**AIR TRAFFIC AND NAVIGATION SERVICES CO. LTD**

**REPUBLIC OF SOUTH AFRICA**



**REQUEST FOR TENDER:**

**REQUEST FOR PROPOSALS:** **ATNS/TPQ/RFP0023/2023/24/FALE CONTROL TOWER CCTV, ACCESS CONTROL AND ALARM SYSTEM**

**APPOINTMENT OF A SERVICE PROVIDER FOR A ONCE OFF DELIVERY, INSTALLATION AND COMMISSIONING OF SECURITY SYSTEMS AT THE KING SHAKA INTERNATIONAL AIRPORT (FALE), VIRGINIA AIRPORT (FAVG), RICHARDS BAY AIRPORT (FARB) AND PIETERMARITZBURG AIRPORT (FAPM).**

**VOLUME 2, 3 and 4**

**July 2023**

**The information contained within this document is confidential to ATNS in all respects and it is hereby acknowledged that the information as provided shall only be used for the preparation of a response to this document. The information furnished will not be used for any other purpose than stated and that the information will not directly or indirectly, by agent, employee or representative, be disclosed either in whole or in part, to any other third party without the express written consent by the Company or its representative.**

|  |
| --- |
| **TABLE OF CONTENTS** |

[ABBREVIATIONS 5](#_Toc138624799)

[1 GENERAL INSTRUCTIONS TO BIDDERS 7](#_Toc138624800)

[2 SCOPE OF WORK 8](#_Toc138624801)

[3 SUMMARY OF REQUIREMENTS 8](#_Toc138624802)

[3.1 Location Description 8](#_Toc138624803)

[3.2 Items Required 9](#_Toc138624804)

[VOLUME 2: TECHNICAL REQUIREMENTS 10](#_Toc138624805)

[CHAPTER 1: GENERAL REQUIREMENTS 10](#_Toc138624806)

[1 ENVIRONMENTAL CONDITIONS 10](#_Toc138624807)

[2 MAINS SUPPLY 10](#_Toc138624808)

[3 SYSTEM LIFESPAN 11](#_Toc138624809)

[4 SYSTEM HOUSING 11](#_Toc138624810)

[5 USER CAPABILITIES 11](#_Toc138624811)

[6 SOFTWARE REQUIREMENTS 12](#_Toc138624812)

[7 NETWORK COMMUNICATION LAYOUT 12](#_Toc138624813)

[8 DECOMMISSIONING AND DISPOSAL 12](#_Toc138624814)

[CHAPTER 2: ACCESS CONTROL SYSTEM 14](#_Toc138624815)

[1 MAIN ACCESS CONTROL SYSTEM 14](#_Toc138624816)

[1.1 General 14](#_Toc138624817)

[1.2 Access Control Management System 15](#_Toc138624818)

[2 AUXILIARIES AND SUPPORT SYSTEMS 16](#_Toc138624819)

[2.1 Proximity Reader 16](#_Toc138624820)

[2.2 Door Controller 18](#_Toc138624821)

[2.3 Access Cards and Card Printing Machine 20](#_Toc138624822)

[2.4 Locking Mechanism 21](#_Toc138624823)

[2.5 Automatic Door Closures 22](#_Toc138624824)

[2.6 Door Open/Close Sensor 22](#_Toc138624825)

[2.7 FALE Guard House Requirements 22](#_Toc138624826)

[2.8 Network Connectivity 23](#_Toc138624827)

[CHAPTER 3: CCTV SYSTEM 24](#_Toc138624828)

[1 CCTV SYSTEM 24](#_Toc138624829)

[2 CAMERA SPECIFICATIONS 24](#_Toc138624830)

[3 MONITOR AND OPERATOR POSITIONS 26](#_Toc138624831)

[3.1 FALE Requirements 26](#_Toc138624832)

[3.2 FAPM, FAVG and FARB Requirements 27](#_Toc138624833)

[4 NETWORK VIDEO RECORDER 27](#_Toc138624834)

[CHAPTER 4: INTRUDER ALARM SYSTEM 30](#_Toc138624835)

[1 GENERAL 30](#_Toc138624836)

[2 ALARM CONTROL PANEL 31](#_Toc138624837)

[3 MAGNETIC CONTACTS 31](#_Toc138624838)

[4 INFRARED STRIPS 32](#_Toc138624839)

[5 PANIC BUTTONS 33](#_Toc138624840)

[6 MOTION DETECTORS 33](#_Toc138624841)

[CHAPTER 5: INTERCOM SYSTEM 35](#_Toc138624842)

[1 INTERCOM SPECIFICATIONS 35](#_Toc138624843)

[CHAPTER 6: SYSTEM INTEGRATION 37](#_Toc138624844)

[1 SYSTEM INTEGRATION 37](#_Toc138624845)

[VOLUME 3: PROJECT MANAGEMENT REQUIREMENTS 38](#_Toc138624846)

[CHAPTER 7: PROJECT MANAGEMENT SPECIFICATIONS 38](#_Toc138624847)

[1 GENERAL 38](#_Toc138624848)

[2 PROJECT MANAGEMENT PLAN 39](#_Toc138624849)

[2.1 Work Breakdown Structure 39](#_Toc138624850)

[2.2 Resource Allocation Plan 39](#_Toc138624851)

[2.3 Resumes of Key Personnel 39](#_Toc138624852)

[3 PROJECT REVIEW MEETINGS 40](#_Toc138624853)

[3.1 Technical Review Meetings 40](#_Toc138624854)

[3.2 Project Status Reports 40](#_Toc138624855)

[4 TESTING & COMMISSIONING 41](#_Toc138624856)

[4.1 Installation, Transition and Commissioning Plan 41](#_Toc138624857)

[4.2 Test And Evaluation Master Plan 41](#_Toc138624858)

[5 RISK MANAGEMENT PLAN 41](#_Toc138624859)

[5.1 Risk Policy and Procedures 41](#_Toc138624860)

[5.2 Risk Report 41](#_Toc138624861)

[6 QUALITY ASSURANCE 42](#_Toc138624862)

[6.1 QA Policy and Procedures 42](#_Toc138624863)

[6.2 Responsibility for Quality 42](#_Toc138624864)

[6.3 Company Quality Inspections 42](#_Toc138624865)

[6.4 Delivery of Project QA Plan 42](#_Toc138624866)

[7 SITE SURVEY 42](#_Toc138624867)

[8 ENVIRONMENTAL MANAGEMENT PROGRAMME 42](#_Toc138624868)

[9 PERSONAL PERMIT 43](#_Toc138624869)

[VOLUME 4: LOGISTIC SUPPORT REQUIREMENTS 44](#_Toc138624870)

[CHAPTER 8: LOGISTIC SUPPORT REQUIREMENTS 44](#_Toc138624871)

[1 TRAINING 44](#_Toc138624872)

[2 WARRANTY 44](#_Toc138624873)

[3 SPARES 44](#_Toc138624874)

[4 SUPPORT CONTRACT 44](#_Toc138624875)

|  |
| --- |
| ABBREVIATIONS |

ATC Air Traffic Controller

ATNS Air Traffic and Navigation Services SOC Ltd

ATSU Air Traffic Services Unit

CCTV Closed-Circuit Television

COC Certificate of Compliance

EMPr Environmental Management Programme

ET Engineering Technician

FALE King Shaka International Airport

FAPM Pietermaritzburg Airport

FARB Richards Bay Airport

FAVG Virginia Airport

FAR False Acceptance Rate

FRR False Rejection Rate

HD High Definition

HDMI High-Definition Media Interface

HMI Human Machine Interface

IEC International Electrotechnical Commission

IEEE Institute of Electrical and Electronic Engineers

IP Ingress Protection

LAN Local Area Network

LED Light Emitting Diode

MATS Manager Air Traffic Services

MTS Manager Technical Services

N/C Normally Closed

N/O Normally Open

NVR Network Video Recorder

OIC Operator in Charge

ONVIF Open Network Video Interface Forum

PC Personal Computer

PIN Personal Identification Number

PIR Passive Infrared

PMP Project Management Plan

PoE Power over Ethernet

PVC Polyvinyl Chloride

RFID Radio Frequency Identification

SANS South African National Standards

SAWS South African Weather Services

SSD Solid State Drive

STS Supervisor Technical Services

TCP/IP Transmission Control Protocol/Internet Protocol

UML Unified Modelling Language

UPS Uninterrupted Power Supply

WBS Work Breakdown Structure

WDR Wide Dynamic Range

# GENERAL INSTRUCTIONS TO BIDDERS

The Bidder shall submit all responses, diagrams, documentation and drawings according to the GENERAL INFORMATION AND INSTRUCTIONS TO BIDDERS document and in the English language.

