

## **GENERAL**

### **1.1 SUMMARY**

#### **A. Contractor Shall Provide and Install**

1. The materials and labor required for the installation of weapons detection systems include, but are not limited to:
  - a) Access Control Panels
  - b) Mobile Applications
2. Although such work is not specifically mentioned herein or on the Drawings, the Contractor shall furnish and install all miscellaneous items, accessories, appurtenances, and devices incidental to or necessary for a sound, secure, and complete installation, without claim for additional payment.

#### **B. Related Sections:**

1. Section 000000 – Procurement and Contracting Requirements
2. Section 010000 – General Requirements
3. Division 26 and 27 Electrical and Cabling Sections
4. Section 280000 – Common Work Results for Security
5. Section 281000 – Access Control and Alarm Management System
6. Section 282000 – Video Surveillance System

#### **C. References:**

1. National Electrical Code
2. International Electrical Code
3. Local Codes

### **1.2 SYSTEM DESCRIPTION**

#### **A. Access Control System**

1. System shall include access control panel, readers, [biometric readers], cabling, locking hardware and power supplies to facilitate access throughout the building.
2. System shall be programmed, controlled, and monitored through mobile application or web-browser.
  - a) [Mobile devices (i.e. tablets, smartphones, smart watches) shall be utilized as access control credentials.]
3. System will be tested to ensure failures are remediated, and that the system will be turnkey. System sensitivity will be configured to meet facility security requirements.

### **1.3 QUALIFICATIONS**

- A. Contractor shall have a proven track record in the field of specified cabling and system installations, with at least (3) previous installations of comparable size and complexity undertaken within the last (5) years.
- B. Contractor shall be a manufacturer's authorized distributor and warrantee station for the equipment offered, and shall maintain a fully equipped service organization capable of furnishing adequate repair service to the equipment.

### **1.4 SUBMITTALS**

- A. Make submittals in accordance with:
  1. Section 00 00 00 – Procurement and Contracting Requirements
  2. Section 01 33 00 – Submittal Procedures.
- B. Action Submittals:
  1. Shop Drawings
    - a) Owner will provide electronic files in CAD or Revit format, containing the contract document drawing files, for use in the preparing of the shop drawings, by the RCDD.
    - b) Drawings will be to scale.
    - c) Submit the following sheets and details:
      - 1) Titlesheet and Cover Page
      - 2) Site Plan
      - 3) Overall Floor Plans

4) Rough-in and wiring details

2. Product submittal

- a) Contractor shall furnish products for a complete, turnkey system. Submit major components and ancillary accessories required for complete system. Minor accessories like screws and nuts are not required for submission, unless specified in other Specifications sections.
- b) Product submittal shall be a single complete submittal. Incomplete submittals will be rejected without review.
- c) Catalog cut sheets and data sheets containing physical and dimensional information, performance data, electrical characteristics, materials used in fabrication, material finish, and licenses. Clearly indicate on each sheet what is being submitted on.

3. Qualification Data: Submit at least (3) references for telecommunications cabling jobs already completed, involving both fiber optics and twisted pair cabling, similar in scope to the project described herein. Include, for each customer reference, the following information: Company name, address, phone number, name and email address of contact and type of job completed.

- a) Provide copies of the Contractor's certification.
- b) Provide written guarantees from manufacturers of major equipment, that a service representative has been assigned.
- c) Provide copies of technician training certificates.

**1.5 DELIVERY, STORAGE, AND HANDLING**

- A. To prevent damage, theft, soiling, and misalignment, protect equipment during transit, storage, and handling.
- B. The Contractor shall coordinate the secure storage of equipment and materials on site, or, if no on-site storage is available, shall provide their own secure storage at the Contractor's expense.
  - 1. Do not store equipment where conditions fall outside the manufacturer's recommendations for environmental conditions.
  - 2. Do not install damaged equipment. Remove environmental conditions from the site and replace damaged equipment with new equipment.

3. If off-site storage of materials is necessary, this shall be at the Contractor's expense.
4. Do not expose to direct sunlight, water, dust and soot.
5. Do not place any magnetic objects near the product.
6. Magnetic objects such as magnets, CRT, T V, monitors or speakers may damage the device
7. Do not place the device next to heating equipment.
8. Prevent water, drinks or chemicals leaking into the device.
9. Do not drop or damage the device.
10. Do not disassemble, repair or modify the device.
11. Do not use the device for any purpose other than those specified.

