



NEC3 Engineering & Construction Contract

Between Airports Company South Africa
(Registration no: 1993/004149/06)

and [Insert at award stage]
(Reg No. _____)

for Design, Supply, Installation and Commissioning of High
Efficiency VRV-VRF Air-Conditioning Units over a period of 24
months.

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CONTRACT No.

Part C1: Agreements & Contract Data

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C1.1 Form of Offer & Acceptance

Offer

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract for the procurement of:

Design, Supply, Installation and Commissioning of High Efficiency VRV-VRF Air-Conditioning Units over a period of 24 months at O.R. Tambo International Airport

The tenderer, identified in the Offer signature block, has examined the documents listed in the Tender Data and addenda thereto and by submitting this Offer has accepted the Conditions of Tender.

By the representative of the tenderer, deemed to be duly authorised, signing this part of this Form of Offer and Acceptance the tenderer offers to perform all of the obligations and liabilities of the *Contractor* under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the *conditions of contract* identified in the Contract Data.

The offered total of the Prices exclusive of VAT is	R
Value Added Tax @ 15% is	R
The total offered amount due inclusive of VAT is	R
(in words)	

This Offer may be accepted by the Employer by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document including the Schedule of Deviations (if any) to the tenderer before the end of the period of validity stated in the Tender Data, or other period as agreed, whereupon the tenderer becomes the party named as the *Contractor* in the *conditions of contract* identified in the Contract Data.



Signature(s)

Name(s)

Capacity

**For the
tenderer:**

*(Insert name and address of
organisation)*

Name &
signature of
witness

Date

Tenderer's CIDB registration number:



Acceptance

By signing this part of this Form of Offer and Acceptance, the Employer identified below accepts the tenderer's Offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the *conditions of contract* identified in the Contract Data. Acceptance of the tenderer's Offer shall form an agreement between the Employer and the tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract, are contained in:

- | | |
|---------|--|
| Part C1 | Agreements and Contract Data, (which includes this Form of Offer and Acceptance) |
| Part C2 | Pricing Data |
| Part C3 | Scope of Work: Works Information |
| Part C4 | Site Information |

and drawings and documents (or parts thereof), which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Returnable Schedules as well as any changes to the terms of the Offer agreed by the tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Form of Offer and Acceptance. No amendments to or deviations from said documents are valid unless contained in this Schedule.

The tenderer shall within two weeks of receiving a completed copy of this agreement, including the Schedule of Deviations (if any), contact the Employer's agent (whose details are given in the Contract Data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the *conditions of contract* identified in the Contract Data at, or just after, the date this agreement comes into effect. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Unless the tenderer (now *Contractor*) within five working days of the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the Parties.

Signature(s)

.....



Name(s)		
Capacity		
for the Employer	Airports Company South Africa, 3rd Floor ACSA North Wing Offices O R Tambo International Airport Kempton Park 1627	
Name & signature of witness	<i>(Insert name and address of organisation)</i>	
	Date	

Note: If a tenderer wishes to submit alternative tenders, use another copy of this Form of Offer and Acceptance.


Schedule of Deviations to be completed by the *Employer* prior to contract award

Note:

1. This part of the Offer & Acceptance would not be required if the contract has been developed by negotiation between the Parties and is not the result of a process of competitive tendering.
2. The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender.
3. A tenderer's covering letter must not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid be the subject of agreement reached during the process of Offer and Acceptance, the outcome of such agreement shall be recorded here and the final draft of the contract documents shall be revised to incorporate the effect of it.

No.	Subject	Details
1		
2		
3		
4		
5		
6		
7		

By the duly authorised representatives signing this Schedule of Deviations below, the Employer and the tenderer agree to and accept this Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules, as well as any confirmation, clarification or changes to the terms of the Offer agreed by the tenderer and the Employer during this process of Offer and Acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the tenderer of a completed signed copy of this Form shall have any meaning or effect in the contract between the parties arising from this Agreement.

For the tenderer:

For the Employer

.....

.....



Signature

Name

Capacity

On behalf
of

(Insert name and address of organisation)

(Insert name and address of organisation)

Name &
signature
of witness

Date



C1.2a ECC3 Contract Data

Part one - Data provided by the *Employer*

Clause	Statement	Data
1	General	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option	
		A: Priced contract with activity schedule
	dispute resolution Option	W1: Dispute resolution procedure
	and secondary Options	
		X2 Changes in the law
		X5: Sectional Completion
		X7: Delay damages
		X13: Performance Bond
		X16: Retention
		X18: Limitation of liability
		Z: <i>Additional conditions of contract</i>
	of the NEC3 Engineering and Construction Contract, April 2013 (ECC3)	
10.1	The <i>Employer</i> is (Name):	Airports Company South Africa SOC Limited (reg. no: 1993/004149/06), a juristic person incorporated in terms of the company laws of the Republic of South Africa
	Address	Registered office at OR Tambo International Airport Airports Company South Africa,



**3rd Floor ACSA North Wing Offices
O R Tambo International Airport
Kempton Park
1627**

10.1 The *Project Manager* is: (Name)

Address

**Airports Company South Africa
O R Tambo International Airport
ACSA Admin. Building
3rd Floor North Wing Offices
Kempton Park
1627**

e-mail

10.1 The *Supervisor* is: (Name)

Address

**Airports Company South Africa
O R Tambo International Airport
ACSA Admin. Building
3rd Floor North Wing Offices
Kempton Park
1627**

e-mail

11.2(13) The *works* are

Design, Supply, Installation and Commissioning of High Efficiency VRV-VRF Air-Conditioning Units in the airside corridors beyond the boarding gates over a period of 24 months, as fully described in C3.

11.2(14) The following matters will be included in the Risk Register

Long-lead VRV/VRF equipment; live airport operations; constrained airside access; electrical capacity; existing services; ICT/cybersecurity approvals; interfaces with BMS/IMCS; and coordination across 27 bridge locations.

11.2(15) The *boundaries of the site* are

O.R. Tambo International Airport

11.2(16) The Site Information is in

Part 4: Site Information



11.2(19)	The Works Information is in	Part 3: Scope of Work and all documents	
12.2	The <i>law of the contract</i> is the law of	the Republic of South Africa	
13.1	The <i>language of this contract</i> is	English	
13.3	The <i>period for reply</i> is	3 Working days	
2	The Contractor's main responsibilities	Data required by this section of the core clauses is provided by the Contractor in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data.	
3	Time		
11.2(3)	The <i>completion date</i> for the whole of the works is	104 weeks after the Contract Date. The contract terminates exactly 104 weeks after the Starting Date unless changed in accordance with this contract.	
11.2(9)	The <i>key dates</i> and the <i>conditions</i> to be met are:	Condition to be met	key date
		FIPDM Stage 3 design-development package, survey verification, design basis, calculations and coordinated layouts accepted.	12 weeks after the Starting Date
		FIPDM Stage 4 issued-for-construction design, software/cloud documentation and construction readiness accepted.	24 weeks after the Starting Date
		Application and cloud development environment accepted by ACSA ICT and Cybersecurity.	32 weeks after the Starting Date



	Long-lead VRV/VRF, electrical, controls and ventilation equipment procured and available for FAT or delivery.	48 weeks after the Starting Date
	Zone A installations and digital-platform core build complete.	76 weeks after the Starting Date
	Zone C installations complete.	84 weeks after the Starting Date
	Zone E installations complete; all 27 bridge locations and 54 spaces mechanically and electrically complete.	90 weeks after the Starting Date
	Cybersecurity verification completed and all critical and high-risk findings closed.	94 weeks after the Starting Date
	SAT, balancing, performance testing, end-to-end integration and user-acceptance testing accepted.	98 weeks after the Starting Date
	Training, handover dossier and FIPDM Stage 6 close-out accepted; Completion achieved.	104 weeks after the Starting Date

30.1

The access dates are:

Part of the Site

Date

Zone A bridge corridors

Starting Date, subject to permits and approved access



		Zone C and Zone E bridge corridors	Starting Date, subject to permits and approved access
		ACSA control room, ICT and BMS/IMCS interface areas	Starting Date, subject to permits and approved access
31.1	The <i>Contractor</i> is to submit a first programme for acceptance within	2 weeks of the Starting Date.	
31.2	The <i>starting date</i> is	Upon signing of the contract by ACSA Delegated Authority	
32.2	The <i>Contractor</i> submits revised programmes at intervals no longer than	4 weeks.	
35.1	The <i>Employer</i> is not willing to take over the <i>works</i> before the Completion Date.		
4	Testing and Defects		
42.2	The <i>defects date</i> is	52 weeks after Completion of the whole of the works.	
43.2	The <i>defect correction period</i> is	One week for safety-critical HVAC, electrical, controls, communications and monitoring Defects; two weeks for other Defects, unless the Project Manager accepts another period.	
47	The Contractor submits a quality plan for acceptance within:	4 weeks of the Starting Date.	
5	Payment		
50.1	The <i>assessment interval</i> is	between the 7th calendar day of each successive month.	
51.1	The <i>currency of this contract</i> is the	South African Rand.	



51.2	The period within which payments are made is	4 weeks after receipt of a valid tax invoice .
6	Compensation events	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.
7	Title	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.
8	Risks and insurance	
80.1	These are additional <i>Employer's</i> risks	1. None.
84.1	The <i>Employer</i> provides these insurances from the Insurance Table	See Annexure D to this Contract Data provided by the Employer.
84.1	The <i>Employer</i> provides these additional insurances	The terms and other matters applicable to these insurances provided by the Employer (and to insurances generally) are detailed in the insurance schedule attached as section C1.4 to the contract ("the insurance Schedule)
84.1	The <i>Contractor</i> provides these additional insurances	As stated in C1.4
84.2	The minimum limit of indemnity for insurance in respect of loss of or damage to property (except the <i>works</i> , Plant, Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the <i>Contractor</i>) caused by activity in connection with this contract for any one event is	Whatever the <i>Contractor</i> deems necessary in addition to that provided by the <i>Employer</i>.
84.2	The minimum limit of indemnity for insurance in respect of death of or bodily injury to employees of the <i>Contractor</i>	As prescribed by the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 and the <i>Contractor's</i> common law liability for



arising out of and in the course of their employment in connection with this contract for any one event is

people falling outside the scope of the Act with a limit of Indemnity of not less than R [●].

9	Termination	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.
10	Data for main Option clause	
A	Priced contract with activity schedule	There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.
11	Data for Option W1	
W1.1	The <i>Adjudicator</i> is (Name)	The person selected from the panel of adjudicators listed in Annexure C of this Contract Data, by the party intending to refer a dispute to him.
W1.2(3)	The <i>Adjudicator nominating body</i> is:	The Chairman of the Johannesburg Society of Advocates, or his successor or his nominee.
W1.4(2)	The <i>tribunal</i> is:	Arbitration.
W1.4(5)	The <i>arbitration procedure</i> is	The latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.
	The place where arbitration is to be held is	In the city where the Site is located, within South Africa.
	The person or organisation who will choose an arbitrator	
	1. if the Parties cannot agree a choice or	the Chairman for the time being or his nominee of
	2. if the arbitration procedure does not	the Association of Arbitrators (Southern Africa) or
	state who selects an arbitrator, is	its successor body.
12	Data for secondary Option clauses	



X2	Changes in the law	There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.	
X5	Sectional Completion	Section	Completion Date
		A1 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
		A1R bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
		A2 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
		A3 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
		A4 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
		A5 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
		A6 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
		A7 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
		A8 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date



A9 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
A10 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
A11 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
A12 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
A13 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
C1 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
C2 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
C3 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
C4 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
C5 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date



		C6 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
		C7 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
		C8 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
		E1 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
		E3 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
		E6 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
		E9 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
		E12 bridge package, comprising the arrival and departure corridors	98 weeks after the Starting Date
X7	Delay damages where Options X5 and X7 are used together		
X7.1	Delay damages for Completion of each section of the works are	Amount per calendar day for each section is 0.05% of the total of the Prices excluding VAT, subject to an aggregate maximum of 10% of the total of the Prices excluding VAT.	
X13	Performance bond		



X13.1	The amount of the performance bond is	5% of the total of the Prices excluding VAT.
X16	Retention (not used with Option F)	
X16.1	The <i>retention percentage</i> is	5% of each amount due; retention-free amount R0; maximum retention 5% of the total of the Prices.
X18	Limitation of liability	
X18.1	The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to:	Nil - Neither Party is liable to the other for any consequential or indirect loss, including but not limited to loss of profit, loss of income or loss of revenue
X18.2	For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to:	The Total Costs Incurred and/or Damages Suffered to the Employer's Property
X18.3	The <i>Contractor's</i> liability for Defects due to his design which are not listed on the Defects Certificate is limited to	The Total Costs Incurred and/or Damages Suffered
X18.4	The <i>Contractor's</i> total liability to the <i>Employer</i> for all matters arising under or in connection with this contract, other than excluded matters, is limited to:	The Total Costs Incurred and/or Damages Suffered
X18.5	The <i>end of liability date</i> is	The date on which the liability in question prescribes in accordance with the Prescription Act No. 68 of 1969 (as amended or in terms of any replacement legislation) for any other matter.
Z	The <i>Additional conditions of contract</i> are	
		Z1 to Z24 below.