To assist Bidders only, each paragraph or article has been appended throughout with the letters “(M)”, “(D)”, “(O)” or “(I)”, to indicate whether the requirement is **M**andatory, **D**esirable, **O**ptional or for **I**nformation only.

**ALL RESPONSES TO THE REQUIREMENTS IN THIS DOCUMENT SHALL BE PROVIDED AS FOLLOWS:**

BIDDERS SHALL RESPOND IN FULL TO EACH ITEM IN THE FORMAT PROVIDED AND REFERENCES (CHAPTER, SECTION, PAGE NUMBER, PARAGRAPH NUMBER) TO DOCUMENTS AND RELEVANT INFORMATION SUPPORTING THE RESPONSES SHALL BE INDICATED IN THE SPACE PROVIDED. THIS INFORMATION WILL BE THE **ONLY RESPONSE USED FOR THE EVALUATION AND ASSESSMENT**.

Responses, provided in the space allowed, that are not clear or inadequate or the lack thereof shall be interpreted as **“Not Compliant”** even though the compliance column is declared as “Comply” and/or the Bidder’s offer meets the requirement. Bidders shall ensure that each response correctly addresses the requirement stated. Responses not addressing the requirement of the specific paragraph shall be interpreted as **“Not Compliant”**.

Bidders shall declare compliance to each and every paragraph of this document, based on the paragraph classification, in the response block provided opposite the column labelled “Compliance”. Bids will be evaluated as follows:

C: fully compliant = 2 points:

PC: partly compliant = 1 point;

NC: not compliant = 0 points.

Noted: Noted and accepted (applicable to paragraphs marked as “I”, not containing requirements)

Bidders shall, for paragraphs declared “PC” or “NC”, include a statement as to the nature of the variation and may supply additionally supporting information in the space provided to demonstrate how the proposal may still meet the needs of ATNS.

**Paragraphs marked “(M)”**, indicates that the requirement is mandatory and Bidders that do not comply with the requirement **shall** be disqualified for further evaluation.

**Paragraphs marked “(D)”**, indicates that the requirement is desirable, and the Bidder is expected to declare their level of compliance, provide a formal response and reference supporting documents.

**Paragraphs marked “(I)”**, indicates that the requirement is for information, however the Bidder is still expected to respond and provide information if requested. Any information gathered herein may form part of the contractual terms.

**Paragraphs marked “(O)”**, indicates that the requirement is optional, and the Bidder may decide how to respond.

# SCOPE OF WORK

The project calls for the procurement, delivery, installation and commissioning of security systems within the King Shaka Region that includes access control systems, Closed-Circuit Television (CCTV) systems, intruder alarm systems and intercom systems. The security systems will be deployed in the Air Traffic Services Units (ATSUs) at the King Shaka International Airport (FALE), Virginia Airport (FAVG), Richards Bay Airport (FARB) and Pietermaritzburg Airport (FAPM). The scope of the project further includes the support and maintenance of the new security systems and decommissioning and disposal of the existing replaced security systems.

# SUMMARY OF REQUIREMENTS

## Location Description

The table below provides a high-level description of each location.

Table : Description of each site.

|  |  |  |
| --- | --- | --- |
| **NAME** | **TYPE** | **DESCRIPTION** |
| King Shaka International Airport | ATSU | Building |
| Pietermaritzburg Airport | ATSU | Building (part of the main airport building) |
| Virginia Airport | ATSU | Building (part of the main airport building) |
| Richards Bay Airport | ATSU | Building (part of the main airport building) |

## Items Required

The tables below summarise the items required per location.

Table 2: ATSU items required.

|  |  |  |
| --- | --- | --- |
| **ATSU** | **Requirements** | **Quantity / Capacity** |
| King Shaka | Access Control System | 21 Access points2 Card printing machine |
| CCTV System | 32 Cameras |
| Intruder Alarm System | 4 Control Panels6 Perimeter Doors5 Zones  |
|  |  |  |
| Pietermaritzburg | Access Control System | 5 Access points1 Card printing machine |
| CCTV System | 5 Cameras |
| Intruder Alarm System | 1 Control Panel2 Perimeter Door1 Zone |
| Intercom | 1 Gate Station1 Handset |
|  |  |  |
| Virginia | Access Control System | 3 Access points1 Card printing machine |
| CCTV System | 4 Cameras |
| Intruder Alarm System | 1 Control Panel1 Perimeter Door1 Zone |
| Intercom | 1 Gate Station1 Handset |
|  |  |  |
| Richards Bay | Access Control System | 2 Access points1 Card printing machine |
| CCTV System | 1 Camera |
| Intercom | 1 Gate Station1 Handset |
|  |  |  |

VOLUME 2: TECHNICAL REQUIREMENTS

1. GENERAL REQUIREMENTS

# ENVIRONMENTAL CONDITIONS

1. The security systems and its auxiliary components offered shall operate within specifications without any degradation in performance under the following environmental conditions and tolerances. The Bidder shall provide supporting information indicating compliance to this requirement. (D)

Table 3: Environmental Conditions.

|  |  |
| --- | --- |
| **Parameter** | **Value** |
| **Outdoors** |  |
| Temperature | -10° to +55°C |
| Relative Humidity | 10% to 90% (non-condensing) |
| **Indoors** |  |
| Temperature | -5 °C to +35 °C |
| Relative Humidity | 10% to 80% (non-condensing) |
| **Protection Rating** |  |
| Ingress Protection (IP) Rating | IP65 (Except where indicated otherwise) |
| Mechanical impact protection rating | IK08 |

# MAINS SUPPLY

1. The security systems shall be powered from an existing online Uninterrupted Power Supply (UPS) to protect the system from surge currents/voltages and provide continuous backup power should the main power supply be interrupted. The Bidder shall provide supporting documentation and indicate compliance to this requirement. (D)
2. Those devices that cannot be supported by the UPS shall be provided with a battery backup. The battery backup shall be able to keep the device operational for a minimum period of 6 hours after a power failure. The devices that will require a battery backup shall be capable of providing a low battery alert. The Bidder shall indicate which devices for each of the systems offered will require a battery backup and details on the battery backup shall be provided. (D)
3. All electrical work shall comply to SANS 10142-1. The Bidder shall provide supporting documentation to show compliance to this requirement. (D)
4. The Contractor shall provide a Certificate of Compliance (COC) for all electrical work performed under this project. The Bidder shall make provision for this in the price schedules. (D)

# SYSTEM LIFESPAN

1. The design life of the security systems offered shall be at least 10 years. The Bidder shall provide supporting information indicating the design life of the proposed security systems. (D)

# SYSTEM HOUSING

1. The Contractor shall supply and install one (1) dedicated 19-inch, 32U floor standing equipment cabinet at FALE to house the equipment for the security systems offered, as well as the associated support and auxiliary hardware. The Bidder shall provide details on the cabinet and make provision for this in the price schedules. (D)
2. The floor standing equipment cabinet shall be installed in the Ground Floor Equipment room at FALE. The Bidder shall indicate compliance to this requirement. (D)
3. The Contractor shall supply and install one (1) dedicated 19-inch, wall mountable equipment cabinet at each of the other ATSU’s to house the equipment for the security systems offered, as well as the associated support and auxiliary hardware. The Bidder shall provide details on the cabinet and make provision for this in the price schedules. (D)
4. The wall mountable equipment cabinet shall be installed in the Equipment room at each of the other ATSU’s. The Bidder shall indicate compliance to this requirement. (D)