## **1.6 CLOSEOUT DOCUMENTS**

- A. Final close out documents including, but not limited to, test results on in digital PDF and physical CD-ROM or USB drive, in native tester format, project manual that includes manufacturer and contractor warranties, product cut sheets, material submittals, etc. Also, include the following:
  1. Provide "As-Built" Drawings in AutoCAD or Revit.
    - a) "As-Built" drawings indicating location of all equipment including but not limited to work area outlets, patch panels, cross connect blocks, on each segment and cable routing outlet and identifiers. Indicate labeling for each piece of equipment.
    - b) As-Built drawings will contain all installed cabling and materials. Outlets will be numbered with each cable associated with the work area outlet.
    - c) (1) printed, hard copy of final approved as-built drawings in native sheet size will be provided to Owner. Unapproved sheet sizes will be rejected.
  2. Place a laminated full-size, minimum "C" sized, floor plan of these drawings (coordinate with Owner) on the wall of each communications room, showing area covered, data locations, and cable label.
  3. Print (2) printed copies of full-sized as-built drawings, and submit to Owner.

4. Provide printed cable test reports in 3-ring binder and submit to Owner.
5. Provide pricing and contact information for emergency service work not covered by warranty.

## **1.7 WARRANTY & SUPPORT**

- A. Warranty shall meet the following criteria:
  1. Warranty covering workmanship from the date of project completion. All repairs shall be made at no cost to the Owner during the warranty period.
    - a) Atlas Series panels and standalone readers shall have a 24-month warranty.
  2. Corrections shall start within 48-hours of notification from Owner.
  3. Claims shall be sent to support@zktecousa.com.
- B. If the warranty is needed by the Owner within the warranted period and the original installer is no longer in business, system manufacturer shall find a substitute certified contractor and assume costs to fulfill the obligations of the warranty.
- C. Upon acceptance of the warranty paperwork and test results from the Contractor, the system manufacturer will mail a notification letter to the installer and a notification letter with warranty certificate to Owner.
- D. The warranty period shall commence following the final acceptance of the project by the Owner and written confirmation of warranty from the system manufacturer.

## **PART 2 PRODUCTS**

### **2.1 ACCESS CONTROL PANEL**

- A. Access Control Panel shall have the following characteristics:
  1. Available in 1, 2, and 4-door configurations
    - a) Up to 4 Wiegand or 8 RS-485/OSDP readers
  2. Provide as [individual panel][bundle][kit].
  3. Capability for remote monitoring.
  4. [Recurring Monthly Revenue (RMR) w/ cloud application]
  5. Storage local to the panel [with cloud backup][with AtlasCloud].

6. Atlas continuously controls your clients' doors, even when the cloud connection is unavailable.
7. Types of Readers Supported: ZKTeco FR1500A / EP30 fingerprint, 125kHz & 13.56MHz Wiegand, OSDP, and RS-485 readers
8. Number of Inputs: [4][6][10] w/ 2 for auxiliary inputs
9. Number of Outputs: [1][3][5] Form C relays w/ 1 for auxiliary outputs
10. User Capacity: 5,000 (Fingerprints and/or card users)
11. Fingerprint Template Capacity: 5,000 (up to 10 fingerprints per user)
12. Logs: 10,000 transactions and unlimited archive downloads
13. Weight: up to 10 lbs (4.2kg)
14. Communication: TCP/IP, Wi-Fi, Wiegand, OSDP
15. Browsers Supported: Chrome, Firefox, Edge, Safari
16. Powder coated aluminum enclosure
17. Mounting: Din Rail
18. Power Supply: 12VDC, 2A [POE]
19. Dimensions (Bundle Only): 15 in. (L) X 3.15 in. (W) X 11 in. (H) [380 mm(L) X 80 mm(W) X 280 mm(H)]
20. Dimensions (Board Only): [6.3 in. X 5.51 in. (160 mm X 140 mm)]
21. Operating Temperature: - 32°F to 122°F (0°C-50°C)
22. Software: [OEM embedded][ZKTeco]
23. Certifications:
  - a) UL 294
  - b) ETL Listed
  - c) ETSI EN 301 489-1 V2.1.1:2017
  - d) ETSI EN 301 489-17 V3.1.1:2017
  - e) ETSI EN 300 328 V2.1.1:2016
  - f) FCC
  - g) NDAA-compliant

- B. Manufacturer: ZKTeco
  - 1. 1-Door Panel: Atlas160
  - 2. 2-Door Panel: Atlas260
  - 3. 4-Door Panel: Atlas460
  - 4. 1-Door Bundle: Atlas160BUN
  - 5. 2-Door Bundle: Atlas260BUN
  - 6. 4-Door Bundle: Atlas460BUN
  - 7. 4-Door Kit, Atlas460, 4-EP10C-M readers, 4-PTE-1 Exit Switches, 50-Prox Card Thick: Atlas460-BT-Kit
  - 8. 4-Door Kit, Atlas 460, 4-EP30CF-M readers,4-PTE-1 Exit Switches, 1-ZK9500 Fingerprint Enrollment Reader: Atlas460-FP-Kit