AMENDMENTS TO THE CORE CLAUSES

Z1 Interpretation and the law



- Z1.1** **Add to core clause 12.3:** Any extension, concession, waiver or relaxation of any action stated in this contract by the Parties, the *Project Manager*, the *Supervisor*, or the *Adjudicator* does not constitute a waiver of rights, and does not give rise to an estoppel unless the Parties agree otherwise and confirm such agreement in writing.
- Z1.2** **Add the following as a new core clause 12.5:**
- Z1.2.1** In this contract:
- Z1.2.1.1** references to any Party to the Contract include its successors or permitted assigns;
- Z1.2.1.2** references to the Contractor include the obligations of its personnel;
- Z1.2.1.3** the references to the provisions of any law include such provisions as amended, re-enacted or consolidated from time to time in so far as such amendment, re-enactment or consolidation applies or is capable of applying to any works under this Contract;
- Z1.2.1.4** references to this Contract and any deed, Contract or instrument are deemed to include references to this Contract or such other deed, agreement or instrument as amended, novated, supplemented, varied or replaced from time to time;
- Z1.2.1.5** references to a "person" include a natural person, company or any other artificial person or other corporate entity, a charity, trust, partnership, joint venture, syndicate, or any other association of persons;
- Z1.2.1.6** references to "month" means a calendar month;
- Z1.2.1.7** headings are for convenience only and are not taken into consideration in the interpretation of the Contract;
- Z1.2.1.8** where any number of days is prescribed, those days are reckoned exclusively of the first and inclusively of the last day unless the last day falls on a day that is not a working day, in which event the last day is the next succeeding working day;
- Z1.2.1.9** any provision in Contract that is or may become illegal, invalid or unenforceable in any jurisdiction is ineffective to the extent of such prohibition or unenforceability in such jurisdiction and is treated as severed from the balance of Contract in such jurisdiction, without invalidating the remaining provisions of Contract in such jurisdiction or affecting it in any other jurisdiction;
- Z1.2.1.10** references to any amount means that amount exclusive of VAT, unless the amount expressly includes VAT;



- Z1.2.1.11** the rule of construction that if general words or terms are used in association with specific words or terms that are a species of a particular genus or class, the meaning of the general words or terms shall be restricted to that same class shall not apply, and whenever the word "including" is used followed by specific examples, such examples shall not be interpreted so as to limit the meaning of any word or term to the same genus or class as the examples given;
- Z1.2.1.12** the rule of construction that the Contract is interpreted against or to the disadvantage of the party responsible for the drafting or preparation of Contract does not apply;
- Z1.2.1.13** words and abbreviations that have well known technical or trade meanings are used in the Contract in accordance with such recognized meanings;
- Z1.2.1.14** references to a "*subsidiary*" or a "*holding company*" is references to a direct or indirect subsidiary or holding company as defined in the law of the jurisdiction of the place of incorporation of the company that has a subsidiary or holding company and "*affiliate*" is any company that is under common control with such subsidiary or holding company;
- Z1.2.1.15** time is of the essence in the performance of the parties' respective obligations.
- Z2 The Project Manager and Supervisor: add the following at the end of core clause 14.2:**
- Z2.1** The Project Manager and the Supervisor may take an action which they have delegated.
- Z3 Early Warning: add the following at the end of core clause 16.2:**
- Z3.1** The Contractor ensures that a subcontractor attends risk reduction meeting if its attendance would assist in deciding the actions to be taken.
- Z4 Providing the Works: Delete core clause 20.1 and replace with the following:**
- Z4.1** The *Contractor* provides the works in accordance with the Works Information and warrants that the results of the Works, when complete, shall be fit for their intended purpose as stated in the Works Information, and if no such purposes is stated, the ordinary purpose of the Works.
- Z5 Subcontracting:**
- Z5.1** **The following clause is added as a new core clause 26.4:** "Within 5 days of request by the *Project Manager*, the Contractor provides proof to the *Project Manager* that the Contractor's payment obligations towards its Subcontractors have been discharged. Failure by the Contractor to provide such proof to the satisfaction of the *Project Manager* entitles the *Employer* to instruct the *Project Manager* to certify payment directly to any such Subcontractor and the *Contractor* shall have no recourse to recover such amounts from the *Employer*. Such direct payment do not create privity of contract between the



Employer and such Subcontractor. The *Employer* may recover such direct payment from the *Contractor*.”

Z6 Other responsibilities: add the following at the end of core clause 27:

- Z6.1** The *Contractor* has satisfied himself, prior to the Contract Date, as to the completeness, sufficiency and accuracy of all information and drawings provided to him as at the Contract Date.
- Z6.2** The *Contractor* is responsible for the correct setting out of the *Works* in accordance with the original points, lines and levels stated in the *Works* Information or notified by the *Project Manager*, *Supervisor* or the *Employer*. Any errors in the positioning of the *Works* are rectified by the *Contractor* at the *Contractor's* own costs.

Z7 Acceleration: add the following new provisions at the end of core clause 36:

- Z7.1** The Project Manager's reply is either:
- Z7.1.1** A notification that the quotation is accepted, in which case, the *Project Manager* changes the Prices, Completion Date and Key Dates and accepts the revised programme; or
- Z7.1.2** A notification that the quotation is not accepted and that the Prices, Completion Date and Key Dates are not changed.

Z8 Extending the defects date: add the following as a new core clause 46:

- Z8.1** If the *Employer* cannot use the *works* due to a Defect, which arises after Completion and before the *defects date*, the *defects date* is delayed by a period equal to that during which the *Employer*, due to a Defect, is unable to use the *works*.
- Z8.2** If part of the *works* is replaced due to a Defect arising after Completion and before the *defects date*, the *defects date* for the part of the *works* which is replaced is delayed by a period equal to that between Completion and the date by when the part has been replaced.
- Z8.3** The *Project Manager* notifies the *Contractor* of the change to a *defect date* when the delay occurs. The period between Completion and an extended *defects date* does not exceed twice the period between Completion and the *defects date* stated in the Contract Data.

Z9 Quality Management System: add the following as a new core clause 47:

- Z9.1** The *Contractor* implements and maintains a quality management system with the requirements stated in the Works Information.



- Z9.2** Within the period stated in the Contract Data, the *Contractor* provides the *Project Manager* with a quality plan for acceptance. A reason for not accepting the quality plan is that it does not allow for the *Contractor* to Provide the Works.
- Z9.3** If any changes are made to the quality plan, the *Contractor* provides the *Project Manager* with the changes quality plan for acceptance.
- Z9.4** The *Project Manager* may instruct the *Contractor* to correct a failure to comply with the quality plan. This instruction is not a compensation event.
- Z10** **Assessing the amount due:**
- Z10.1** **Delete the second bullet point of core clause 50.1 and replace with the following:** “within thirteen weeks of termination of this Contract”
- Z11** **Final assessment: add the following as a new core clause 53:**
- Z11.1** The *Project Manager* makes a final assessment and certifies final payment in accordance with the Contract. The final payment is made within four weeks of the assessment.
- Z11.2** An assessment of the final amount due is conclusive evidence of the final amount due under or in connection with the Contract, unless a Party raises a dispute in relation to the assessment of the final amount due.
- Z11.3** The assessment of the final amount due is changed to include any agreement the Parties reached and/or a decision of the Adjudicator which has not been referred to the tribunal within four weeks of that decision. The changed assessment becomes conclusive evidence of the final amount due under or in connection with the Contract.
- Z12** **Notifying compensation events:**
- Z12.1** **Delete the last sentence in core clause 61.3 and replace with the following:** “If the *Contractor* does not notify a compensation event within four weeks of becoming aware of the event, he is not entitled to a change in the Prices, the Completion date or a Key Date and the *Employer* is absolved from all liability in relation to such event.”
- Z13** **Assessing compensation events:**
- Z13.1** **The following is added at the end of core clause 63.4:** “the *Contractor* shall only be entitled to changes to the Prices, the Completion Date and/or the Key Date if the compensation event affects the critical path.”
- Z14** **Termination**



- Z14.1** Add the following to core clause 91.1, at the second main bullet, fifth sub-bullet point, after the words “assets or”: “business rescue proceedings are initiated or steps are taken to initiate business rescue proceedings”.

AMENDMENTS TO THE SECONDARY OPTION CLAUSES

- Z15** **Changes in Law: Add the following clause to secondary option X2 as X2.2:**

- Z15.1** A change in law is defined as:

- Z15.1.1** the adoption, enactment, promulgation, coming into effect, repeal, amendment, reinterpretation, change in application or other modification after the Contract Date of any law, excluding (i) the enactment of any bill inside the country, but only if such bill is enacted without any material changes being made to the contents of such bill from the form published in the Gazette (as defined in the Interpretation Act, 1957) as at the Contract Date, and (ii) any such modification in law relating to any taxes, charges, imposts, duties, levies or deductions that are assessed in relation to a person's income

- Z15.1.2** any permit being terminated, withdrawn, amended, modified or replaced, other than (i) in accordance with the terms upon which it was originally granted, (ii) as a result of the failure by the *Contractor* to comply with any condition set out therein, or (iii) as a result of any act or omission of the *Contractor*, any Subcontractor or any affiliate to the *Contractor*.

- Z16.** **Delay damages: add the following to secondary Option X7 (if applicable in this contract)**

- Z16.1** If the amount due for the *Contractor's* payment of delay damages reaches the limits stated in this Contract Data for Option X7, the *Employer* may, at its sole discretion, terminate the *Contractor's* obligation to Provide the Works.

- Z16.2** If the *Employer* terminates in terms of this clause, the procedures and payment on termination as those applied for reasons R1 to R15 or R18 stated in the Termination Table

- Z17** **Performance Bond**

- Z17.1** **Amend the first sentence of clause X13.1 to read as follows:** The *Contractor* gives the *Employer* an unconditional, on-demand performance bond, provided by a bank or insurer which the *Project Manager* and the *Employer* have accepted, for the amount stated in the Contract Data and in the form set out in Annexure B of this Contract Data.

- Z17.2** **Add the following new clause as Option X13.2:** The *Contractor ensures* that the performance bond is valid and enforceable until the end of the *contract period*. If the terms of the performance bond specify its expiry date and the end of the *contract period* does not coincide with such expiry date, four



weeks prior to the said expiry date, the *Contractor* extends the validity of the performance bond until the end of the *contract period*. If the *Contractor* fails to so extend the validity of the performance bond, the *Employer* may claim the full amount of the performance bond and retain the proceeds as cash security

Z18 Limitation of liability: Insert the following new clause as Option X18.6:

Z18.1 The *Employer's* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is limited to R0.00.

Z18.2 Notwithstanding any other clause in this contract, any proceeds received from the security bonds and guarantees provided by the *Contractor* in terms of this Contract and any insurances or any proceeds which would have been received from any insurances but for the conduct of the *Contractor* shall be excluded from the calculation of the limitations of liability listed in the contract.

ADDITIONAL Z CLAUSES

Z19 Cession, delegation and assignment

Z19.1 The *Contractor* shall not cede, delegate or assign any of its rights or obligations to any person without the written consent of the *Employer*, which consent shall not be unreasonably withheld. This clause shall be binding on the liquidator/business rescue practitioner /trustee (whether provisional or not) of the *Contractor*.

Z19.2 The *Employer* may, on written notice to the *Contractor*, cede and delegate its rights and obligations under this contract to any person or entity.

Z20 Joint and several liability

Z20.1 If the *Contractor* constitutes a joint venture, consortium or other unincorporated grouping of two or more persons, these persons are deemed to be jointly and severally liable to the *Employer* for the performance of the Contract.

Z20.2 The *Contractor* shall, within 1 week of the Contract Date, notify the *Project Manager* and the *Employer* of the key person who has the authority to bind the *Contractor* on their behalf.

Z20.3 The *Contractor* does not materially alter the composition of the joint venture, consortium or other unincorporated grouping of two or more persons without prior written consent of the *Employer*.