# USER CAPABILITIES

1. The security systems shall cater for different users with configurable user permissions. The Bidder shall provide supporting information to show compliance to this requirement. (D)
2. The security systems shall be configurable to cater for at least three (3) user levels and associated permissions as shown in the table below. The Bidder shall provide supporting documentation to show compliance to this requirement. (D)

Table 4: User permissions.

|  |  |  |
| --- | --- | --- |
| **#** | **USER** | **PERMISSIONS** |
| 1 | Super User | Full system access |
| 2 | Administrator | All access excluding configuration changes. |
| 3 | General User | View only with limit control (e.g., 5-min playback, camera selection) |

# SOFTWARE REQUIREMENTS

1. Software updates, patches, new versions, and new releases on all systems shall not overwrite, alter, amend or impact on the operational system configuration and operational system parameters. All systems shall be able to revert to previous software versions. The Bidder shall provide supporting information indicating compliance to this requirement. (D)

# NETWORK COMMUNICATION LAYOUT

1. The Access Control System and the CCTV System shall make use of the existing network, where applicable, for communication between the various components (i.e., door controllers, cameras, etc.). The Tenderer shall indicate compliance to this requirement. (D)
2. The Contractor shall supply and install new CAT6 Ethernet cables to connect the necessary equipment (i.e., cameras, door controllers, etc.) to the network. A maximum length of 110m of cable per item, shall be provided for at each location to cater for each of the items (camera, door controllers, etc.). The Bidder shall make provision for this in the costing. (D)
3. The details below are applicable to the existing fibre optic layout at the FALE ATSU:
4. The Guard house and the Tower Equipment room are two separate sites and are connected to the Ground floor Equipment room via fibre optic cable.
5. The fibre installed is single mode 1310nm with ST connectors. The fibre shall be used to connect to the Guard house and the Tower Equipment Room.

The Tenderer shall indicate acknowledgement of this requirement. (I)

1. The Contractor shall supply and install suitable network switches, fibre interfaces and patch panels at the FALE guard house and the tower equipment room to connect the new security equipment to the main network. The Bidder shall provide supporting data sheets on the devices offered and include the itemized costing in the price schedules. (D)

# DECOMMISSIONING AND DISPOSAL

1. The existing security equipment that are replaced, shall be uninstalled, disassembled and disposed of in an environmentally friendly manner and in line with current environmental laws. The Bidder shall provide supporting information to indicate compliance to this requirement. (D)
2. Waste shall be managed according to the ATNS waste management policies and there shall be adherence to the requirements of the National Waste Management Act (No.59 of 2008). The Bidder shall indicate compliance to this requirement. (D)
3. Records of disposal shall be kept at sites and also sent to ATNS Environment & Sustainability Department. The Bidder shall indicate compliance to this requirement. (D)

1. ACCESS CONTROL SYSTEM

# MAIN ACCESS CONTROL SYSTEM

## General

1. The Contractor shall supply and install an access control system consisting of the following devices, including but not limited to:
	1. Server
	2. Proximity readers
	3. Door controllers
	4. Desktop for enrolment of new users - biometrics, Radio Frequency Identification (RFID) and Personal Identification Number (PIN) code registration
	5. Biometrics enrolment reader/writer
	6. Card printing machine
	7. Locking mechanisms (Magnetic door lock)
	8. Existing physical barriers (Boom gates and Turnstiles)

The Bidder shall provide supporting information to show compliance to this requirement. (D)

1. The access control system shall be scalable. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
2. The access control system shall cater for multiple entry/exit points. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
3. The access control system shall allow for the configuration of different zones with different access rights. The access control system shall thus allow for the configuration of zones to have restricted access to authorised personnel only. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
4. Each zone shall be monitored by the access control system and a record of users entering and exiting the zone shall be kept. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
5. The cabling for the new access control system shall be installed in the existing cable routes, ducts and trays as far as possible. The Bidder shall indicate compliance to this requirement. (D)
6. The access control system shall allow for visitors and contractors to be enrolled on a temporary basis with an access time or duration limit. Visitors and contractor’s identification details shall be stored on the database. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
7. All devices associated with the access control system shall have a power status indicator. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
8. The access control system shall cater for an interface from the existing fire detection system. The interface shall be a N/O (normally open) relay contact or a N/C (normally closed) relay contact. The Bidder shall provide supporting information indicating the interface for the fire detection system on the proposed access control system. (D)
9. In the event of a fire and during an emergency evacuation, the access control system shall unlock all doors automatically. The exception will be at FALE, where the guard house will be excluded from being automatically unlocked. The Bidder shall provide supporting information indicating compliance to this requirement. (D)

## Access Control Management System

1. A central access management system shall be provided to manage the access control system. The Bidder shall provide details of the proposed central access management system. (D)
2. The access management system shall have a user-friendly Human Machine Interface (HMI). The Bidder shall provide samples of the HMI and supporting information on the HMI functionality. (D)
3. The access management system shall cater for administrator access to the server and database where users and events are stored. The Bidder shall provide supporting information indicating that the proposed access management system complies to this requirement. (D)
4. The access management system shall allow for the setting up of access zone profiles. The system shall allow for the different zone profiles to be applied to specific user types. The system shall allow for access to be scheduled and restricted during specific times. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
5. The access management system shall generate a visual and audible alarm/alert when an entry/exit door is left open for longer than a configurable duration. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
6. The access management system shall log and track all system changes. The system shall be capable of extracting all system changes into a report in pdf format. The Bidder shall provide details on how system changes are handled and shall provide a list of reports can be extracted from the system. (D)
7. The Unified Modelling Language (UML) architecture of the access management system software shall be provided. The Bidder shall indicate compliance to this requirement. (D)

# AUXILIARIES AND SUPPORT SYSTEMS

## Proximity Reader

1. The contractor shall supply and install 2 proximity readers for each of the entry/exit points as defined in the table below. The Bidder shall provide details of the proposed proximity readers and make provision for it in the costing. (D)

|  |  |  |
| --- | --- | --- |
| **ATSU** | **Entry/Exit Points** | **Associated Readers** |
| FALE | 21 | 42 |
| FAVG | 3 | 6 |
| FAPM | 5 | 10 |
| FARB | 2 | 4 |

1. The proximity readers shall have the ability to identify personnel by means of:
	1. RFID cards
	2. Fingerprints
	3. Keypad PIN codes
	4. Any combination of the above

The Bidder shall provide supporting information confirming that the proposed proximity readers support the above access methods. (D)

1. The proximity readers shall support Transmission Control Protocol/Internet Protocol (TCP/IP) network communication. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
2. The proximity readers shall support PoE (Power over Ethernet). The Bidder shall provide supporting information indicating compliance to this requirement. (D)
3. The proximity readers shall provide an indication to show when access is granted or denied. If the indication is in the form of a LED light, the LED shall glow green when access is granted and red when access is denied. The Bidder shall provide details about what the proposed proximity reader displays when access is granted or denied. (D)
4. The proximity reader shall support the following RFID technologies, including but not limited to:
	1. HID 125KHz
	2. MIFARE 1K
	3. MIFARE 4K
	4. MIFARE Ultralight / C
	5. MIFARE DESFire / EV1
	6. MIFARE Mini

The Bidder shall provide supporting information indicating what RFID technologies are supported by the proposed proximity reader. (D)

