues and improvements, and any operational suggestions. This meeting may include representatives from product manufacturer to discuss possible program improvements and any product changes.

    - Required Attendees – Contract manager, contractor project manager, and contractor service manager.

- *Monthly Contract Meeting* –

    - The governing organization reserves the right to make use of a shared workspace with project managers and contractors to provide project updates and coordination in person and with other trades.

- *Periodic Status Reports* – These status reports will be required based upon a frequency identified by the contract manager. The frequency will be determined by the current workload and need for communication of status. The format for these reports will be created by the contractor and submitted to the contract manager for approval. The governing organization reserves the right to make use of a shared workspace for contractors to provide updates.

13. Access Control System Capital Projects:

a. The governing organizations reserve the right to utilize this contract for the procurement and installation of new access control systems. The scope and pricing of these systems will not exceed the limitations of the JEA and JAXPORT formal bid process.

b. The contractor will be responsible for ensuring that all estimated pricing for these new installations are in accordance with this contract. In addition, the contractor will be required to provide their pricing for the new installations in an itemized format, further amplifying their adherence to the terms of this contract.

c. All labor rates used in these projects will not exceed the SR rate for each labor category identified on the bid form, unless specifically authorized by the project manager in the project specification.

14. General Contract Requirements:

a. Parking access will not be provided at downtown locations. The contractor must be thoroughly familiar with all city, state, and federal laws pertaining to the industry including installation, maintenance and repair. All materials being used must comply with all local, state, and federal regulations. All chemicals used must have labels along with Material Safety Data Sheets. The contractor must keep JEA and JAXPORT personnel informed, particularly with regard to regulations. If JEA or JAXPORT is in violation because of contractor's actions, the contractor must pay all costs to correct the violation(s).

b. The contractor is required to check in with operations on site, or the site supervisor, prior to beginning the performance of any service requests. If no personnel are available, the contractor is required to contact JEA Security Dispatch (665-8200) or JAXPORT Security Operations Center (357-3360).

c. All work performed under this contract will be accomplished in accordance with the JEA and JAXPORT Security Typical standard drawings. The contractor is responsible for reviewing and/or requesting a copy of the JEA and JAXPORT Security Typical standard drawings from the JEA or JAXPORT project manager. These drawings establish the minimum required guidelines for all JEA and JAXPORT security projects. All variations from these drawings, if not specifically identified in this contract, must be approved by the JEA or JAXPORT project manager.

d. All Electronic Security System (ESS) equipment will be designed and installed as an addition to the existing JEA or JAXPORT ESS systems. This includes, but is not limited to, ensuring all equipment is compatible with the equipment currently established.

e. Any problems arising out of contractor's workmanship will be corrected by contractor with no additional cost charged to JEA or JAXPORT.

f. Contractor's employees are required to have attended JEA's Safety Orientation to submit an estimate for this work. In addition, the contractor and all sub-contractors must be safety pre-qualified and substation safety trained, if applicable, prior to the beginning of any work.

g. All contractors' employees, including all subcontractors, working on JEA and JAXPORT property will abide by JEA and JAXPORT Safety Rules and Regulations or will be asked to leave the property, and not be allowed to work on any other projects or properties.

h. The contractor is required to contact the JEA or JAXPORT Project Manager for a "Hot Work Permit" prior to conducting any activities that will result in the generation of a spark or flame on JEA or JAXPORT property.

i. JAXPORT 33 CFR Part 105.215, Security Awareness Training – This training has been created to address specific requirements within JAXPORT's Facility Security Plans and is provided by JAXPORT Public Safety Department. All contractors must receive the training prior to beginning work. Classes can be scheduled by contacting JAXPORT Access Control at accesscontrol@jaxport.com or calling 904-357-3344.

j. JAXPORT projects will require contractors and sub-contractors to obtain a valid Transportation Workers Identification Credential (TWIC) via the Transportation Security Administration (TSA) office located at 2121 Corporate Square Blvd. Bldg A #165, Jacksonville, Florida 32226, prior to beginning any work inside JAXPORT's Restricted Access Areas (RAA). Contract personnel will then register their TWIC at the JAXPORT Access Control Center and receive a JAXPORT Business Purpose Credential. If a TWIC cannot be obtained, then JAXPORT can provide escort services. This will be at the expense of the contractor.

15. General Construction Requirements: The following is a listing of the general construction requirements for this project, if applicable:

a. All equipment cabling must be installed in EMT conduit for interior applications and galvanized rigged conduit for exterior applications. In the case of buried cabling, the conduit should be PVC schedule 40 or better.

b. All in-ground pull boxes, installed in support of this contract, shall be set in gravel, a minimum of 6", to provide drainage, and dirt or mud from entering conduits. Conduits also shall be installed high enough above gravel, 6" minimum, to prevent gravel from entering the conduits. There will be no joints or splices allowed in the pull boxes in the ground. In addition, any electrical splices must be completed in a separate junction box below the equipment field enclosure.

c. Conduits ends will have bells or bushings installed and a pull string in all conduits, if they are installed under this contract. All conduits shall enter the bottom or sides of equipment and j-boxes when installed outside. All conduits entering the sides of j-box will require a fitting to provide a watertight seal such as a Meyers Hub.