Z21 Ethics

Z21.1 The *Contractor* undertakes:



- Z21.1.1** not to give any offer, payment, consideration, or benefit of any kind, which constitutes or could be construed as an illegal or corrupt practice, either directly or indirectly, as an inducement or reward for the award or in execution of this contract;
- Z21.1.2** to comply with all laws, regulations or policies relating to the prevention and combating of bribery, corruption and money laundering to which it or the *Employer* is subject, including but not limited to the Prevention and Combating of Corrupt Activities Act, 12 of 2004.
- Z21.2** The *Contractor's* breach of this clause constitutes grounds for terminating the *Contractor's* obligation to Provide the Works or taking any other action as appropriate against the *Contractor* (including civil or criminal action). However, lawful inducements and rewards shall not constitute grounds for termination.
- Z21.3** If the *Contractor* is found guilty by a competent court, administrative or regulatory body of participating in illegal or corrupt practices, including but not limited to the making of offers (directly or indirectly), payments, gifts, gratuity, commission or benefits of any kind, which are in any way whatsoever in connection with the contract with the *Employer*, the *Employer* shall be entitled to terminate the contract in accordance with the procedures stated in core clause 92.2. The amount due on termination is A1.
- Z22 Confidentiality**
- Z22.1** All information obtained in terms of this contract or arising from the implementation of this contract shall be treated as confidential by the *Contractor* and shall not be used or divulged or published to any person not being a party to this contract, without the prior written consent of the *Project Manager* or the *Employer*, which consent shall not be unreasonably withheld.
- Z22.2** If the *Contractor* is uncertain about whether any such information is confidential, it is to be regarded as such until otherwise notified by the *Project Manager*.
- Z22.3** This undertaking shall not apply to –
- Z22.3.1** Information disclosed to the employees of the *Contractor* for the purposes of the implementation of this agreement. The *Contractor* undertakes to procure that its employees are aware of the confidential nature of the information so disclosed and that they comply with the provisions of this clause;
- Z22.3.2** Information which the *Contractor* is required by law to disclose, provided that the *Contractor* notifies the *Employer* prior to disclosure so as to enable the *Employer* to take the appropriate action to protect such information. The *Contractor* may disclose such information only to the extent required by law and shall use reasonable efforts to obtain assurances that confidential treatment will be afforded to the information so disclosed;



Z22.3.3 Information which at the time of disclosure or thereafter, without default on the part of the *Contractor*, enters the public domain or to information which was already in the possession of the *Contractor* at the time of disclosure (evidenced by written records in existence at that time);

Z22.4 The taking of images (whether photographs, video footage or otherwise) of the *works* or any portion thereof, in the course of Providing the Works and after Completion, requires the prior written consent of the *Project Manager*. All rights in and to all such images vests exclusively in the *Employer*.

Z22.5 The *Contractor* ensures that all his Subcontractors abide by the undertakings in this clause.

Z23 Liens and Encumbrances

Z23.1 The *Contractor* keeps the Equipment used to Provide the Services free of all liens and other encumbrances at all times. The *Contractor*, vis-a-vis the *Employer*, waives all and any liens which he may from time to time have, or become entitled to over such Equipment and any part thereof and procures that his Subcontractors similarly, vis-a-vis the *Employer*, waive all liens they may have or become entitled to over such Equipment from time to time

Z24 Intellectual Property

Z24.1 Intellectual Property ("IP") rights means all rights in and to any patent, design, copyright, trade mark, trade name, trade secret or other intellectual or industrial property right relating to the Works.

Z24.2 IP rights remain vested in the originator and shall not be used for any reason whatsoever other than carrying out the *works*.

Z24.3 The *Contractor* gives the *Employer* an irrevocable, transferrable, non-exclusive, royalty free licence to use and copy all IP related to the *works* for the purposes of constructing, repairing, demolishing, operating and maintaining the works.

Z24.4 The written approval of the *Contractor* is to be obtained before the *Contractor's* IP made available to any third party which approval will not be unreasonably withheld or delayed. Prior to making any *Contractor's* IP available to any third party the *Employer* shall obtain a written confidentiality undertaking from any such third party on terms no less onerous than the terms the *Employer* would use to protect its IP.

Z24.5 The *Contractor* shall indemnify and hold the *Employer* harmless against and from any claim alleging an infringement of IP rights ("**the claim**"), which arises out of or in relation to:

Z24.5.1 the *Contractor's* design, manufacture, construction or execution of the Works;

Z24.5.2 the use of the *Contractor's* Equipment, or



Z24.5.3 the proper use of the Works.

Z24.6 The *Employer* shall, at the request and cost of the *Contractor*, assist in contesting the claim and the *Contractor* may (at its cost) conduct negotiations for the settlement of the claim, and any litigation or arbitration which may arise from it.



Annexure A: One-in-ten-year-return *weather data* obtained from SA Weather Bureau for [weather station]

If any one of these *weather measurements* recorded within a calendar month, before the Completion Date for the whole of the *works* and at the place stated in this Contract Data is shown to be more adverse than the amount stated below then the *Contractor* may notify a compensation event.

	<i>Weather measurement</i>				
Month	Cumulative rainfall (mm)	Number of days with rain more than 10mm	Number of days with min air temp < 0 deg.C	Number of days with snow lying at 08:00 CAT	[Other measurements if applicable]
January	[•]	[•]	[•]	[•]	
February	[•]	[•]	[•]	[•]	
March	[•]	[•]	[•]	[•]	
April	[•]	[•]	[•]	[•]	
May	[•]	[•]	[•]	[•]	
June	[•]	[•]	[•]	[•]	
July	[•]	[•]	[•]	[•]	
August	[•]	[•]	[•]	[•]	
September	[•]	[•]	[•]	[•]	
October	[•]	[•]	[•]	[•]	
November	[•]	[•]	[•]	[•]	
December	[•]	[•]	[•]	[•]	

Only the difference between the more adverse recorded weather and the equivalent measurement given above is taken into account in assessing a compensation event.



Annexure B: Pro forma Security Bonds and Guarantee

Pro forma Performance Bond – Demand Guarantee (for use with Option X13)

(to be reproduced exactly as shown below on the letterhead of the Bank providing the Bond / Guarantee)

[Insert *Contractor's* name and registered address]

Bank reference No.

Date:

Dear Sirs,

Performance Bond – Demand Guarantee for [insert name of *Contractor*] required in terms of contract [insert *Contractor's* contract reference number or title]

1. In this Guarantee the following words and expressions shall have the following meanings: -

1.1	"Bank" means	[Insert name of Bank], [●] Branch, Registration No. [●]
1.2	"Bank's Address" means	[Insert physical address of Bank]
1.3	"Contract" means	the written agreement relating to providing the <i>works</i> , entered into between the <i>Employer</i> and the <i>Contractor</i> , on or about the [●] day of [●] 20[●] (Contract Reference No. [●]) as amended, varied, restated, novated or substituted from time to time;
1.4	" <i>Contractor</i> " means	[●] a company registered in accordance with the laws of [●] under Registration No [●].
1.5	" <i>Employer</i> " means	Airports Company South Africa SOC Limited a company registered in accordance with the laws of the Republic of South Africa under Registration Number 1993/004149/30



1.6	"Expiry Date" means	the earlier of the date that the Bank receives a notice from the <i>Employer</i> stating that all amounts due from the <i>Contractor</i> as certified in terms of the contract have been received by the <i>Employer</i> and that the <i>Contractor</i> has fulfilled all his obligations under the Contract, or the date that the Bank issues a replacement Bond for such lesser or higher amount as may be required by the <i>Employer</i>.
1.7	"Guaranteed Sum" means	5% of contract value excluding VAT which must be submitted within 10 working days from notification of award
1.8	"works" means	Design, Supply, Installation and Commissioning of High Efficiency VRV-VRF Air-Conditioning Units over a period of 24 months at O.R. Tambo International Airport

3. At the instance of the *Contractor*, we the undersigned _____ and _____, in our respective capacities as _____ and _____ of the Bank, and duly authorized thereto, confirm that we hold the Guaranteed Sum at the disposal of the *Employer* as security for the proper performance by the *Contractor* of all of its obligations in terms of and arising from the Contract and hereby undertake to pay to the *Employer*, on written demand from the *Employer* received prior to the Expiry Date, any sum or sums not exceeding in total the Guaranteed Sum.

4. A demand for payment under this guarantee shall be made in writing at the Bank's address and shall:

1. be signed on behalf of the *Employer* by a director of the *Employer*;
2. state the amount claimed ("the Demand Amount");
3. state that the Demand Amount is payable to the *Employer* in the circumstances contemplated in the Contract.

4. Notwithstanding the reference herein to the Contract the liability of the Bank in terms hereof is as principal and not as surety and the Bank's obligation/s to make payment:

1. is and shall be absolute provided demand is made in terms of this bond in all circumstances; and
2. is not, and shall not be construed to be, accessory or collateral on any basis whatsoever.

3. The Bank's obligations in terms of this Guarantee:



1. shall be restricted to the payment of money only and shall be limited to the maximum of the Guaranteed Sum; and
2. shall not be discharged and compliance with any demand for payment received by the Bank in terms hereof shall not be delayed, by the fact that a dispute may exist between the *Employer* and the *Contractor*.
3. The *Employer* shall be entitled to arrange its affairs with the *Contractor* in any manner which it sees fit, without advising us and without affecting our liability under this Guarantee. This includes, without limitation, any extensions, indulgences, release or compromise granted to the *Contractor* or any variation under or to the Contract.
4. Should the *Employer* cede its rights against the *Contractor* to a third party where such cession is permitted under the Contract, then the *Employer* shall be entitled to cede to such third party the rights of the *Employer* under this Guarantee on written notification to the Bank of such cession.
5. This Guarantee:
 1. shall expire on the Expiry Date until which time it is irrevocable;
 2. is, save as provided for in the cession provision above, personal to the Employer and is neither negotiable nor transferable;
 3. shall be returned to the Bank upon the earlier of payment of the full Guaranteed Sum or expiry hereof;
 4. shall be regarded as a liquid document for the purpose of obtaining a court order; and
 5. shall be governed by and construed in accordance with the law of the Republic of South Africa and shall be subject to the jurisdiction of the Courts of the Republic of South Africa.
 6. will be invalid and unenforceable if any claim which arises or demand for payment is received after the Expiry Date.
7. The Bank chooses domicilium citandi et executandi for all purposes in connection with this Guarantee at the Bank's Address.

Signed at _____ on this _____ day of _____ 20__

For and on behalf of the Bank



Bank Signatories(s)

Name(s) (printed)

Witness(s)

Bank's seal or stamp


Annexure C: ACSA Panel of Adjudicators

One of the following adjudicators shall be selected by the referring party as and when a dispute arises. This panel is valid for a period of three years, commencing on 1 May 2020.

Potential Adjudicator	Email Address	Chamber
Adv. Mkhululi Duncan Stubbs	duncan.stubbs@gmail.com	Thulamela Chambers
Adv. Arzhar Bham SC	bhamae@law.co.za	Victoria Mxenge
Adv. Mohhamed Chohan SC	chohann@counsel.co.za	Group One
Adv. Benny Makola	benny.makola@gmail.com	Group 621
Adv. Vincent Maleka SC	ivmaleka@mweb.co.za	Thulamela Chambers
Adv. Chris Loxton SC	loxton@counsel.co.za	Group One



Annexure D: ACSA Insurance Clauses

INSURANCE CLAUSES FOR LANDSIDE CONSTRUCTION CONTRACTS WHERE THE AWARDED CONTRACT VALUE DOES NOT EXCEED R150 MILLION, AND THE CONSTRUCTION PERIOD DOES NOT EXCEED 36 MONTHS, AND THE DEFECTS LIABILITY PERIOD DOES NOT EXCEED 24 MONTHS

Each Party shall be responsible for effecting and maintaining the relevant insurances as specified below and to the extent relevant to the Contract.

1. Insurance Effected By The Employer (Principle Controlled Insurance ("PCI"))

1.1 Notwithstanding anything elsewhere contained in this Contract and without limiting the obligations, liabilities or responsibilities of the Contractor in anyway whatsoever (including but not limited to any requirement for the provision by the Contractor of any other insurances) the Employer shall effect and maintain for the duration of the construction and maintenance periods of the Contract - as appropriate in the joint names of the Employer, the Contractor and where relevant Sub-Contractors the following insurances which are subject to the terms, limits, exceptions and conditions of the Policy:

a) Contract Works/Contractors Public Liability/ Removal Of Lateral Support Liability

Section 1 Of The Policy – Contract Works

Contract Works Insurance for the full value of the Works to provide cover against accidental physical loss of or damage to the Works, Temporary Works and materials intended for incorporation in the Works all being the subject matter of this Contract including to the extent provided for in the policy whilst in transit or temporarily stored at any premises en route to or from the Site (other than where this is a continuation of Marine Transit) within the territorial limits of the policy.

This insurance may specifically exclude any cost necessary to replace or rectify any of the property insured, which is in a defective condition due to defect in design, plan specification, material or workmanship.

This insurance contains the following limitations and warranties;

Open Trench Limitation



In respect of loss or damage to open trenches and pipes, conduits or cables laid therein, caused directly or indirectly by rain, inundation or flood, Insurers liability shall be limited in respect of the aggregate length of open trenches at any one time to 2,500 meters.

Exposed Layer Works (applicable to works involving paving, roadways, bulk earthworks and runways and taxiways)

In respect of loss or damage to Exposed Layer Works relating to paving, roadways and runways (including taxiways) caused directly or indirectly by rain, inundation or flood, Insurers liability shall be limited in respect of the aggregate length of Exposed Layer Works at any one time to 2,500 meters.

Section II of the Policy – Contractors Public Liability

Public Liability Insurance which provides indemnity against legal liability in the event of accidental death of or injury to persons and/or loss of or damage to property (other than the Works the subject matter of this Contract) arising from the execution of the Contract with a limit of indemnity of **R100,000,000** in respect of any one occurrence or series of occurrences consequent on or attributable to one source or original cause.