1. The proximity reader shall have a card reading distance of 0 to 5cm. The Bidder shall provide supporting information indicating the card reading distance of the proposed proximity reader. (D)
2. The proximity reader shall have a card reading duration of less than 1 second. The Bidder shall provide supporting information indicating the card reading duration of the proposed proximity reader. (D)
3. The proximity reader shall have an optical fingerprint module. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
4. The proximity reader shall have a fingerprint comparing mode of 1:1 and 1:N. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
5. The proximity reader shall have a fingerprint False Acceptance Rate (FAR) of less than 0.001%. The Bidder shall provide supporting information indicating the FAR of the proposed proximity reader. (D)
6. The proximity reader shall have a fingerprint False Rejection Rate (FRR) of less than 0.01%. The Bidder shall provide supporting information indicating the FRR of the proposed proximity reader. (D)
7. The proximity reader shall be plug-and-play and seamlessly integrate with the access management system. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
8. All outdoor proximity readers shall have an IP67 rating and shall be fitted with an outdoor weatherproof housing to protect the unit from direct sunlight. Weatherproof housings shall be provided for as per the table below. The Bidder shall provide supporting information indicating the IP rating of the proposed proximity reader as well as details of the weatherproof housing. The Bidder shall also make provision for the weatherproof housings in the costing. (D)

|  |  |  |
| --- | --- | --- |
| **Location** | **Positions** | **Weatherproof housings** |
| FALE | * + Vehicle entry (2)
	+ Vehicle exit (2)
	+ Reception entry (1)
	+ Equipment Room A (ERA) entry (1)
 | 6 |
| FAPM | * + Main Entrance
	+ Emergency Exit
 | 2 |
| FARB | * + Main Entrance Gate
 | 1 |

1. The Contractor shall supply and install four (4) goose neck poles for the proximity readers at the vehicle entry/exit points at FALE. The Bidder shall provide details of the proposed goose necks and make provision for this in the costing. (D)

## Door Controller

1. The access control system shall incorporate door controller(s). Door controllers can be associated per system, or per zone, or per door or per proximity reader. The Bidder shall indicate how the door controllers are incorporated into the proposed access control system. (D)
2. The supplier’s system configuration shall determine the number of door controllers to accommodate the number of entry/exit points and associated proximity readers per location as indicated in the table below. It shall be noted that the Entry/Exit points for the FALE Guardhouse are not doors. Six (6) of the associated readers will be used for boom gates and two (2) will be used for turnstiles in line with the requirements under Section 2.7 of this Chapter. The Bidder shall indicate the number of door controllers that will be required and make provision for it in the costing. (D)

|  |  |  |
| --- | --- | --- |
| **Location** | **Entry/Exit Points** | **Associated Readers** |
| FALE ATSUFALE Guard House | 174 | 348 |
| FAVG | 3 | 6 |
| FAPM | 5 | 10 |
| FARB | 2 | 4 |

1. The door controller(s) shall have a storage capacity that can accommodate the database, of unique identification (biometrics, RFID card and PIN code) information, for a minimum of people per location as indicated in the table below. The Bidder shall provide supporting information indicating the storage capacity of the proposed door controllers. (D)

|  |  |
| --- | --- |
| **Location** | **People** |
| FALE | 500 |
| FAVG | 100 |
| FAPM | 100 |
| FARB | 100 |

1. The database on the door controller(s) shall be updated/synchronised when changes are made at the access management system. The Bidder shall provide supporting information indicating how the database on the door controllers are updated/synchronised when changes are made at the access management system. (D)
2. All events from the door controllers shall be recorded and stored on the central server. During a power or network outage, the door controller(s) shall have a storage capacity to cater for at least 100,000 events until the power or network is restored. The Bidder shall provide supporting information indicating the door controller’s storage capacity for and the management of events during power or network outages. (D)
3. The door controller(s) and all associated devices (i.e., proximity readers, locking mechanisms, etc.) shall be able to function independently of the connection to the server and the backup power supply. The Bidder shall provide supporting information indicating how this requirement will be complied with. (D)
4. All data stored on the door controller(s) shall be retained during a power failure. The Bidder shall provide supporting information indicating how this requirement will be complied with. (D)
5. The Contractor shall supply and install a bypass key switch on the unsecured side of each door where a door controller is installed. All bypass keys for one location shall be keyed alike. The number of copies of the bypass keys to be provided at each location are indicated in the table below. The Bidder shall provide details of the proposed bypass key switches and make provision for it in the costing. (D)

|  |  |
| --- | --- |
| **Location** | **Keys** |
| FALE | 10 |
| FAVG | 4 |
| FAPM | 4 |
| FARB | 4 |

1. The contractor shall supply and install a green resettable emergency door release call point on the secure side of each door where a door controller is installed. The Bidder shall provide details of the proposed call point and make provision for it in the costing. (D)

## Access Cards and Card Printing Machine

1. The Contractor shall provide RFID cards which are compatible with the access control system. The number of RFID cards to be provided per location are indicated in the table below. The Bidder shall provide details about the proposed RFID cards and make provision for it in the costing. (D)

|  |  |
| --- | --- |
| **Location** | **RFID cards** |
| FALE | 500 |
| FAVG | 50 |
| FAPM | 50 |
| FARB | 50 |

1. The Contractor shall provide blank Polyvinyl chloride (PVC) cards for ATNS employee credentials to be printed on. The number of PVC cards to be provided per location are indicated in the table below. The Bidder shall make provision for this in the costing. (D)

|  |  |
| --- | --- |
| **Location** | **PVC cards** |
| FALE | 500 |
| FAVG | 100 |
| FAPM | 100 |
| FARB | 100 |

1. The Contractor shall design and supply three (3) types of printing templates for the employee cards. The layout of the templates shall be provided by ATNS after contracting. The Bidder shall make provision for the templates in the costing. (D)
2. The Contractor shall supply and install user registration workstations with a biometric reader/writer and an associated card printing stations as per the table below. The Bidder shall provide details of the proposed workstations and card printing stations and make provision for them in the costing. (D)

|  |  |  |
| --- | --- | --- |
| **Location** | **Nr of workstations** | **Position** |
| FALE | 2 | Manager Technical Services SecretaryManager Air Traffic Services Secretary |
| FAVG | 1 | Tower Cab |
| FAPM | 1 | Tower Cab |
| FARB | 1 | Tower Cab |

1. All workstations shall have the capability to enrol new users and print access cards. The Bidder shall provide supporting information indicating how this requirement will be complied with. (D)
2. Card printing machines shall be delivered with a colour printer ribbon. Each printer ribbon shall have a yield of at least 500 cards. The Bidder shall indicate the yield of the proposed printer ribbons and make provision for it in the costing. (D)
3. One spare colour printer ribbon shall be provided for each card printing machine. The Bidder shall make provision for it in the costing. (D)

## Locking Mechanism

1. The Contractor shall supply and install locking mechanisms for each of the entry/exit doors where a door controller is installed. The Bidder shall provide details of the proposed locking mechanisms and make provision for them in the costing. (D)
2. The locking mechanism shall be a magnetic lock or equivalent. The Bidder shall provide supporting information indicating the type of locking mechanism to be provided. (D)
3. The locking mechanism shall have minimum break force of 500kg. The Bidder shall provide supporting information indicating minimum break force of the proposed locking mechanism. (D)
4. The locking mechanism shall be compatible with the proposed door controller. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
5. The locking mechanism shall be installed on the inside of the door and the design shall cater for doors opening to the outside as well as to the inside. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
6. The locking mechanism shall have an LED to display the lock status. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
7. The locking mechanism shall generate an output signal to provide the lock status to the door controller and the access management system. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
8. The locking mechanism shall cater for an interface from the intercom system, where applicable, so that it can be unlocked from the intercom’s handset. The Bidder shall provide supporting information indicating compliance to this requirement. (D)

## Automatic Door Closures

1. The Contractor shall supply and install automatic door closure on all doors where a door controller is installed. The Bidder shall provide details of the proposed automatic door closures and make provision for them in the costing. (D)
2. The door closure shall be able to cater for a door weight of up to 50kg. The Bidder shall provide the maximum door weight that the proposed door closure can cater for. (D)
3. All door closures shall be installed indoor. The Bidder shall indicate compliance to this requirement. (D)
4. The closing and latching speed of the door closures shall be adjustable. The Bidder shall provide supporting information indicating compliance to this requirement. (D)