d. If in-ground pull boxes, installed in support of this contract, are installed in an area where exposed to vehicle traffic, it will be of such construction, or have protection such as bollards, to prevent it from being damaged. Vehicular traffic includes, but is not limited to, passenger trucks, lawn tractors, and industrial service trucks.

e. All equipment cabling, installed in underground conduits, shall be gel filled or rated for wet locations. In addition, all fiber optical cabling will be rated for the application in which it is employed.

f. All fiber optic cabling, installed under this contract, will be tested by an optical time domain reflectometer (OTDR) upon completion of the installation. The tested fiber must show that any dB loss is within acceptable levels. The acceptable dB loss levels are .5 dB, per fiber optic connector, and .0004, per foot, of fiber optic cable. Test results, that exceed this standard, will result in the fiber optic cabling being rejected.

g. All existing fiber optic cabling identified to be used in a project shall be tested prior to use and must meet the same standards listed in line 14.f. Any deviation from this must be approved by the contact manager. Fiber test reports must be provided by the contractor.

h. Contractor shall utilize at minimum18 gauge – 4 or 6 wire conductors to all access control system components unless specified otherwise in the project.

i. All badge readers shall be wired as 20 milliamps unless otherwise required by manufacturers or best practices recommended installation procedures.

j. Contractor shall utilize, at minimum, CAT6 for ethernet wiring for all above ground in conduit installations. All fiber optic cable, ethernet, and low voltage cabling shall meet or exceed the environmental protection demands of each project site.

k. All above ground conduit shall be properly sealed at all conduit joints, junction boxes, and points of conduit termination to prevent water infiltration into conduit or equipment enclosures. If damage results from water infiltration the contractor will bear the full replacement cost to repair or replace the damaged equipment.

l. Contractor shall leave (1) pull string in all conduit runs that are newly installed.

m. All cable runs shall be labeled in accordance with Telecommunications Industry Association (TIA) 606-C labeling guidelines. JAXPORT reserves the right to modify this labeling standard if necessary per project.

n. All access control system cable runs shall be properly labeled at either end of all cable runs. All access control panels shall include a device label that documents the devices panel name, IP address, serial number and MAC address,

All access control system components shall include the use of the power surge grounding discharge line included with 18 gauge 4 or 6 conductor cable wiring unless otherwise agreed upon during a project.

o. Contractor shall follow the below standard guidelines for new cabinet enclosures.

- All industrial hardened switches and industrial hardened power supplies shall be din-rail or rack mounted unless a standard rack switch has been specified.
- All fiber optic cable LIU's, network surge protection, midspans and UPS devices shall be rack mountable units inside the VSS enclosure unless otherwise specified in the project.
- All single device power injectors shall be affixed to the rear or side of the cabinet and permanently attached.
- All cabling within the enclosure shall be neat and organized efficiently.
- Contractor shall not mount, rest, or permanently affix any equipment directly to the floor of the cabinet enclosure.
- Contractor shall provide to JAXPORT's IT department grounding testing results for all new or modified VSS enclosures as part of a project. All grounding results shall ensure resistance does not exceed 5ohms.
- Contractor shall ensure that all equipment mounted inside cabinet enclosures are properly grounded to the cabinets grounding bar. The cabinets grounding bar shall be properly connected to a grounding source that will allow power surges to properly dissipate so as to not cause damage to sensitive equipment within the cabinet enclosure.
- All newly installed enclosures shall include a grounding bar and pre-populated (4) plug outlet.

p. All existing or newly installed fiber optic cabling, installed under this contract, will be tested by an optical time domain reflectometer (OTDR) upon completion of the installation. A copy of OTDR testing results shall be provided to the Governing organization. The tested fiber must show that any dB loss is within acceptable levels. The acceptable dB loss levels are .5 dB, per fiber optic connector, and .0004, per foot, of fiber optic cable. DB loss per fiber run shall not exceed 3DB of loss for run-length, fiber-type, splice, connection, and termination. Test results, that exceed this standard, will result in the fiber optic cabling being rejected.

q. Contractor shall make all efforts possible to protect existing cable runs and terminations. Contractor shall, as required, terminate existing fiber connections damaged during equipment removal or replacement.

r. At time of project completion and upon request the contractor shall turnover any leftover tools or materials purchased under the project to JAXPORT. Additionally, the contractor shall, upon request, turn over all existing equipment removed from the project.

s. If removal of any existing equipment results in visible damage to drywall and/or the building façade, the contractor will be responsible for conducting minor repair work to the damaged area. This includes, but is not limited to, patching, plugging, and painting the impacted area.

t. The contractor is responsible for utilizing security screws for the mounting of any vandal resistant equipment and vandal resistant equipment mounts/brackets.

u. Access control projects are turnkey installations. Any painting, caulking or finishing work shall be included by the contractor as a part of their project.

v. All work done by the contractor will meet or exceed all applicable codes.

w. Contractor will be required to secure and pay all fees for permits, approvals, and licenses. Any deviation from the standards listed above has to be approved by or at the request of the authorized project manager for JEA or JAXPORT.