Section III of the Policy – Removal Of Lateral Support Liability

Removal Of Lateral Support Liability which provides indemnity against legal liability in the event of accidental death of or injury to persons and/or loss of or damage to property (other than the Works the subject matter of this Contract) arising out of or in connection with shock or vibration or the removal or weakening of or interference with support to property in the vicinity of the Contract Site and arising out of or in connection with the Insured Contract (but not in respect of tunneling works) and occurring during the Period of Insurance.

The Limit of Indemnity being limited to R50,000,000 attributable to one source or original cause

b) **Contract Works SASRIA** – Providing physical loss of or damage to the Works, Temporary Works and materials intended for incorporation in the Works as covered by the underlying Contract Works policy as noted in (a) above due to perils as covered in terms of the SASRIA Contract Works wording as issued by SASRIA SOC.

The Contract Works SASRIA cover excludes consequential or indirect loss or damage of any kind or description whatsoever.

The SASRIA Contract Works policy is limited to **R500,000,000 (Incl. VAT)** in the aggregate during the policy period of insurance.



The Contract Works SASRIA policy wording can be obtained from the SASRIA website <http://www.sasria.co.za/> which notes the covers and policy exclusions.

c) **Design & Construct Professional Indemnity Insurance** which provides indemnity against legal liability to pay compensation as a result of any actual or alleged negligent act, error or omission in the performance of the Professional Duties of the insured and arising from the execution of this project. The limit of indemnity under this insurance shall be ***R25,000,000 in the aggregate during the annual policy period of insurance that ACSA effect such cover during the policy period from 1 April to 31 March during each policy period of insurance.**

*The limits of indemnity applies to all ACSA contracts as a whole and does not apply specifically to this contract. The aggregate limit could be exhausted by claims under other ACSA contracts and there is no guarantee that this insurance cover will provide sufficient cover to this specific contract should the aggregate limit be exhausted.

The Policy only covers the rectification of the works and excludes all consequential losses.

Professional Duties do not include:

- a) Labour and construction work which would normally be the responsibility of the building or engineering contractor.
- b) Supervision of the construction works usually undertaken by a building or engineering contractor.

1.2 The **Contractor** shall familiarise itself fully with the details of such insurance effected by the Employer. The Contractor shall comply to all the terms and conditions of the Employer arranged policies and the Contractor shall be deemed to be fully aware of all the conditions, limits, limitations, exclusions/exceptions and deductibles that are contained in the Employer arranged policies. Copies of the Employer arranged policies are obtainable on request from the Employer and if the Contractor is of the opinion that additional insurance is required, such shall be for the Contractors account.

1.3 The Employer shall pay the premium in connection with the insurances effected by the Employer. The Employer is entitled to all return premiums, dividends, discounts, or adjustments in connection with the insurances effected by the Employer.

1.4 The Contractor shall not include any premium charges for this insurance except to the extent, which he may deem necessary in his own interests to effect supplementary insurance to the insurance effected by the Employer. The Employer reserves the right to call for full information regarding insurance costs included by the Contractor.



In the event that the Contractor purchases any insurances in addition to those indicated above, the premium and taxes, duties, etc. shall be borne entirely by the contractor.

1.5 Any further clarification of the scope of cover provided by the Policies arranged by the Employer should be obtained from the Employer.

1.6 The Contractor and/or any other party who obtains indemnity under the policies effected under 1.1 shall become liable for the deductibles (first amount payable) which are applicable in respect of each and every occurrence or series of occurrences attributable to one source or cause giving rise to loss or damage or indemnifiable liability. The deductibles applicable to the policies effected under 1.1 are as follows:

a) Contract Works/Contractors Public Liability/ Removal Of Lateral Support Liability

Unless stated otherwise in the Policy Extensions the Deductibles shall be as follows which will apply in respect of each and every occurrence or series of occurrences arising out of or in connection with any one event giving rise to loss or damage:

Section 1 Of The Policy – Contract Works

In respect of all loss or damage **R150,000** but increased to **R250,000** in respect of loss or damage arising out of or in connection with testing and commissioning.

Section 2 Of The Policy – Contractors Public Liability

R75,000 each and every claim in respect of Property Damage.

Section 3 Of The Policy – Removal Of Lateral Support Liability

R75,000 each and every claim.

b) Contract Works SASRIA

In respect of theft as a result of the SASRIA perils insured - **R25,000** each and every occurrence.

c) Design & Construct Professional Indemnity Insurance

a) In respect of contracts under R50 million at award – **R5,000,000**.

b) In respect of contracts over R50 million at award – **R10,000,000**.



1.7 In the event of any occurrence which is likely to give rise to a claim under the insurance arranged by the Employer, the Contractor shall:

a) In addition to any statutory requirement or other requirements contained in the Contract immediately notify the Employer and the Employer's Insurance Brokers by telephone, mobile phone or email giving the circumstances, nature and an estimate of the loss or damage or liability. The Contractor must also complete the Claim Advice Form (Appendix "A").

The following persons/insurers must be advised immediately on the occurrence of a claim on site or even a possibility of a claim arising due to an incident occurring on site:

Airports Company South Africa:

Nokulunga Masiza

Tel: +27 (0)11 723 1400

M: +27 (0)79 512 0532

Nokulunga.Masiza@airports.co.za

Buhle Mnguni

D: +27 (0)11 723 1400

M: +27 (0)74 535 9075

Buhle.Mnguni@airports.co.za

b) Preserve damage and make it available for inspection by a representative of the Insurers.

c) Wherever possible, photographs of damage should be taken.

d) Inform the police authorities promptly in the event of loss or damage by theft, burglary or any malicious persons(s) for the purpose of recovering any property so lost, discovering the guilty person or persons, and having him, her or them duly prosecuted.

e) Advise the Insurers of any other insurance(s) which may cover the same loss, damage or injury, or any part thereof.



f) Give to the Insurers every assistance to enable the Insurers to settle or resist any claim against the Insured, or institute any proceedings;

g) On completion the Claims Advice Form, the form must be sent to the Employers Insurance Brokers for further action (the original may be emailed to the Employers Insurance Broker). (Please do not remove the Claims Advice Form out of this document. Rather photocopy the form and send the copy to the Employers Insurance Brokers).

h) The Employer and the employers Insurance brokers / Insurers or their appointed loss adjusters shall have the right to make all and any enquiry's on the Site of the Works or elsewhere as to the cause and results of any such occurrence and the Contractor shall co-operate in carrying out such enquiry's.

i) The Contractor, Project Managers and Consultants must allow free access to Insurers' assessors for the purpose of investigating and assessing the loss or damage.

j) The Contractor must not proceed with the making good any off the loss without the prior authorisation of the Insurers.

k) The Contractor must keep separate records of the costs involved in making good any loss or damage and these records should be available at all times for inspection by Insurers. Such records should include inter alia the entire cost of labour, materials, transport and equipment.

l) Where required by the Employer, negotiate the settlement of claims with the Insurer or their appointed loss adjusters through the Employer's Insurance Brokers and shall obtain the Employer's approval of such settlement.

m) Once the amount of a claim is agreed by the Insurers and the Contractor, an "Agreement of Loss" form must be signed by the Contractor and if required this shall be counter signed by the Employer or the Project Managers.

n) The proceeds of such claim will, if required by the Employer, be paid net of any Deductible applicable under the policy by the Insurers to the Employer who on receipt thereof will arrange for payment to be made in terms of the Conditions of Contract. In the event that it is agreed by the Employer that such claims payment be made directly to the Contractor, the Contractor shall arrange for the Employer to endorse the "Agreement of Loss" to this effect.

1. Insurance Effected by the Contractor.



In addition to Clause 1.1 in respect of the insurances effected by the Employer the following Insurances to be effected by the Contractor:

2.1 Without limiting the Contractor's obligations, responsibilities and liabilities, the Contractor and Sub-contractor shall maintain at the Contractor's and Subcontractor's expense and where applicable provide as a minimum the following insurances:

a) **Insurance of Construction Plant and Equipment** (including tools offices and other temporary structures and contents) and other things (except those intended for incorporation into the Works) brought onto the site for a sum sufficient to provide for their replacement.

The Employer shall be named as additional insured and a waiver of subrogation shall be provided to the Employer.

b) Contractor's Common Law Liability/ Worker's Compensation Insurance

The Contractor shall take out and maintain employer's liability insurance with a limit of indemnity of not less than **R20,000,000** and/or workmen's compensation insurance covering personal injury to or death of the employees of the Contractor engaged in connection with the Works to the minimum value required by applicable law.

The Contractor shall procure that its Subcontractors take out and maintain similar insurance in respect of its Subcontractor's personnel performing the Works.

In the event that a claim is made against the Employer in connection with such insurance, the Contractor shall indemnify and hold harmless the Employer against any such claim.

The Employer shall be named as additional insured and a waiver of subrogation shall be provided to the Employer.

c) **Motor Vehicle Liability Insurance** comprising (as a minimum) "Balance of Third Party" Risks including Passenger Liability indemnity with a limit of indemnity of not less than **R5 000 000** for all owned, non-owned, leased and hired vehicles.

d) Insurance For Buy-Down Cover Of Employer's Deductibles

Should the Contractor believe that the Employer effected Contract Works, Public Liability and Design & Construct Professional Indemnity deductibles as noted in Clause 1.1(a) and (c) be considered to be unacceptable to the Contractor, then the Contractor must obtain Buy Down cover for these



deductibles to a deductible considered by the Contractor as being acceptable in respect of the works being undertaken.

e) Where the Contract involves manufacturing and/or fabrication of the Works or parts thereof at premises other than at the Contract Site the Contractor shall satisfy the Employer that all materials and equipment for incorporation in the Works are adequately insured during manufacture and/or fabrication. In the event of the Employer having an insurable interest in such Works during manufacture or fabrication then such interest shall be noted by endorsement to the relevant Policies of Insurance.

Such insurance shall name Employer as an additional insured, and shall be primary to any insurance maintained by the Employer.

f) **Public Liability** insurances in excess of the Employers Public Liability insurances as stated under clause 1.1(a).

g) **Contractor's Professional Indemnity Insurance** in excess of the Employers Design & Construct Professional Indemnity insurances as stated under clause 1.1(c) and if applicable to cover the deductible that applies to the Employer effected insurance.

h) Marine Zone E Insurance (If Applicable)

Cover: Imports of cargo, equipment, goods, plant, machinery and materials ("**Insured Property**") to the site where the Permanent Works will be constructed.

Sum Insured: Not less than the value of the largest single cargo shipment, conveyance or the value in storage, whichever is the greater (CIF plus 10%).

Marine / Air Zone E Insurance covering the Insured Property against all risks of physical loss or damage while in transit by land, sea or air from country of origin anywhere in the world to the site where the Permanent Works will be constructed including loading, or vice versa, from the commencement of the time the insured items are loaded prior leaving the warehouse or factory for shipment to the said site.

The insured parties are the Employer, the Contractor and its Subcontractors, and all their personnel involved in the execution of any Works on the construction site.

j) **Miscellaneous Insurance**



Other insurance as is customary, desirable or necessary to comply with applicable Laws in the Country.

2.2 The insurances to be provided by the Contractor and his Sub-contractor shall be effected with Insurers and on terms approved by the Employer (which approval shall not be unreasonably withheld) and shall be maintained in force for the duration required (including any period of maintenance/defects liability period). The Contractor shall within twenty eight (28) days of commencement of the contract produce to the Employer the relevant Policy or Policies of Insurance.

2.3 In the event that the Contractor or his Sub-contractor receives any notice of cancellation or restrictive modification to the insurance provided to them they shall immediately notify the Employer in writing of such cancellation or restriction and shall advise what action the Contractor or his Sub-contractor will take to remedy such action.

If the Contractor fails to effect and keep in force the insurances referred to then the Employer may effect and keep in force any such insurances and pay such premium or premiums as may be necessary for that purpose and from time to time deduct the amount paid by the Employer from any monies due or which may become due to the Contractor or recover same as a debt from the Contractor.

2.4 **Sub-Contractors.**

The Contractor shall:

- a) ensure that all potential and appointed Sub-contractors are aware of the whole contents of these Insurance Clauses, and
- b) enforce the compliance by sub contract agreement between the Contractor and Sub-Contractor and where applicable that the Sub Contractor effect similar insurance relating to the insurances required to be effected by the Contractor under Clause 2 (Contractor effected insurances).



APPENDIX A

CONTRACTORS CLAIMS ADVICE FORM - FOR ACSA INSURED CONTRACTS UNDER THE ANNUAL POLICY

Send to : Airports Company South Africa

E-Mail The Following People :

Nokulunga.Masiza@airports.co.za

Buhle.Mnguni@airports.co.za

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1. (Please provide name of contracting company, site address, telephone numbers and e-mail address).