## Door Open/Close Sensor

1. The Contractor shall supply and install door open/close sensors on all entry/exit points where a door controller is installed. The Bidder shall provide details of the proposed door open/close sensors and make provision for it in the costing. (D)
2. The door open/close sensor shall communicate the status of the door to the door controller and the access management system. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
3. An audible alarm, configurable per door, shall be generated at each door, if the door is left open for longer than a configurable duration. This will mostly be required at external access points and will be de-activated for internal access points. It must be possible to cancel the alarm, locally at the door, by means of a cancellation pin code. The Bidder shall provide supporting information indicating compliance to this requirement. (D)

## FALE Guard House Requirements

1. The control cards in the two (2) existing turnstiles shall be replaced. The new control cards shall interface with the new access control system. The Bidder shall provide details of the proposed control cards and make provision for it in the costing. (D)
2. The control cards for the four (4) existing boom gates shall be replaced. The new control cards shall interface with the new access control system. The Bidder shall provide details of the proposed control cards and make provision for it in the costing. (D)
3. The control cards for the two (2) existing spike barriers shall be replaced. The new control cards shall interface with the new access control system. The Bidder shall provide details of the proposed control cards and make provision for it in the costing. (D)
4. The four (4) existing loop detectors, including the loop connection wiring, installed under the boom gates shall be replaced. The Bidder shall provide details of the proposed replacement process, loop detectors and loop connection wiring and make provision for it in the costing. (D)
5. The existing boom gates, spike barriers and turnstiles shall be treated for corrosion and painted. The Bidder shall provide details of the corrosion treatment and the paint to be used and make provision for it in the costing. (D)

## Network Connectivity

1. The access control system and all associated devices shall support TCP/IP for network connectivity. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
2. All the devices associated with the access control system shall support Power over Ethernet (PoE). The Bidder shall provide supporting information indicating compliance to this requirement. (D)
3. CCTV SYSTEM

# CCTV SYSTEM

1. The Contractor shall supply and install CCTV surveillance systems at the locations as indicated in Table 2. The Bidder shall provide details of the proposed CCTV system and make provision for it in the costing. (D)
2. The CCTV system for FALE shall be at least a 32-channel system and for other locations at least an 8-channel system. The Bidder shall provide supporting information indicating the number of channels that the proposed CCTV systems for each location can manage. (D)
3. The CCTV system shall cater for remote monitoring on a mobile device. The remote mobile monitoring shall be made available for the FALE Technical Services Manager (MTS) and the FALE Air Traffic Services Manager (MATS) as well as the respective Operator in Charge (OIC) at the other ATSUs. ATNS shall provide the internet connection for remote monitoring. The Bidder shall provide supporting information indicating that the proposed CCTV system allows for remote monitoring on a mobile device. (D)
4. The CCTV system shall support the capability of offsite monitoring from a central control room. The bandwidth requirements to achieve this must be provided. The Bidder shall provide supporting information indicating that the proposed CCTV system supports offsite monitoring. (D)
5. The CCTV system devices shall be Open Network Video Interface Forum (ONVIF) compliant devices. The Bidder shall provide supporting information indicating that all the CCTV system devices are ONVIF compliant. (D)

# CAMERA SPECIFICATIONS

1. The following types of cameras are currently installed at FALE and shall be replaced:
	1. Eight (8) outdoor fixed mounted bullet camera
	2. Fourteen (14) indoor dome mounted camera
	3. Four (4) outdoor dome mounted camera

The Bidder shall provide details of the proposed cameras and include it in the costing. (D)

1. The Contractor shall assess the placement of the existing cameras and advise on the placement of the new cameras to cover all blind spots. Existing blind spots have been identified at the Rear Loading zone, Ground Floor Equipment Room and Air conditioning plant. The Bidder shall make provision for this in the costing. The Bidder shall also make provision for an additional six (6) cameras which shall include the three (3) cameras required to cover the blind spots noted. (D)
2. The types of cameras required at FAPM, FAVG and FARB are shown in the table below. The Bidder shall provide details of the proposed cameras and include it in the costing. (D)

|  |  |  |  |
| --- | --- | --- | --- |
| **Camera Type** | **FAPM** | **FAVG** | **FARB** |
| Indoor Dome | 3 | 3 | 1 |
| Outdoor Bullet | 2 | 1 | 0 |

1. The Contractor shall ensure that the CCTV camera placement allows for viewing of all entry/exit points that will be controlled by the access control system. The Bidder shall indicate compliance to this requirement. (D)
2. All cameras provided shall be wired cameras. The Bidder shall provide supporting information indicating that the proposed cameras are wired cameras. (D)
3. All cameras shall support PoE and TCP/IP. The Bidder shall provide supporting information indicating that the proposed cameras support PoE and TCP/IP. (D)
4. All cameras shall have a minimum resolution of 2 megapixels. The Bidder shall provide supporting information indicating the resolution of the proposed cameras. (D)
5. All cameras shall have a minimum video resolution of 1080p at a minimum frame rate of 20fps. The Bidder shall provide supporting information indicating the video resolution and frame rate of the proposed cameras. (D)
6. All cameras shall support at least one of the following video compression formats; H.264, H.264+, H.265 or H.265+. The Bidder shall provide supporting information indicating the video compression formats supported by the proposed cameras. (D)
7. All outdoor cameras shall have an IP67 rating. The Bidder shall provide supporting information indicating IP rating of the proposed cameras to be installed outdoors. (D)
8. All cameras shall have an IR range of at least 20m for low light conditions, with the exception of the FALE guard house cameras that shall have at least a 50m IR range. The FALE guard house currently has eight (8) outdoor fixed mounted bullet camera. The Bidder shall provide supporting information indicating the IR range of all the cameras proposed. (D)
9. All cameras shall be equipped with motion sensors. Recordings shall only be created when motion is detected. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
10. The cameras shall have a minimum Wide Dynamic Range (WDR) of 120dB to ensure that images are not affected by backlight. The Bidder shall provide supporting information indicating the WDR of the proposed cameras. (D)

# MONITOR AND OPERATOR POSITIONS

1. Monitor and operator positions shall be supplied with the CCTV system. The Bidder shall indicate compliance to this requirement. (D)
2. A monitor position shall only receive a live feed from the CCTV system without any interaction or control. The selection of the camera feeds being monitored shall be configurable. If a Personal Computer (PC) is required for a monitor position, the PC shall have an All-in-one form factor. The Bidder shall provide the minimum specifications required for the PC and indicate compliance to this requirement. (D)
3. An operator positions shall be connected to the Network Video Recorder (NVR) and shall allow the user to view all camera feeds as well as select specific feeds to monitor. The operator positions shall have a playback function for the playback of recorded footage. The operator positions shall be restricted from making any configuration changes to the CCTV system. The Bidder shall indicate compliance to this requirement. (D)

## FALE Requirements

1. The Contractor shall supply and install one (1) monitor position, consisting of a 24-inch widescreen full High Definition (HD) monitor, at the reception area. The Bidder shall provide details of the equipment that will be supplied to comply with this requirement and include it in the costing. (D)
2. The Contractor shall supply and install two (2) monitor positions, consisting of a 27-inch widescreen full HD monitor, at the FALE Tower controller position and the FALE Approach controller position. These monitor positions shall receive a live feed of the access points to the relevant rooms as well as a live feed of the hallways leading to relevant rooms. The Bidder shall provide details of the equipment that will be supplied to comply with this requirement and include it in the costing. (D)
3. The Contractor shall supply and install two (2) operator positions, consisting of a PC and a 32-inch widescreen full HD monitor, at each of the 2 guard houses (entry and exit). The Bidder shall provide details of the equipment that will be supplied to comply with this requirement and include it in the costing. (D)
4. The Contractor shall supply and install one (1) operator position, consisting of a PC and widescreen full HD monitor, in the equipment cabinet provided for the equipment room. The width of the monitor shall be the maximum size permissible for a 19-inch rack. The monitor installed in the equipment room shall be connected directly to the NVR. Users with Super User rights shall be able to make configuration changes on this operator position. The Bidder shall provide details of the equipment that will be supplied to comply with this requirement and include it in the costing. (D)
5. The Bidder shall provide the minimum specifications of the hardware that the monitor and operating positions have to comply with to achieve required performance. (D)