## **2.2 MOBILE APPLICATION**

- A. Mobile Application shall have the following characteristics:
  - 1. Add/edit users
  - 2. View reports/alarms
  - 3. Initiate and clear lock-downs
  - 4. Remotely open/close doors
  - 5. Manufacturer: ZKTeco
    - a) Atlas App
- B. Mobile Credential shall have the following characteristics:
  - 1. Enables smart devices like smartphones, smart watches, tablet to be used as access control credentials
  - 2. Functions include Card Mode, Remote Mode, and QR code
  - 3. Available in the Apple App Store and Google Play
  - 4. Manufacturer: ZKTeco
    - a) ARMATURA ID App
- C. Mobile Credential shall have the following characteristics:

1. Enables smart devices like smartphones, smart watches, tablet to be used as access control credentials through Bluetooth and QR code
2. Available in the Apple App Store and Google Play
3. Manufacturer: ZKTeco
  - a) ZKey

## **PART 3 EXECUTION**

### **3.1 WORKMANSHIP**

- A. Manufactured products, materials, equipment, and components shall be provided, conditioned, applied, installed, connected, and tested in accordance with the manufacturer's specifications and printed instructions.
  1. This includes work done by other trades not limited to, but including electrical, door hardware, and telecommunications.
- B. The installation of all system components shall be carried out under the direction of qualified personnel. Appearance shall be considered as important as mechanical and electrical efficiency. Workmanship shall meet or exceed industry standards.

### **3.2 INSTALLATION GUIDELINES**

- A. Panels
  1. Secure to studs, beams, or approved backing. Equipment shall be plumb and square.
  2. Ensure panel board is properly powered. Electrical installation shall comply with Electrical Codes.
  3. Provide diode for locks directly powered by the access control board.
  4. Installation shall comply with manufacturer's guidelines.
  5. Coordinate frequencies and antenna orientation to minimize interference.

### **3.3 PROGRAMMING & CONFIGURATION**

- A. Coordinate static IP addresses and controller subnets with network administrator.
- B. Coordinate and configure access levels and door groups.
- C. Coordinate reset of default username and password.
- D. Coordinate system configuration and settings with system user/manager.

- E. Integrations with other systems shall be documented.
- F. Access Control Panels
  - 1. Wiegand or OSDP readers shall be connected to the correct port.
  - 2. Expansion boards shall be connected via RS-485 ports, up to a maximum of 16 inputs and 2 outputs.
    - a) Set RS-485 addresses before powering boards.
  - 3. Configure dip switch settings per manufacturer's guidelines.
  - 4. [Ensure OEM software is installed with the most current software packages.]
- G. Mobile [& Cloud] Applications
  - 1. Refer to manufacturer for most current and up-to-date guidelines.
  - 2. [Update controllers with the cloud firmware package.]

### **3.4 TESTING PROCEDURES**

- A. Submit audit logs and proof of all tests.
- B. Submit proof of adherence with manufacturer's guidelines on use of biometric data. Abide by local laws and regulations.

### **3.5 CLOSEOUT DOCUMENTS**

- A. Provide detailed project record documentation for sections listed in Part 1.
- B. Maintain separate sets of redlined design drawings for the communications work, which show the exact placement, and identification of as-built system components. These are subject to weekly review by the General Contractor, Owner, or its representative.

### **3.6 WARRANTY & SUPPORT SERVICES**

- A. Remove dust or dirt regularly.

### **3.7 GENERAL**

- A. Refer to manufacturer's guidelines and documentation for installation.
- B. Provide any required screws, anchors, clamps, hook and loop, miscellaneous grounding and support hardware, etc. needed to facilitate the installation of the system.

- C. Furnish any special installation equipment or tools necessary to properly complete the installation.
- D. All techniques and fixtures used in the installation must minimize complexity and must allow for easy maintenance of, and ready access to, all components for test measurements.

### **3.8 TRAINING**

- A. Provide a minimum of (1) 4-hour training session with a minimum of (4) Owner's staff at the project site (or other location designated by the Owner) by a qualified instructor who is factory certified (presence of equipment necessary because trainees must successfully demonstrate knowledge on a working system). Topics shall include system usage, operation and maintenance, and minor modifications.
  - 1. [ZKTeco remote training shall be scheduled with ZKTeco training staff.]
  - 2. [ZKTeco in-person training shall be scheduled with ZKTeco training staff.]

**\*\*\*END OF SECTION\*\*\***