RE: ACSA CONTRACTORS: CAR/PL/PI: CLAIM

Date of loss: _____

Reported to site agent by: _____ Date: _____

Reported to Insurance Broker by: _____ Date: _____

Locality of Incident _____



How did the loss occur (cause)? _____

Details and nature of loss or damage to Contract Works _____

Details of other property damaged _____



Names and address of witnesses _____

Estimated cost of repairs (Separate records of all costs must be kept) R_____

Person whom assessor should contact _____

Telephone/Mobile Numbers Of Contact Person _____

Email Address of Contact Person _____



C1.2b Contract Data

Part two - Data provided by the Contractor**Notes to a tendering contractor:**

1. Please read both the NEC3 Engineering and Construction Contract (April 2013) and the relevant parts of its Guidance Notes (ECC3-GN)¹ in order to understand the implications of this Data which the tenderer is required to complete. An example of the completed Data is provided on pages 152 to 154 of the ECC3 Guidance Notes.
 2. The number of the clause which requires the data is shown in the left-hand column for each statement however other clauses may also use the same data
- Completion of the data in full, according to Options chosen, is essential to create a complete contract.

Clause	Statement	Data
10.1	The <i>Contractor</i> is (Name): Address Tel No. Fax No.	
11.2(8)	The <i>direct fee percentage</i> is The <i>subcontracted fee percentage</i> is	% %
11.2(18)	The <i>working areas</i> are the Site and	
24.1	The <i>Contractor's</i> key persons are: 1 Name: Job: Responsibilities: Qualifications:	

¹ Available from Engineering Contract Strategies Tel 011 803 3008, Fax 011 803 3009 or see www.ecs.co.za



	Experience: 2 Name: Job Responsibilities: Qualifications: Experience:	CV's (and further key persons data including CVs) are appended to Tender Schedule entitled .
11.2(14)	The following matters will be included in the Risk Register	

PART 2: PRICING DATA

Document reference	Title	No of pages
C2.1	Pricing assumptions: Option A	
C2.2	The <i>activity schedule</i>	

C2.1 Pricing assumptions: Option A

The conditions of contract

How work is priced and assessed for payment

Clause 11 in NEC3 Engineering and Construction Contract, April 2013 (ECC3) Option A states:

Identified and defined terms	11 11.2	(20) The Activity Schedule is the <i>activity schedule</i> unless later changed in accordance with this contract.
		(22) Defined Cost is the cost of the components in the Shorter Schedule of Cost Components whether work is subcontracted or not excluding the cost of preparing quotations for compensation events.
		(27) The Price for Work Done to Date is the total of the Prices for each group of completed activities and each completed activity which is not in a group. A completed activity is one which is without Defects which would either delay or be covered by immediately following work.
		(30) The Prices are the lump sum prices for each of the activities on the Activity Schedule unless later changed in accordance with this contract.

Option A is a lump sum form of contract where the work is broken down into activities, each of which is priced by the tendering contractor as a lump sum. Only completed activities are assessed for payment at each assessment date; no part payment is made if the activity is not completed by the assessment date.

Function of the Activity Schedule

Clause 54.1 in Option A states: "Information in the Activity Schedule is not Works Information or Site Information". This confirms that instructions to do work or how it is to be done are not included in the Activity Schedule but in the Works Information. This is further confirmed by Clause 20.1 which states, "The *Contractor* Provides the Works in accordance with the Works Information". Hence the *Contractor* does **not** Provide the Works in accordance with the Activity Schedule. The Activity Schedule is only a pricing document.

Link to the programme

Clause 31.4 states that “The *Contractor* provides information which shows how each activity on the Activity Schedule relates to the operations on each programme which he submits for acceptance”. Hence when compiling the *activity schedule*, the tendering contractor needs to show each activity on the programme he submits with his tender.

Preparing the *activity schedule*

The tendering contractor prepares the *activity schedule* and should study the ECC3 Guidance Notes pages 19 and 20 before doing so. The *Employer* may have instructed the tendering contractor to include particular activities which he has specified and requires the *Contractor* to identify them in his *activity schedule*.

1. Generally it is the Contractor who prepares the Activity Schedule as part of his tender by breaking down the work described within the Works Information into suitable activities which can be well defined, priced as a lump sum and shown on the programme. The Employer, in his Conditions of Tender or in a Tender Schedule, may have listed some items that he requires the Contractor to include in his activity schedule and be priced accordingly.
2. The Prices are defined in clause 11.2(20) as the lump sum for each activity in the activity schedule and the Price for Work Done to Date (PWDD) (the amount due to the contractor) is defined in clause 11.2(24) as the total of the Prices for each activity that has been completed. Hence activities in the activity schedule should be structured so as to provide an acceptable monthly cash flow as they are only assessed for payment on the assessment date if they have been completed.
3. As the Contractor has an obligation to correct Defects (core clause 43.1) and there is no compensation event for this unless the Defect was due to an Employer's risk, the lump sum Prices must also include for the correction of Defects.
4. If the Contractor has decided not to identify a particular activity, the cost to the *Contractor* of doing the work must be included in, or spread across, the other Prices in order to fulfil the obligation to complete the works for the tendered total of the Prices.

5. There is no adjustment to the lump sum activity schedule price if the amount, or quantity, of work within that activity later turns out to be different to that which the contractor estimated at time of tender. The only basis for a change to the Prices is as a result of a compensation event. See Clause 60.1.
6. Hence the Prices tendered by the Contractor in the *activity schedule* are inclusive of everything necessary and incidental to Providing the Works in accordance with the Works Information, as it was at the time of tender, as well as correct any Defects not caused by an Employer's risk.
7. However, the Contractor does not have to allow in his Prices for matters that may arise as a result of a compensation event. It should be noted that the list of compensation events includes those arising as a result of an Employer's risk event listed in core clause 80.1.

An activity schedule could have the following format:

Item No.	Programme Reference	Activity description	Price

C2.2 the activity schedule

The Tenderer completes the Price column. Each price is a lump sum excluding VAT and includes all work, risk and ancillary obligations necessary to complete the activity. An activity is paid only when the activity description has been fully completed and the applicable requirements of the Scope have been met.

Activity No.	Section / programme reference	Activity description	Price (ZAR excl. VAT)
Project controls			
1.1	Project controls	Mobilisation, kick-off, execution plan and registers	
1.2	Project controls	Detailed programme, cash flow and reporting baseline	
1.3	Project controls	Health, safety, security permits, Site establishment, hoarding and logistics	
1.4	Project controls	Quality, environmental, temporary-works and commissioning plans	
FIPDM Stage 3			
2.1	FIPDM Stage 3	Measured surveys, asset verification and confirmation of Stage 2 information	
2.2	FIPDM Stage 3	Mechanical load calculations, equipment selections and coordinated layouts	
2.3	FIPDM Stage 3	Electrical design, load study, protection, single-line diagrams and cable schedules	
2.4	FIPDM Stage 3	Controls, instrumentation, BMS/IMCS and points design	
2.5	FIPDM Stage 3	Native application, IoT, cloud, API and cybersecurity design	
2.6	FIPDM Stage 3	Civil/structural supports, penetrations and coordinated design-risk review	
2.7	FIPDM Stage 3	Accepted consolidated Stage 3 design package	
FIPDM Stage 4			
3.1	FIPDM Stage 4	Mechanical issued-for-construction package	
3.2	FIPDM Stage 4	Electrical issued-for-construction package including galvanised trunking layouts	
3.3	FIPDM Stage 4	Controls and instrumentation issued-for-construction package	
3.4	FIPDM Stage 4	Application/cloud issued-for-construction package and FAT/UAT protocols	

Activity No.	Section / programme reference	Activity description	Price (ZAR excl. VAT)
3.5	FIPDM Stage 4	Construction H&S documentation and Stage 4 readiness acceptance	
Procurement and FAT			
4.1	Procurement and FAT	VRV/VRF outdoor and indoor units, refrigerant piping and accessories	
4.2	Procurement and FAT	Ductwork, diffusers, fresh-air fans, filters and louvres	
4.3	Procurement and FAT	Electrical boards, cabling and galvanised trunking	
4.4	Procurement and FAT	Sensors, PLC panels, metering, server and displays	
4.5	Procurement and FAT	FAT and release for delivery	
Bridge completion			
5.1	Bridge completion	Complete Bridge A1 package for arrival and departure corridors in accordance with C3	
5.2	Bridge completion	Complete Bridge A1R package for arrival and departure corridors in accordance with C3	
5.3	Bridge completion	Complete Bridge A2 package for arrival and departure corridors in accordance with C3	
5.4	Bridge completion	Complete Bridge A3 package for arrival and departure corridors in accordance with C3	
5.5	Bridge completion	Complete Bridge A4 package for arrival and departure corridors in accordance with C3	
5.6	Bridge completion	Complete Bridge A5 package for arrival and departure corridors in accordance with C3	
5.7	Bridge completion	Complete Bridge A6 package for arrival and departure corridors in accordance with C3	
5.8	Bridge completion	Complete Bridge A7 package for arrival and departure corridors in accordance with C3	
5.9	Bridge completion	Complete Bridge A8 package for arrival and departure corridors in accordance with C3	
5.10	Bridge completion	Complete Bridge A9 package for arrival and departure corridors in accordance with C3	

Activity No.	Section / programme reference	Activity description	Price (ZAR excl. VAT)
5.11	Bridge completion	Complete Bridge A10 package for arrival and departure corridors in accordance with C3	
5.12	Bridge completion	Complete Bridge A11 package for arrival and departure corridors in accordance with C3	
5.13	Bridge completion	Complete Bridge A12 package for arrival and departure corridors in accordance with C3	
5.14	Bridge completion	Complete Bridge A13 package for arrival and departure corridors in accordance with C3	
5.15	Bridge completion	Complete Bridge C1 package for both corridors, including scheduled fire-rated ducting and smoke-fan interfaces	
5.16	Bridge completion	Complete Bridge C2 package for both corridors, including scheduled fire-rated ducting and smoke-fan interfaces	
5.17	Bridge completion	Complete Bridge C3 package for both corridors, including scheduled fire-rated ducting and smoke-fan interfaces	
5.18	Bridge completion	Complete Bridge C4 package for both corridors, including scheduled fire-rated ducting and smoke-fan interfaces	
5.19	Bridge completion	Complete Bridge C5 package for both corridors, including scheduled fire-rated ducting and smoke-fan interfaces	
5.20	Bridge completion	Complete Bridge C6 package for both corridors, including scheduled fire-rated ducting and smoke-fan interfaces	
5.21	Bridge completion	Complete Bridge C7 package for both corridors, including scheduled fire-rated ducting and smoke-fan interfaces	
5.22	Bridge completion	Complete Bridge C8 package for both corridors, including scheduled fire-rated ducting and smoke-fan interfaces	
5.23	Bridge completion	Complete Bridge E1 package for arrival and departure corridors in accordance with C3	
5.24	Bridge completion	Complete Bridge E3 package for arrival and departure corridors in accordance with C3	
5.25	Bridge completion	Complete Bridge E6 package for arrival and departure corridors in accordance with C3	
5.26	Bridge completion	Complete Bridge E9 package for arrival and departure corridors in accordance with C3	
5.27	Bridge completion	Complete Bridge E12 package for arrival and departure corridors in accordance with C3	
Digital platform			

Activity No.	Section / programme reference	Activity description	Price (ZAR excl. VAT)
8.1	Digital platform	IoT gateway configuration and secure cloud telemetry integration	
8.2	Digital platform	Continuous cloud database, Firebase services, storage and REST API configuration	
8.3	Digital platform	Cloud dashboards, analytics and carbon-reporting configuration	
8.4	Digital platform	Android and iOS Kotlin Multiplatform application development	
8.5	Digital platform	Application architecture, SQLDelight offline database, repositories, ViewModels and nested navigation	
8.6	Digital platform	Cybersecurity verification, Firebase authentication and exception-handling tests	
8.7	Digital platform	Source code and reproducible deployment package	
Integration			
9.1	Integration	BMS/IMCS integration attendance and point-to-point testing	
9.2	Integration	Server and two 85-inch displays installed and configured	
Testing and commissioning			
10.1	Testing and commissioning	Zone A SAT, balancing, controls and performance testing	
10.2	Testing and commissioning	Zone C SAT, balancing, controls and performance testing	
10.3	Testing and commissioning	Zone E SAT, balancing, controls and performance testing	
10.4	Testing and commissioning	End-to-end application/cloud integration and user-acceptance testing	
10.5	Testing and commissioning	Independent testing and statutory certification	
Training and close-out			
11.1	Training and close-out	Operations and maintenance training	
11.2	Training and close-out	As-built drawings, manuals, certificates and asset data	
11.3	Training and close-out	Software source, deployment, configuration and credential handover	

Activity No.	Section / programme reference	Activity description	Price (ZAR excl. VAT)
11.4	Training and close-out	FIPDM Stage 6 close-out and Completion	
Provisional sums			
12.1.1	Provisional sums	IoT gateway configuration and secure cloud telemetry integration	R650,000.00
12.1.2	Provisional sums	Continuous cloud database, Firebase services, storage and REST API configuration	R650,000.00
12.1.3	Provisional sums	Cloud dashboards, analytics and carbon-reporting configuration	R450,000.00
12.1.4	Provisional sums	Android and iOS Kotlin Multiplatform application development	R1,200,000.00
12.1.5	Provisional sums	Application architecture, SQLDelight offline database, repositories, ViewModels and nested navigation	R400,000.00
12.1.6	Provisional sums	Cybersecurity verification, Firebase authentication and exception-handling tests	R400,000.00
12.1.7	Provisional sums	Source code and reproducible deployment package	R250,000.00
12.2	Provisional sums	BMS/IMCS integration by an ACSA-appointed specialist	R650,000.00
12.3	Provisional sums	Independent testing provisional sum	R50,000.00
12.4	Provisional sums	Specialist or statutory certification	R50,000.00
12.5	Provisional sums	Verified pre-existing hazardous-material remediation	R50,000.00
12.6	Provisional sums	Major additional electrical capacity	R200,000.00
Grand Total A			

***All mounts to entered exclusive of VAT. Grand Total A to be carried over to Form of Offer**

C3: Scope of Work

1. Description of the works

1.1 Executive overview

The project entails the design, supply, installation and commissioning of high-efficiency VRV/VRF air-conditioner units in the airside corridors beyond boarding gates at O.R. Tambo International Airport. The battery limits are between the rotunda of apron-drive or nose-loader passenger loading bridges and the attachment to the terminal building.