## FAPM, FAVG and FARB Requirements

1. The Contractor shall supply and install one (1) operator position in the tower at each ATSU. This position shall also work as a monitor position depending on the type of user that has logged in. Requirements stipulated under Chapter 6 must be taken into consideration. The Bidder shall indicate compliance with this requirement. (D)

# NETWORK VIDEO RECORDER

1. The Contractor shall supply and install a Network Video Recorder (NVR) for the CCTV system. The Bidder shall provide details of the proposed NVR and make provision for it in the costing. (D)
2. The NVR shall have sufficient storage to store recorded footage for at least 30 days. The Bidder shall provide supporting information indicating the storage capacity of the proposed NVR. (D)
3. The NVR shall have a Solid-State Drive/s (SSD) to store the footage. The Bidder shall provide supporting information indicating the type of storage that will be installed in the proposed NVR. (D)
4. The NVR shall be capable of simultaneously recording of all available channels (i.e., the 32 channel NVR shall be capable of recording all 32 channels simultaneously). The Bidder shall provide supporting information indicating that the proposed NVR’s can simultaneously record all available channels. (D)
5. The NVR shall have a user-friendly graphical user interface (GUI). The Bidder shall indicate what functionality is available on the GUI as well as provide screenshots of the GUI for the proposed NVR. (D)
6. The NVR shall cater for comprehensive search and playback functions, including but not limited to:
	1. Play
	2. Pause
	3. Rewind
	4. Fast forward
	5. Screenshot

The Bidder shall provide supporting information indicating search and playback functions of the proposed NVR. (D)

1. The NVR shall allow for viewing and playback via a remote Web management connection. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
2. The NVR shall support the use of PC software or a built-in web application via a network for live viewing, playback and configuration. The Bidder shall provide details of the PC software or the web application and the functionality thereof. (D)
3. The NVR shall be capable of exporting video footage to a USB drive in mpeg4, MKV or any format suitable to be played on a windows-based PC. The Bidder shall provide supporting information indicating the capability of the proposed NVR to export video footage and the format that it supports. (D)
4. The NVR shall allow for the user to select the date, time and duration of the video to be exported. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
5. The NVR shall output video at a minimum resolution of 1080p. The Bidder shall provide supporting information indicating the minimum video resolution that the proposed NVR shall output. (D)
6. The NVR shall have at least 2 High-Definition Media Interface (HDMI) outputs. The Bidder shall provide supporting information indicating the number of HDMI outputs available on the proposed NVR. (D)
7. All recordings must be date and time stamped. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
8. The NVR shall be password protected. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
9. The NVR shall come pre-installed and pre-configured with all the necessary software. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
10. The NVR shall support multi-level access control based on usernames and passwords. Users’ authorisation shall be configured according to Table 4. The Bidder shall provide supporting information indicating that the proposed NVR supports multi-level access control. (D)
11. The NVR shall have at least 1 ethernet port for connection to the Local Area Network (LAN). The Bidder shall provide supporting information indicating the number of ethernet ports available on the proposed NVR. (D)
12. The NVR shall support TCP/IP. The Bidder shall provide supporting information indicating that the proposed NVR supports TCP/IP. (D)
13. The NVR shall support the PoE standards IEEE 802.3af and IEEE 802.3at. The NVR shall have enough PoE supported ports to connect all 32 cameras or a suitable PoE switch/switches shall be provided to compensate for the cameras that cannot be connected directly to NVR. The Bidder shall provide supporting information indicating that the proposed NVR supports the PoE standards. If PoE switches are to be provided, the Bidder shall provide details of the proposed PoE switches and make provision for them in the costing. (D)
14. INTRUDER ALARM SYSTEM

# GENERAL

1. The Contractor shall supply and install an intruder alarm system at FALE, FAPM and FAVG. The Bidder shall provide details of the proposed intruder alarm system and make provision for it in the costing. (D)
2. The intruder alarm system for FALE shall have the capability to configure five (5) zones that can be armed and disarmed independently. Two zones shall be configured for the FALE building during implementation. One section of the building is occupied by the South African Weather Service (SAWS) and the other section by ATNS. Therefore, SAWS and ATNS shall be able to arm and disarm their respective sections independently. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
3. The intruder alarm system at FALE shall send an immediate alert to the security guards on-site should the alarm be triggered. The Bidder shall provide supporting information indicating how this will be achieved. (D)
4. The intruder alarm system shall have the capability of linking to an off-site armed response company. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
5. The intruder alarm system shall provide the option to override zones or bypass alarm sensors for the purpose of security patrolling. The Bidder shall provide supporting information indicating how this will be achieved. (D)
6. The intruder alarm shall comply with the following standards:
	1. SANS 60839-1-1:2007/IEC 60839-1-1:1988 Alarm systems Part 1: General requirements
	2. SANS 60839-1-3:2007/IEC 60839-1-3:1988 Environmental testing

The Bidder shall provide supporting information indicating compliance to this requirement. (D)

1. The intruder alarm system shall consist of the following components at minimum:
	1. Alarm control panel and keypad
	2. Magnetic contacts
	3. Infrared Strips
	4. Panic Buttons
	5. Motion detectors

The Bidder shall indicate what components the proposed intruder alarm system shall consist of. (D)

1. The intruder alarm system shall be scalable and upgradable to cater for newer systems such as electric fencing, vibration sensors, Passive Infrared (PIR) Sensors as well as additional infrared beams and magnetic contacts. The Bidder shall provide supporting information indicating that the proposed intruder alarm system can be expanded in the future to include the systems listed above. (D)

# ALARM CONTROL PANEL

1. The Contractor shall supply and install six (6) alarm control panels at eye-level in the areas listed in the table below.

|  |  |  |
| --- | --- | --- |
| **Location** | **Quantity** | **Areas** |
| FALE | 4 | * 1. Reception Area
	2. Loading zone exit
	3. SAWS Entrance
	4. SAWS Exit
 |
| FAPM | 1 | * 1. Main Entrance
 |
| FAVG | 1 | * 1. Main Entrance
 |

The Bidder shall provide details of the proposed alarm control panels and make provision for it in the costing. (D)

1. The keypad on the alarm control panel shall be backlit and remain illuminated in the event of power failure. The Bidder shall provide supporting information indicating compliance to this requirement. (D)

# MAGNETIC CONTACTS

1. Magnetic contacts shall be used to trigger the alarm if any of the perimeter doors are opened when the alarm is in an armed state. The Bidder shall indicate compliance to this requirement. (D)
2. The Contractor shall inspect the existing magnetic contacts at FALE and advise ATNS on the condition and if they can be reused. It will be at the discretion of ATNS on whether the existing magnetic contacts will be replaced. The Bidder shall make provision for new magnetic contacts in the costing. (D)
3. The Contractor shall supply and install nine (9) magnetic contacts at the perimeter doors listed in the table below.

|  |  |  |
| --- | --- | --- |
| **Location** | **Quantity** | **Perimeter Doors** |
| FALE | 6 | * 1. Reception Cubicle – single door
	2. Reception – double door
	3. SAWS Rear Exit – single door
	4. ATNS Loading Area Exit – single door
	5. UPS Room Exit – double door
	6. Equipment Room A Exit – double door
 |
| FAPM | 2 | 1. Main Entrance
2. Emergency Exit Door
 |
| FAVG | 1 | 1. Main Entrance
 |

The Bidder shall provide details of the proposed magnetic contacts and make provision for it in the costing. (D)