1.2 Scope of work

The Contractor is responsible for the complete design, supply, installation, testing, commissioning and handover of the high-efficiency VRV/VRF air-conditioning systems in the airside corridors beyond boarding gates, including all mechanical, controls and instrumentation, electrical, building, civil, existing-services, digital-platform and integration work necessary for complete operational systems.

The bridge schedule and Annexure E control the included locations and dimensions. References below to Alpha 1 to Alpha 13 and Echo 1 to Echo 12 apply to the scheduled bridge locations A1, A1R, A2 to A13, E1, E3, E6, E9 and E12. Each bridge package includes both the arrival and departure corridors.

2. Alpha 1 to Alpha 13 and Echo 1 to Echo 12

2.1 Design works

- 2.1.1 Design the VRV/VRF HVAC system and obtain sign-off by a Mechanical PrEng or PrTechEng. The design includes measured surveys, cooling-load calculations, fresh-air requirements, equipment selection, refrigerant-pipe sizing, condensate drainage, duct sizing, diffuser quantities and locations, coordinated drawings, schedules and design certificates.
- 2.1.2 Design the controls and instrumentation system and select an industrial SCADA solution. A Control and Instrumentation PrEng or PrTechEng signs the control philosophy, architecture, I/O schedule, points list, schematics, alarm matrix, communications and integration design.
- 2.1.3 Design concrete pads or select suitable proprietary portable pads for outdoor VRV/VRF condenser units. Complete structural-integrity assessments of existing slabs, supports, anchors and penetrations and obtain sign-off by the responsible Civil/Structural PrEng or PrTechEng.
- 2.1.4 Design the electrical reticulation system and obtain sign-off by an Electrical PrEng or PrTechEng, including load and fault-level studies, distribution boards, protection, metering, isolators, earthing, cable sizing, routes, separate galvanised containment and single-line diagrams.

2.2 Mechanical works

- 2.2.1 Supply and install new high-efficiency outdoor VRV/VRF condenser units, complete with supports, vibration isolation, weather protection, controls interfaces and manufacturer accessories.
- 2.2.2 Supply and install indoor hideaway ducted units with return-air and fresh-air plenum boxes, filters, supports and condensate PVC piping graded to suitable discharge points.
- 2.2.3 Supply and install insulated refrigeration piping, fittings, branch or refrigerant-distribution boxes and accessories. Complete brazing, nitrogen purging, pressure testing, evacuation, charging, leak testing and commissioning and provide a certificate of conformity signed by an appropriately registered SAQCC Gas refrigeration and air-conditioning practitioner.
- 2.2.4 Supply and install insulated supply-air and return-air ductwork, including plenums, supports, flexible connections, access panels, sealing and external insulation.
- 2.2.5 Supply and install spigot dampers, volume-control dampers, round ducts, flexible ducting and swirl diffusers, complete with balancing and identification.
- 2.2.6 Supply and install fresh-air fans, ductwork, dampers, filters and weather louvres, complete with guards, supports, electrical connection, controls and airflow balancing.
- 2.2.7 Provide complete mechanical as-built drawings, equipment schedules, test records, balancing reports, operating data and maintenance information.

2.3 Controls and instrumentation works

- 2.3.1 Supply and install airflow sensors and transmitters on supply, return and fresh-air ducts, with suitable straight lengths, access and calibration.
- 2.3.2 Supply and install static-pressure indicators and transmitters on supply and return ducts.
- 2.3.3 Supply and install temperature sensors and transmitters on supply and return ducts.
- 2.3.4 Supply and install aesthetically suitable local temperature and humidity displays.
- 2.3.5 Supply and install control panels including PLCs, required I/O, industrial communications or Wi-Fi modules, protection, power supplies and an online UPS. Provide complete normal and UPS-backed power supplies to the PLC, IoT gateway, communications and network devices, sensors, transmitters and control-panel auxiliaries. Size the UPS from a documented load and autonomy calculation accepted during design and provide mains-failure, UPS-on-battery, low-battery and UPS-fault indications to the PLC, SCADA, BMS/IMCS and digital platform.
- 2.3.6 Link each control panel to the industrial SCADA, BMS/IMCS and digital platform using accepted open protocols and complete point-to-point testing.
- 2.3.7 Wire airflow, pressure, temperature, humidity and power-metering devices to the control panels and provide complete termination, ferruling, identification and testing.
- 2.3.8 Supply and install the server and two 85-inch LED displays at the ACSA Infrastructure Monitoring Centre, including mounts, connections, configuration, dashboards and operator interfaces.

2.3.9 Supply and install labels and dedicated hot-dip galvanised steel trunking for sensor, instrumentation, control and communications cables, physically segregated from power cabling.

2.3.10 Provide as-built wiring diagrams, I/O lists, points schedules, network information, PLC logic and editable program and configuration files.

2.4 Electrical works

2.4.1 Supply and install distribution boards equipped with relays, circuit breakers, earth-leakage protection, surge protection, smart energy meters and dedicated labelled circuits, isolators and power supplies for fresh-air fans, outdoor units, indoor units, PLC control panels, IoT gateways, UPS units, communications equipment, controls and associated equipment.

2.4.2 Supply, install, terminate, joint, identify and test all power cables and conductors.

2.4.3 Supply and install lockable local isolators and safety disconnecting devices for all equipment.

2.4.4 Supply and install dedicated hot-dip galvanised steel trunking and cable trays for electrical power cables, complete with covers, fittings, supports, bonding and earthing and segregated from sensor and control cabling.

2.4.5 Test the complete electrical installation and provide Certificates of Compliance from the distribution boards to all supplied units and equipment.

2.5 Building and facilities works

2.5.1 Configure the designated ACSA Infrastructure Monitoring Centre desks and operator positions for the HVAC plant operator and controller, including furniture interfaces, displays, power and data coordination.

2.5.2 Replace all suspended-ceiling components damaged or removed for the Works and match the existing finish.

2.5.3 Clean each affected bridge and corridor continuously during the Works and complete a final clean before each scheduled flight or operational hand-back so that the area is safe, clean, unobstructed and ready for airport operations.

2.5.4 Make good and reinstate all affected ceilings, walls, floors, roofs, finishes, penetrations, paintwork and building elements before each scheduled flight or operational hand-back. No affected bridge or corridor may be returned to operations with incomplete making good, loose materials, exposed openings, unfinished surfaces or work-related hazards.

2.5.5 Provide, inspect and maintain compliant hoarding, barriers and signage so that passengers, personnel, aircraft operations and airport assets are protected from the Works.

2.6 Civil works

2.6.1 Design, supply and install concrete pads or accepted proprietary portable pads for outdoor units, including foundations, reinforcement, levels, drainage, anchors and making good.

2.7 Existing-services works

- 2.7.1 Isolate, protect, temporarily remove where accepted, reinstate, test and restore fire detectors and associated interfaces affected by the Works.
- 2.7.2 Isolate, protect, temporarily remove where accepted, reinstate, test and restore ceiling lights and associated electrical services affected by the Works.

3. Charlie 1 to Charlie 8

3.1 Design works

- 3.1.1 Complete and professionally sign the VRV/VRF HVAC design, including surveys, cooling loads, fresh-air requirements, equipment selection, refrigeration, condensate, duct sizing, diffuser layouts and coordinated drawings.
- 3.1.2 Complete and professionally sign the controls, industrial SCADA, I/O, points, alarm, network and integration design.
- 3.1.3 Complete and professionally sign the civil and structural design for outdoor-unit pads, existing slabs, supports, anchors, penetrations and external plant.
- 3.1.4 Complete and professionally sign the electrical reticulation, load, protection, metering, earthing, cabling, isolator and galvanised-containment design.

3.2 Mechanical works

- 3.2.1 Supply and install outdoor VRV/VRF condenser units and indoor hideaway ducted units with plenums, filters, supports and condensate piping.
- 3.2.2 Supply and install insulated refrigeration piping, distribution boxes and accessories and complete pressure testing, evacuation, charging, leak testing and SAQCC Gas certification.
- 3.2.3 Supply and install insulated supply and return ductwork, spigot and volume-control dampers, round ducts, flexible ducts and swirl diffusers.
- 3.2.4 Supply and install fresh-air fans, ductwork, filtration and weather louvres and complete airflow balancing.
- 3.2.5 Supply and install the scheduled fire-rated ductwork and aluminium weather louvres for existing smoke fans, including supports, fire stopping, interfaces, testing and certification.
- 3.2.6 Provide complete mechanical as-built drawings, schedules, test records and operating and maintenance information.

3.3 Controls and instrumentation works

- 3.3.1 Supply and install airflow, static-pressure, temperature and humidity sensing, indication and transmission for supply, return and fresh-air systems.

- 3.3.2 Supply and install PLC control panels, required I/O, communications modules, protection, power supplies and an online UPS and link them to the industrial SCADA, BMS/IMCS and digital platform. Provide complete normal and UPS-backed power supplies to the PLC, IoT gateway, communications and network devices, sensors, transmitters and control-panel auxiliaries. Size the UPS from a documented load and autonomy calculation accepted during design and provide mains-failure, UPS-on-battery, low-battery and UPS-fault indications to the PLC, SCADA, BMS/IMCS and digital platform.
- 3.3.3 Wire, terminate, label and test all sensors, transmitters, power meters, panels and interfaces.
- 3.3.4 Supply and install the server and two 85-inch LED displays at the ACSA Infrastructure Monitoring Centre and configure the required operator displays and dashboards.
- 3.3.5 Supply and install labels and separate dedicated hot-dip galvanised steel trunking for sensor, control and communications cables.
- 3.3.6 Provide as-built wiring diagrams, I/O and points schedules, network information, PLC logic and editable program and configuration files.

3.4 Electrical works

- 3.4.1 Supply and install distribution boards, relays, circuit breakers, earth-leakage protection, surge protection, smart meters, dedicated labelled circuits, power supplies, cabling, joints and lockable isolators for all supplied equipment, including PLC control panels, IoT gateways, UPS units and communications equipment.
- 3.4.2 Supply and install dedicated hot-dip galvanised steel trunking and cable trays for power cables, complete with covers, fittings, supports, bonding and earthing and segregated from sensor and control cabling.
- 3.4.3 Test the complete electrical installation and provide Certificates of Compliance from the distribution boards to all supplied units and equipment.

3.5 Building, civil and existing-services works

- 3.5.1 Configure the designated ACSA Infrastructure Monitoring Centre operator desks and positions, replace damaged suspended ceilings and provide compliant hoarding, barriers and signage. Clean each affected bridge and corridor continuously during the Works and complete a final clean before each scheduled flight or operational hand-back. Make good and reinstate all affected building elements before each scheduled flight or operational hand-back so that the area is safe, clean, unobstructed and ready for airport operations.
- 3.5.2 Design, supply and install concrete or accepted proprietary portable pads for outdoor units, including structural verification, anchors, drainage and making good.
- 3.5.3 Protect, isolate, reinstate, test and restore fire detectors, ceiling lights and other existing services affected by the Works.

4. General services

- 4.1 Prepare the statutory documentation and secure the construction work permit from the Department of Employment and Labour before construction starts.
- 4.2 Select, supply, configure, test and commission an industrial SCADA solution and train the Employer's designated personnel.
- 4.3 Provide, secure, maintain and remove all Contractor's Equipment, plant, tools, temporary works, access equipment, lifting equipment, storage and Site facilities required to execute the Works.
- 4.4 Provide the native Android and iOS Kotlin Multiplatform application, IoT gateways, secure cloud telemetry, continuous database, Firebase services, REST APIs, dashboards, analytics, carbon reporting, offline synchronisation, cybersecurity, source code and reproducible deployment package described in this Scope.
- 4.5 Coordinate and support BMS/IMCS integration by the ACSA-appointed specialist, including points, protocols, network information, attendance, testing, retesting and final acceptance.
- 4.6 Complete factory acceptance, site acceptance, performance, balancing, electrical, controls, communications, cybersecurity, failover, backup-and-restore and user-acceptance testing.
- 4.7 Provide training, warranties, maintenance support, licences and subscriptions for the stated periods and complete all handover, as-built, certification, asset-data and FIDPM Stage 6 close-out requirements.