# INFRARED STRIPS

1. There shall be infrared strips used at FALE to trigger the alarm if any motion is detected in front of the ground floor windows of the building when the alarm is in an armed state. The Bidder shall indicate compliance to this requirement. (D)
2. The Contractor shall inspect the existing outdoor infrared strips at FALE and advise ATNS on the condition and if they can be reused. It will be at the discretion of ATNS on whether the existing infrared strips will be replaced. The Bidder shall make provision for this in the costing. (D)
3. The Contractor shall supply and install outdoor infrared strips to cover all ground floor windows. Below are the areas and lengths to be covered:
	1. Eastern Side – 40m
	2. Western Side – 45m
	3. Northern Side (Main Entrance) – 40m
	4. Southern Side – 31m
	5. Loading Zone – 14m

The Bidder shall provide details of the proposed infrared strips and make provision for it in the costing. (D)

1. The infrared strips shall be weatherproof with an IP rating of at least IP55. The Bidder shall provide supporting information indicating the IP rating of the proposed infrared strips. (D)
2. The infrared strips shall eliminate false alarms in poor weather conditions. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
3. The infrared strips shall be pet friendly to eliminate false alarms caused by animals. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
4. The infrared strips shall output at least 4 beams. The Bidder shall provide supporting information indicating how many beams the proposed infrared strips will output. (D)
5. The infrared strips shall have a minimum length of at least 70cm. The Bidder shall provide supporting information indicating the length of the proposed infrared strips. (D)

# PANIC BUTTONS

1. The Contractor shall supply and install eight (8) panic buttons which trigger an audible alarm in the areas listed in the table below.

|  |  |  |
| --- | --- | --- |
| **Location** | **Quantity** | **Position** |
| FALE | 4 | 1. Approach Controller position
2. Tower Controller position
3. SAWS Forecaster/Observer position
4. Reception
 |
| FAPM | 2 | 1. Tower Controller position
2. To be advised
 |
| FAVG | 2 | 1. Tower Controller position
2. To be advised
 |

The Bidder shall provide details of the proposed panic buttons and make provision for them in the costing. (D)

1. The Contractor shall supply two (2) wireless panic buttons for the on duty patrolling security guards at FALE. These panic buttons shall be linked to a silent alarm. The Bidder shall provide details of the proposed panic buttons and make provision for them in the costing. (D)
2. All panic button signals shall immediately alert security in the guard house at FALE. The Bidder shall indicate compliance to this requirement. (D)

# MOTION DETECTORS

1. The Contractor shall inspect the existing indoor motion detectors at FALE and advise if they can be connected to the new intruder alarm system and include this as an option. The Bidder shall make provision for connecting the existing motion detectors to the new intruder alarm system. (D)
2. The existing motion detectors are microwave PIR sensors. The Bidder shall indicate acknowledgement of this requirement. (I)
3. The Contractor shall supply and install two (2) PIR motion detectors in the areas listed in the table below.

|  |  |  |
| --- | --- | --- |
| **Location** | **Quantity** | **Position** |
| FAPM | 1 | 1. Ground floor area
 |
| FAVG | 1 | 1. Ground floor area
 |

The Bidder shall provide details of the proposed motion detectors and make provision for them in the costing. (D)

1. INTERCOM SYSTEM

# INTERCOM SPECIFICATIONS

1. The Contractor shall supply and install an intercom at the FAPM, FAVG and FARB ATSUs. The Bidder shall provide details of the proposed intercoms and make provision for them in the costing. (D)
2. The intercom shall consist of the following components, including but not limited to:
	1. Gate station
	2. Handset

The Bidder shall provide supporting information indicating the components of the proposed intercom. (D)

1. The intercom shall support 2-way voice communication. The Bidder shall provide supporting information indicating that the proposed intercom supports 2-way voice communication. (D)
2. The gate station shall be installed at the main entrance. The Bidder shall indicate compliance to this requirement. (D)
3. The gate station shall consist of a speaker, microphone and a call button. The Bidder shall provide supporting information indicating the components of the gate station. (D)
4. The call button on the gate station shall have a proximity sensor so that it does not need any physical contact. The Bidder shall provide supporting information indicating compliance to this requirement. (D)
5. The gate station shall be wall mounted. The Bidder shall indicate compliance to this requirement. (D)
6. The handset shall be installed at the tower Air Traffic Controller’s (ATC) position. The Bidder shall indicate compliance to this requirement. (D)
7. The handset shall have an unlock button, or similar functionality, that can be used to unlock the locking mechanism installed at the main entrance to grant visitor’s access. The Bidder shall provide supporting information indicating that the handset has this functionality. (D)
8. SYSTEM INTEGRATION

# SYSTEM INTEGRATION

1. The Bidder shall provide details of how the proposed access control system and the proposed CCTV system can be integrated. The benefits and the added functionality of integrating the two systems shall be outlined. (D)
2. The Bidder shall provide details of the possibility of supplying an access control system with an integrated intercom. If possible, the Bidder shall make provision for it at FAPM, FAVG and FARB. (D)
3. The Contractor shall supply and install one 20-inch All-in-one PC at FAPM, FAVG and FARB. The PC shall cater for the following functionality:
	1. CCTV operator/monitor position
	2. Management of the access control system and server
	3. Enrolment of new users
	4. Printing of employee cards

The Bidder shall provide details of the PC and the minimum specifications of the hardware that the PC has to comply with to achieve required performance. (D)

VOLUME 3: PROJECT MANAGEMENT REQUIREMENTS

1. PROJECT MANAGEMENT SPECIFICATIONS

# GENERAL

1. The Contractor shall establish, implement and maintain an extensive and comprehensive Project Management Plan (PMP) for the FALE Region Security Project throughout the period of any Contract arising from this RFP. These Plans will be used to manage and monitor the project. The Bidder shall submit summary level plans with the RFP to be refined as necessary during the Contract development and reporting phases. (D)
2. The Contractor shall divide the plans into activities which can be managed, monitored, and measured in the terms of duration, cost and resources. (D)
3. Project Management of the FALE Region Security Project is the responsibility of the Contractor. (I)
4. The Bidder shall present ATNS with a Project Management plan in the Microsoft Project format for integration into the ATNS Enterprise Project Management (EPM) system. (D)
5. The Contractor shall utilise an automated Project Management tool to assist in the overall control of the FALE Region Security Project. The Company may require direct access to any such Project Management System for at least monitoring and audit purposes. (D)
6. Project Management shall encompass the management of all the various facets of the project as defined in the Contract, specified milestones, identifies the critical path, linked to the Work-Breakdown Structure, procurement of equipment, resource allocation and control, management of sub-contractors, on-site installation and testing, transitioning, commissioning, transportation, all Integrated Logistic Support activities, staff movements and subsistence, etc. (D)
7. The Contractor shall prepare for, actively participate in, and respond to the Project Meetings, prepare and present comprehensive reports, and produce adequate documentation as described in sections (I).