5. Design submissions and review

- 5.1 Submit a design-submission register within 10 working days after the Starting Date. Each submission is complete, coordinated, internally checked, signed by the responsible registered professional and accompanied by calculations, a compliance matrix and an interface list. Allow 10 working days for Employer review of a complete submission and include reasonable review cycles and correction of non-compliance in the programme and Prices. Do not procure or construct affected permanent works before the relevant design is accepted, except at the Contractor's risk. Acceptance does not transfer design responsibility.

6. FIDPM deliverables and discipline responsibilities

- 6.1 The Works start at FIDPM Stage 3. The Contractor verifies the Employer's brief and available Stage 2 information and completes Stages 3, 4, 5 and 6. Mechanical, Electrical, Control and Instrumentation and Civil/Structural designs, calculations, drawings and completion records are prepared, checked and signed by appropriately registered professionals within their disciplines.
- 6.2 Stage 3: measured surveys, load confirmation, design development, coordinated calculations, equipment selection, layouts, control philosophy, digital architecture, cost plan, programme and design-risk review.
- 6.3 Stage 4: issued-for-construction drawings, specifications, schedules, software and API design, cybersecurity design, construction health-and-safety documentation, procurement and FAT readiness.
- 6.4 Stage 5: supply, construction, installation, configuration, inspection, FAT, SAT, balancing, integration, testing and commissioning.

6.5 Stage 6: as-built information, operating and maintenance data, training, statutory certificates, software and configuration handover, defects closure and final completion dossier.

6.6 The Contractor provides sufficient management, design, supervision, installation, testing, commissioning and administrative resources. The seven key resources below are distinct persons; no person fulfils more than one key role.

Role description	Minimum qualification and professional registration	Minimum relevant experience
Project / Construction Manager	SAQA-accredited BTech in engineering or the built environment, or higher; active SACPCMP registration as PrCPM or PrCM.	More than three years of multidisciplinary engineering construction experience after initial SACPCMP professional registration.
Mechanical Engineer	SAQA-accredited BTech Mechanical Engineering, or higher; active ECSA registration as PrTechEng or PrEng.	More than three years after initial ECSA professional registration in commercial or industrial HVAC design and commissioning, including VRV/VRF, central plant, ventilation or ductwork.
Control and Instrumentation Engineer	SAQA-accredited BTech Electronic Engineering or Mechatronics Engineering, or higher; active ECSA registration as PrTechEng or PrEng.	More than three years after initial ECSA professional registration in HVAC controls, PLCs/controllers, alarm matrices, energy monitoring and BMS/IMCS/SCADA integration.
Electrical Engineer	SAQA-accredited BTech Electrical Engineering, or higher; active ECSA registration as PrTechEng or PrEng.	More than three years after initial ECSA professional registration in electrical distribution, HVAC supplies, panels, protection, metering, earthing and certification.
Civil / Structural Engineer	SAQA-accredited BTech Civil Engineering, or higher; active ECSA registration as PrTechEng or PrEng.	More than three years after initial ECSA professional registration in equipment plinths, support frames, anchors, penetrations, roof or external plant supports and structural verification in operational facilities.

Refrigeration and Air-conditioning Specialist	SAQA-accredited refrigeration and air-conditioning trade qualification, diploma or higher relevant qualification; active SAQCC Gas registration through SARACCA appropriate to the proposed synthetic refrigerant.	At least one completed qualifying VRV/VRF or commercial HVAC project involving installation, brazing, pressure testing, evacuation, charging, recovery and commissioning.
Construction Health and Safety Agent	SAQA-accredited National Diploma in safety, occupational health and safety, engineering or the built environment, or higher; active SACPCMP registration as PrCHSA.	More than three years of multidisciplinary engineering construction experience after initial SACPCMP professional registration.

6.7 Submit a tender-specific organogram, signed availability letters and reporting interfaces. A replacement requires prior Project Manager acceptance and has qualifications, registration and relevant experience equal to or better than the evaluated resource.

7. Equipment requirements

- 7.1 All equipment is new, unused, current production, supported in South Africa, compatible as a complete system and suitable for at least 10 years of service and spares availability.
- 7.2 Provide high-efficiency VRV/VRF outdoor condensing units and compatible indoor hideaway ducted units for every scheduled space; insulated refrigerant piping and distribution accessories; condensate drainage; plenums; insulated supply, return and fresh-air ductwork; dampers; diffusers; fans; filters; weather louvres; and scheduled Zone C fire-rated ducting and smoke-fan interface provisions.
- 7.3 Provide airflow, pressure, temperature and humidity instrumentation; PLC panels, I/O, communications, protection and metering; the scheduled server and two 85-inch displays; and complete SCADA/BMS/IMCS interfaces.
- 7.4 Provide distribution boards, protection, relays, isolators, power supplies, smart energy meters and all electrical, control, sensor and communications cabling.
- 7.5 Develop the native Android and iOS application using Kotlin Multiplatform, Jetpack Compose/Compose Multiplatform Navigation, Ktor, Koin and encrypted SQLDelight; use Firebase Authentication, Cloud Storage and Cloud Firestore where appropriate; and provide IoT gateways, databases, REST APIs, dashboards, analytics, alerts, audit trails, offline synchronisation, cybersecurity, backup, restore and disaster recovery.
- 7.6 Provide open interfaces, unrestricted Employer access, source code, schemas, architecture, test evidence, software bill of materials, administrative credentials, reproducible packages and all licences, hosting, distribution and support for 24 months after Completion.

8. Workmanship requirements

- 8.1 Provide all labour, supervision, access equipment, temporary works, craneage, transport, storage, consumables, fixings, sleeves, sealants, labels, testing instruments and incidental items necessary for complete operational systems. Provide all dedicated electrical circuits, breakers, isolators, surge protection, AC and DC power supplies, transformers, chargers, batteries, online UPS units, distribution, wiring, earthing and accessories required to power the PLCs, IoT gateways, communications and network devices, sensors, transmitters and control-panel auxiliaries.
- 8.2 Install power cables in suitably sized hot-dip galvanised steel trunking with covers, fittings, supports, bonding, earthing and labels. Install sensor, instrumentation, communication and control cables in separate dedicated hot-dip galvanised steel trunking, physically segregated from power cabling.
- 8.3 Provide equipment pads, structural supports, vibration isolation, corrosion protection, weatherproofing, penetrations, sealing, fire stopping, making good, painting and reinstatement of ceilings, walls, floors, roofs, lights and fire detectors.
- 8.4 Pressure-test, evacuate, charge and commission refrigeration circuits; test electrical installations; provide Certificates of Compliance; permanently label equipment, cables and terminals; protect existing assets; and repair Contractor-caused damage at no additional cost.

9. Applicable legislation and standards

- 9.1 Comply with legislation, statutory notices, ACSA requirements and the standards listed in Annexure A in the editions applicable at the Contract Date. Where requirements conflict, legislation and statutory requirements take precedence, followed by the Contract Data, this Scope, accepted Contractor design and manufacturer requirements. Notify the Project Manager and do not adopt a lower requirement without acceptance.

10. Execution constraints and business continuity

- 10.1 The airport remains operational. Verify dimensions, loads, existing services, access routes, electrical supplies, structural supports and interfaces before final design or procurement. Coordinate with airport operations, security, fire and rescue, ICT, electrical, building maintenance and controls teams. Maintain safe passenger and operational access using accepted phasing, hoarding, barricading, signage, permits and housekeeping. Plan shutdowns, tie-ins and deliveries in advance, protect assets and reinstate disturbed areas. Before each scheduled flight or operational hand-back, remove tools, waste, dust, loose materials and temporary obstructions; complete the required cleaning and making good; close or securely protect openings; and obtain the Employer's operational release of the affected bridge or corridor.
- 10.2 Zone A comprises A1, A1R and A2 to A13; Zone C comprises C1 to C8; and Zone E comprises E1, E3, E6, E9 and E12. Each bridge package includes both the arrival and departure corridors.

11. Programme and planning

- 11.1 Submit and maintain a logic-linked programme aligned with the Activity Schedule and FIDPM Stages 3 to 6. Include surveys, design submissions, Employer reviews, permits, approvals, procurement, manufacturing, FAT, phased airside work, shutdowns, bridge-by-bridge installation, testing, training, handover, float and risk allowances. Completion is within 104 weeks after the Contract Date.

12. Health, safety, environment and quality

- 12.1 Comply with the OHS Act, Construction Regulations, environmental conditions and accepted health-and-safety, environmental and quality plans. Provide competent supervision, permits, task risk assessments, method statements, inspection and test plans, material approvals, nonconformance control, waste management, dust and noise controls, fire prevention, housekeeping and protection of passengers, personnel, assets and airport operations.

13. Testing, commissioning and acceptance

- 13.1 Complete FAT for panels, controllers, software, communications and alarm logic. Submit procedures at least 15 working days before testing. Complete SAT, electrical testing, pressure and evacuation records, airflow balancing, static pressure, temperature, humidity, drainage, controls, protection, metering, integration, cybersecurity, failover, backup-and-restore and user-acceptance testing for every bridge and space. Test PLC, IoT gateway, communications and control-panel power supplies under normal supply, simulated mains failure and restoration; verify UPS transfer without loss of monitoring or communications, accepted autonomy, battery condition, recharge, bypass and all mains-failure, on-battery, low-battery and UPS-fault alarms. Correct failures and repeat tests caused by non-compliance at no additional cost.

14. Training, handover, warranty and maintenance

- 14.1 Provide practical and classroom training for nominated ACSA personnel covering operation, alarms, isolation, inspection, mobile/cloud administration, cybersecurity, reporting, backup, restore and fault finding. The defects date is 52 weeks after Completion. Honour equipment warranties, correct Defects and provide the specified digital licences, subscriptions, hosting, distribution and support for 24 months after Completion.

15. Handover documents

- 15.1 Submit approved designs; editable and PDF as-built drawings; calculations; asset registers; warranties; FAT/SAT and commissioning records; refrigeration, electrical and statutory certificates; O&M manuals; maintenance schedules; network, IP and points schedules; PLC/SCADA files; application and cloud source code; build and deployment packages; credentials; backups; training records; defects records; and the FIDPM Stage 6 close-out report.

16. Employer-provided items, interfaces, exclusions and boundaries

- 16.1 The Employer provides controlled access to the bridge corridors and designated control-room, ICT and BMS/IMCS interface areas; available existing drawings and asset information for information only; review comments; operational coordination; witnessing personnel; and approved network/interface requirements. The Contractor verifies all Employer-provided information and remains responsible for coordination and completeness.
- 16.2 Excluded unless instructed are major electrical-capacity upgrades beyond confirmed tie-in points, verified pre-existing hazardous-material remediation, direct charges of the ACSA-appointed BMS/IMCS specialist, instructed independent testing fees and identified third-party statutory fees. Contractor design, preparation, attendance, support, normal certification, testing, rectification and interface work remain included in the Prices.

17. Risk allocation and compensation-event controls

- 17.1 The Contractor allows for conditions reasonably discoverable through competent tender review and Stage 3 surveys, normal coordination, live-airport phasing, access procedures, protection, temporary works and correction of Defects. Notify early warnings promptly. Do not proceed with work alleged to change the Prices or Completion Date without the notices and Project Manager instructions required by the contract.

Item	Scope boundary	Contractor's included obligation
Native mobile application and cloud platform — total	Provisional sum: R4,000,000.00 excluding VAT. Expenditure is limited to instructed digital-platform work and approved related services, licences and hosting.	The seven allocations below are maximum activity allowances and do not transfer design, coordination, testing, support or Completion risk to the Employer.
12.1.1 IoT gateway configuration and secure cloud telemetry integration	R650,000.00 excluding VAT.	Supply and configure suitable gateways, secure device identity, telemetry ingestion, buffering, health monitoring and plant-to-cloud communications.
12.1.2 Continuous cloud database, Firebase services, storage and REST API configuration	R650,000.00 excluding VAT.	Configure the continuously available operational database, Firebase Authentication, Cloud Storage, Firestore, documented REST APIs, backup, restore, retention and 24-month cloud services.

12.1.3 Cloud dashboards, analytics and carbon-reporting configuration	R450,000.00 excluding VAT.	Configure plant dashboards, alarms, trends, detector health, airflow and HVAC performance, refrigerant-loss analytics and carbon-dioxide-equivalent reports.
12.1.4 Android and iOS Kotlin Multiplatform application development	R1,200,000.00 excluding VAT.	Develop, test, deploy and commission the native Android and iOS Kotlin Multiplatform application using Compose Multiplatform, Ktor and Koin.
12.1.5 Application architecture, SQLDelight offline database, repositories, ViewModels and nested navigation	R400,000.00 excluding VAT.	Implement repository and ViewModel architecture, encrypted SQLDelight offline persistence, synchronisation, nested navigation and consistent application states.
12.1.6 Cybersecurity verification, Firebase authentication and exception-handling tests	R400,000.00 excluding VAT.	Complete authentication, role and MFA controls, exception handling, security testing, penetration testing, remediation, audit trails, failover and backup-and-restore verification.
12.1.7 Source code and reproducible deployment package	R250,000.00 excluding VAT.	Provide source code, schemas, APIs, architecture, build and deployment instructions, software bill of materials, credentials, signing arrangements and reproducible packages.
BMS/IMCS integration by an ACSA-appointed specialist	Provisional sum: R650,000.00 excluding VAT. The specialist's direct charges are paid only when instructed.	Provide all design data, points, protocols, attendance, configuration support, testing and retesting.
Independent testing	Provisional sum: R50,000.00 excluding VAT for the instructed independent tester or certifier's fee.	Prepare the systems, provide access, instruments and support, rectify failures and repeat tests caused by Contractor non-compliance.