# PROJECT MANAGEMENT PLAN

1. The Bidder shall submit an outline Project Management Plan (PMP) with the RFP. The PMP shall include the following information: (D)
2. Resource Allocation Plan
3. Test and Evaluation Master Plan
4. Installation, Transition and Commissioning Plan
5. Risk Management Plan
6. Quality Assurance Plan
7. Draft Project Status Reports and Progress Review Meetings
8. The PMP will be a formally accepted and approved document that will be used to manage and control project execution throughout the project life-cycle phases. The detailed PMP shall be submitted to the Company for approval within the first month after contract award. (I)

## Work Breakdown Structure

1. The Work Breakdown Structure enables the Company to maintain visibility of the project elements. The WBS shall identify all activities and work packages required from contract award to successful completion and commissioning of the generators. The Bidder shall include the WBS in the draft Construction and Installation Management Plan to be submitted as part of the proposal. (D)

## Resource Allocation Plan

1. A Resource Allocation Plan, which identifies the resources, including sub-contract resources, to be applied to each element, activity and/or work package of the project shall be submitted. The Plan shall clearly identify all project related organisational breakdowns, responsibilities and work proposed. The Resource Allocation Plan shall be included in the draft Installation Management Plan to be submitted as part of the proposal. (D)

## Resumes of Key Personnel

1. The Contractor shall ensure that only appropriately qualified and experienced personnel will be employed on the tasks and/or work packages identified. The Company shall retain the right to direct the Contractor to remove from the project any personnel considered by the Company to be inappropriately qualified or experienced, or unacceptable to the Company. The Bidder shall provide the resumes of key personnel that will be dedicated to the project as part of the proposal. (D)

# PROJECT REVIEW MEETINGS

1. The Contractor shall attend Progress Review Meetings at monthly intervals (or at other mutually agreed intervals) to present the monthly Project Status Report to the company. The regular Progress Review meetings shall be held at the airport premises, or any other mutually agreed locations, or via Microsoft Teams. A copy of the written Project Status Report and meeting presentation material shall be submitted to the Company at least one week prior to the Progress Review Meeting. (D)
2. The Contractor shall be represented by appropriate key personnel in each significant area to be considered during the meeting to enable effective discussion of agenda items and the Progress Report. The Project Manager and relevant specialists and support personnel shall represent the Company. The Project Manager shall chair the Progress Review Meetings. (D)
3. The Contractor shall submit a draft Agenda for Company concurrence at least two weeks prior to a scheduled Progress Review Meeting. The Company may submit items for inclusion in the agenda. The Contractor shall provide administrative support for the progress review and/or technical review meeting and prepare and distribute a draft record of the minutes of the meeting within one week of the meeting. The minutes are to include an Action Item List. The Company and the Contractor shall submit any updates to the Action Item List during the meeting. The Company and the Contractor shall, prior to the next meeting, review the draft minutes for accuracy. (D)
4. The Contractor and the Company will each meet their own costs associated with attending Progress Review Meetings. (I)

## Technical Review Meetings

1. The Contractor shall be required to conduct technical review meetings with Company personnel either at the Company airport offices or via Microsoft Teams. It is preferred that these reviews be held concurrently with Progress Review Meetings, where possible. The below requirements are representative requirements, certain alternative plans may or may not be offered. These plans must list and describe the Technical Review Meetings they would propose for this project. The technical reviews and meetings should consist of at least a Site Survey and Acceptance Test Readiness Review. (I)

## Project Status Reports

1. The Contractor shall provide project status reports at monthly intervals, this shall capture the project performance to date and make recommendations for future implementations and changes. (D)
2. The Bidder shall submit a Status Report example with the RFP. (D)

# TESTING & COMMISSIONING

## Installation, Transition and Commissioning Plan

1. The Contractor shall prepare, implement and maintain an Installation, Transition and Commissioning Plan (ITCP) that describes the Contractor’s plan for the installation of the new systems, clearly indicate how the transition from the existing installation will be achieved, leading to the commissioning and acceptance of the new system. The Bidder shall submit a draft Installation, Transitioning and Commissioning Plan with the bid. (D)
2. The contractor shall provide as-built drawings of all systems on commissioning of the system. (D)

## Test And Evaluation Master Plan

1. The Contractor shall prepare, implement and maintain a Test and Evaluation Master Plan (TEMP) that describes the Contractor’s plan for all Tests and Evaluations to be undertaken in demonstrating compliance with the technical, operational, contractual and performance requirements of the project. The Bidder shall submit a draft plan that shall include an Acceptance matrix which identifies all deliverables and methods of testing to demonstrate compliance. (D)

# RISK MANAGEMENT PLAN

## Risk Policy and Procedures

1. The Bidder shall include an outline of their risk policy and methodology for risk identification, assessment and abatement for all equipment and services to be supplied under this project. (D)

## Risk Report

1. The Contractor shall provide a Risk Report at each Progress Review Meeting to indicate the status and action associated with identified risk items. The format of the Risk Report shall be mutually agreed. (D)

# QUALITY ASSURANCE

## QA Policy and Procedures

1. The Bidder shall provide details on the company quality assurance policy and procedures and relevant accreditations held by the company. (D)

## Responsibility for Quality

1. The Contractor shall be responsible for ensuring that the quality of equipment and installation materials are supplied in accordance with the terms of the Contract, and any construction and installation activity performed, fully conforms to the prescribed requirements. The Company will undertake a monitoring and audit role in relation to the Quality Plan and program to determine whether equipment, construction and installation deliverables meet the contractual requirements. (D)

## Company Quality Inspections

1. The Company reserves the right to perform inspections, conduct tests or perform audits at the Contractor’s or sub-contractors’ premises at any time when such actions are deemed necessary to ensure supplies and services conform to the specified requirements. (D)

## Delivery of Project QA Plan

1. A detailed Project Quality Assurance Plan after contract award and completion of the site survey shall be submitted. (D)

# SITE SURVEY

1. Comprehensive site surveys shall be performed at the beginning of the project activities and at least before any equipment is ordered. (I)
2. A detailed site survey report and implications of the information gathered to update planning, design, installation and implementation specifications shall be submitted. (D)

# ENVIRONMENTAL MANAGEMENT PROGRAMME

1. The Contractor shall develop an Environmental Management Programme (EMPr) based on identified activities which may have potential or actual environmental impacts before the commencement of work in accordance to the National Environmental Management Act (No. 107 of 1998) and associated environmental legislation as well as ATNS’ environmental specifications. The Bidder to submit a draft environmental management programme with their submission. (D)
2. A Draft Environmental Management Programme (EMPr) shall be provided, specific to the project scope. The environmental management programme shall address, without limitations, the following: (D)
	1. Energy efficiency pertaining to all aspects of the project.
	2. The use of Environmentally sustainable materials and products.

# PERSONAL PERMIT

1. All Contractor’s staff that will be working at the Company’s FARB complex will require a Personal Permit valid for the period that is envisaged for the works at the designated airport. Personal Permit application entails, but is not limited to (D):
	1. Necessary application form to be completed.
	2. Valid certified copy of ID or passport to be attached to application forms.
	3. A police clearance on the applicant
	4. Applicant to indicate request to carry cell phone supported by necessary support documentation.
2. The Bidder shall submit a detailed process of how they will acquire airport permits for FARB. The Bidders are urged to contact the Airport Manager- 035 907 5353 or Administrator - 035 907 5997 for more information. (D)

VOLUME 4: LOGISTIC SUPPORT REQUIREMENTS

1. LOGISTIC SUPPORT REQUIREMENTS

# TRAINING

1. The Bidder shall provide training for each user type for the number people stipulated in the table below. (D)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **User Type** | **FALE** | **FAPM** | **FAVG** | **FARB** |
| Super User | 4 | 2 | 2 | 2 |
| Administrator | 6 | 2 | 2 | 2 |
| General Users | 6 | 4 | 4 | 4 |

# WARRANTY

1. The Bidder shall indicate the warranty period per type of equipment to be provided. A minimum warranty period of 12 months per equipment is required. (D)

# SPARES

1. The Bidder shall specify and include any recommended spares that should be kept by ATNS in their proposal. (D)

# SUPPORT CONTRACT

1. The Bidder shall include a maintenance and support proposal for the duration of the specified life of the systems. The Bidder shall include any interventions that may be required to achieve the stipulated 10-year life span. (D)
2. The Contractor shall respond within 12 hours (Tmax) for FALE and within 24 hours (Tmax) for the other airports for any system failures. (D)
3. Should the Contractor not meet the proposed response time, the penalty shall be imposed. Service penalties will be determined by the Actual response time (Tact) per incident and calculated as per formula below: -

Service penalty = (Tact)(hours)/ (Tmax)(hours) \* (Priority factor⃰ )\*(10%\* next contract invoice value), up to a total maximum of the value of the Agreement per Agreement period where: Tmax (hours) = corresponding maximum agreed time to respond (arrive at the site).

Note: The penalty only applies to where the response time was exceeded. Priority factors for all types of failures is one (1). (D)