Specialist or statutory certification	Provisional sum: R50,000.00 excluding VAT for identified third-party or statutory fees instructed by the Project Manager.	All normal professional design, installation, refrigeration, electrical and Contractor certification costs are included in the Prices.
Verified pre-existing hazardous-material remediation	Provisional sum: R50,000.00 excluding VAT for verified pre-existing hazardous-material remediation instructed by the Project Manager.	Survey and identify suspected materials, stop work safely, protect the area and cooperate with the instructed specialist.
Major additional electrical capacity	Provisional sum: R200,000.00 excluding VAT for instructed capacity beyond the confirmed tie-in points and stated Contractor works.	Complete load and fault-level studies and submit evidence before procurement. No expenditure is incurred without a Project Manager instruction.

17.2 A provisional sum is not an entitlement. Expenditure starts only after a Project Manager instruction.

Unused balances remain with the Employer. Contractor coordination, attendance, preparation, support, testing and rectification remain included unless expressly stated otherwise.

18. Activity Schedule and payment

18.1 The priced Activity Schedule is aligned to the accepted programme and measurable completed deliverables. Each of the 27 bridges is a separate payment activity. Prices include all design, labour, materials, plant, supervision, access, permits, phasing, overheads, profit, escalation, risk allowances and incidental work, excluding VAT and instructed provisional-sum expenditure.

18.2 A bridge activity includes both arrival and departure corridors and all applicable builders work, supports, VRV/VRF equipment, refrigerant piping, drainage, ductwork, air terminals, ventilation, electrical distribution, separate galvanised power and sensor/control trunking, controls, instrumentation, integration, fire stopping, testing, balancing, commissioning, reinstatement and bridge-specific handover records. Delivery of materials, partial installation or completion of only one corridor is not a completed activity.

19. Completion criteria

19.1 Completion is achieved only when all 27 bridge locations and 54 spaces, the native application, cloud platform and integrations are complete, safe, operational and compliant; all tests have passed; required certificates and Category A handover documents are accepted; training is complete; safety-critical and operational Defects are corrected; and all work areas are clean and reinstated.

20. **Scope acceptance schedule**

- 20.1 The Contractor submits and maintains a Scope acceptance schedule identifying every design submission, sample, material approval, method statement, FAT, SAT, inspection, certificate, training item, handover document and bridge completion package requiring Project Manager acceptance or witnessing. The schedule states the responsible person, planned submission date, review period, acceptance status, comments, resubmission date and close-out evidence and is updated with each programme submission.

ANNEXES to C3 (Works information)

Title	Annex number	Applicable or N/A
Detail Technical Specification	Annexure A	Applicable
Schedule of Equipment	Annexure B	Applicable
Environmental Terms and Conditions	Annexure C	Applicable
Occupational Health and Safety Agreement	Annexure D	Applicable
Bridge corridor dimensions	Annexure E	Applicable

ANNEXURE A

Detail Technical Specification

VRV/VRF air-conditioning, ventilation, electrical and controls		
Standard / Regulation	Standard Number	Description
Refrigeration safety	ASHRAE 15 and ASHRAE 34	Safety, refrigerant classification and concentration requirements applicable to VRV/VRF systems.
Refrigerating systems	ISO 5149 Parts 1–4	Safety and environmental requirements across design, installation, operation and recovery
Refrigerating systems	SANS 10147	South African refrigeration safety requirements
Ventilation	SANS 10400-O	Ventilation requirements where applicable
Pressure equipment	Pressure Equipment Regulations and SANS 347	Categorisation and conformity assessment where applicable
Electrical installations	SANS 10142-1	Low-voltage installation, verification and certification
Industrial control cybersecurity	IEC 62443 Series and ACSA requirements	Secure control-system architecture and integration
Health and safety	OHS Act and Construction Regulations, 2014	Health, safety and construction work duties
Airport requirements	ACSA standards and specifications	Engineering, operations, permits, IT, cybersecurity and IMC integration

Remote Monitoring, Internet of Things (IoT), Cloud Platforms and Analytics		
Standard / Regulation	Standard Number	Description
Industrial Communication Networks and Systems Security	IEC 62443 Series	Cybersecurity requirements for industrial automation, SCADA, PLC and connected systems
Functional Safety Systems	IEC 61508	Functional safety requirements for electrical, electronic and programmable systems
Programmable Controllers	IEC 61131 Series	Requirements for programmable logic controllers and automation systems
Industrial Networks – OPC Unified Architecture	IEC 62541 Series	Standards for secure industrial communication and interoperability between systems
MQTT Messaging Protocol	ISO/IEC 20922	Lightweight publish/subscribe messaging protocol for IoT devices and cloud communication
Information Security Management Systems	ISO/IEC 27001	Requirements for information security management systems
Code of Practice for Information Security Controls	ISO/IEC 27002	Best practices for information security controls and cloud systems
Cloud Computing Overview and Vocabulary	ISO/IEC 17788	Defines concepts and terminology for cloud computing systems
Cloud Computing Reference Architecture	ISO/IEC 17789	Reference architecture for cloud computing platforms and services
Internet of Things Reference Architecture	ISO/IEC 30141	Reference architecture for Internet of Things systems
Internet of Things Interoperability	ISO/IEC 21823 Series	Requirements for interoperability between IoT systems and devices
Systems and Software Engineering	ISO/IEC/IEEE 12207	Software lifecycle processes for software development and maintenance
Software Quality Requirements and Evaluation	ISO/IEC 25010	Software quality model for applications, cloud systems and analytics platforms
Information Technology Service Management	ISO/IEC 20000	Requirements for IT service management systems
Data Protection and Privacy	Act 4 of 2013 (POPIA)	Governs data protection, storage and privacy for cloud-based systems

Cybersecurity Framework	NIST Cybersecurity Framework	Framework for cybersecurity risk management and protection of connected systems
Industrial Automation and Control Systems Security	NIST SP 800-82	Security guidance for industrial control systems, SCADA and PLC systems
Web Accessibility Guidelines	WCAG 2.1	Accessibility requirements for web and mobile applications
Not applicable	Not applicable	Not applicable
Cloud Service Availability and Resilience	ISO 22301	Business continuity and resilience requirements for cloud and remote monitoring platforms
Telecommunications and Network Infrastructure	IEEE 802 Series	Network communication standards for Ethernet, Wi-Fi and industrial networking
Time Synchronisation for Networked Systems	IEEE 1588	Precision time protocol requirements for synchronisation of industrial monitoring systems
Industrial Ethernet Communication	EtherNet/IP	Industrial Ethernet communication protocol requirements for PLC and SCADA integration
Modbus Communication Protocol	Modbus TCP/IP	Industrial communication protocol for instrumentation and monitoring devices
Airports Company South Africa IMCS Standards	ACSA IMCS Standards and Specifications	Requirements for integration into the ACSA Integrated Monitoring and Control System
Cloud Data Storage and Security Requirements	ISO/IEC 27017	Security controls for cloud services and cloud data protection
Cloud Privacy Protection	ISO/IEC 27018	Protection of personally identifiable information in public cloud services

ANNEXURE B

SCHEDULE OF EQUIPMENT

Refer to the updated Bill of Quantities, equipment schedules, accepted FIPDM Stage 3 design and accepted FIPDM Stage 4 issued-for-construction documentation.

ACSA Service & Maintenance Contractors
Environmental Terms and Conditions to Commence Work - EMS 048

The following Environmental Terms and Conditions shall be strictly adhered to by all contractors when conducting works for ACSA. ACSA shall audit contractor activities, products and services on an ad hoc basis to ensure compliance to these environmental conditions. Any pollution clean-up costs shall be borne by the contractor.

ISSUE	REQUIREMENT
Environmental Policy	ACSA's Environmental Policy shall be communicated, comprehended and implemented by all ACSA appointed contractor staff.
Storm water, Soil and Groundwater Pollution	- No solid or liquid material may be permitted to contaminate or potentially contaminate storm water, soil or groundwater resources. - Any pollution that risks contamination of these resources must be cleaned-up immediately. Spills must be reported to ACSA immediately. Contractors shall supply their own suitable clean-up materials where required. - Washing, maintenance and refueling of equipment shall only be allowed in designated service areas on ACSA property. It is the contractor's responsibility to determine the location of these areas. - No leaking equipment or vehicles shall be permitted on the airport.
Air Pollution	- Dust: Dust resulting from work activities that could cause a nuisance to employees or the public shall be kept to a minimum. - Odours and emissions: All practical measures shall be taken to reduce unpleasant odours and emissions generated from work related activities. - Fires: No open fires shall be permitted on site.
Noise Pollution	- All reasonable measures shall be taken to minimise noise generated on site as a result of work operations. - The Contractor shall comply with the applicable regulations with regard to noise.
Waste Management	- Waste shall be separated as general or hazardous waste. - General and hazardous waste shall be disposed of appropriately at a permitted landfill site should recycling or re-use of waste not be feasible. - Under no circumstances shall solid or liquid waste be dumped, buried or burnt. - Contractors shall maintain a tidy, litter free environment at all times in their work area. - Contractors must keep on file:

	1. The name of the contracting waste company 2. Waste disposal site used 3. Monthly reports on quantities – separated into general, hazardous and recycled 4. Maintained file of all Waste Manifest Documents and Certificates of Safe Disposal 5. Copy of waste permit for disposal site This information must be available during audits and inspections.
Handling & Storage of Hazardous Chemical Substances (HCS)	1. All HCS shall be clearly labeled, stored and handled in accordance to Materials Safety Data Sheets. 2. Materials Safety Data Sheets shall be stored with all HCS. 3. All spillages of HCS must be cleaned-up immediately and disposed of as hazardous waste. (HCS spillages must be reported to ACSA immediately). 4. All contractors shall be adequately informed with regards to the handling and storage of hazardous substances. 5. Contractors shall comply with all relevant national, regional and local legislation with regard to the transport, storage, use and disposal of hazardous substances.
Water and Energy Consumption	ACSA promotes the conservation of water and energy resources. The contractor shall identify and manage those work activities that may result in water and energy wastage.
Training & Awareness	The conditions outlined in this permit shall be communicated to all contractors and their employees prior to commencing works at the airport.

Penalties

Penalties shall be imposed by ACSA on Contractors who are found to be infringing these requirements and/or legislation. The Contractor shall be advised in writing of the nature of the infringement and the amount of the penalty. The Contractor shall take the necessary steps (e.g. training/remediation) to prevent a recurrence of the infringement and shall advise ACSA accordingly.

The Contractor is also advised that the imposition of penalties does not replace any legal proceedings, the Council, authorities, land owners and/or members of the public may institute against the Contractor.

Penalties shall be between R200 and R20 000, depending upon the severity of the infringement. The decision on how much to impose will be made by ACSA's Airport Environmental Management Representative in consultation with the Airport Manager or his/her designate, and will be final. In addition to the penalty, the Contractor shall be required to make good any damage caused as a result of the infringement at his/her own expense.

I, _____ (name & surname) of _____

_____ (company) agree to the above conditions and acknowledge ACSA's right to impose penalties should I or any of my employees or sub-contractors fail to comply with these conditions.

Signed: _____ on this date: _____ (dd/mm/yyyy)

at: _____ (airport name).

ANNEXURE D

OCCUPATIONAL HEALTH AND SAFETY AGREEMENT

AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH & SAFETY ACT (ACT 85 Of 1993) & CONSTRUCTION REGULATION 5.1(k)

OBJECTIVES

To assist Airport Company South Africa (ACSA) in order to comply with the requirements of:

1. The Occupational Health & Safety (Act 85 of 1993) and its regulations and
2. The Compensation for Occupational Injuries & Diseases Act (Act 130 of 1993) also known as the (COID Act).

To this end an Agreement must be concluded before any contractor/ subcontracted work may commence

The parties to this Agreement are:

Name of Organization: AIRPORTS COMPANY SOUTH AFRICA O R Tambo INTERNATIONAL AIRPORT
Physical Address: Airport Company South Africa OR Tambo International Airport ACSA Building, 4th Floor

Hereinafter referred to as “Client”

Name of organisation:
Physical Address:

Hereinafter referred to as “the Mandatary/ Principal Contractor”

MANDATORY'S MAIN SCOPE OF WORK

GENERAL INFORMATION FORMING PART OF THIS AGREEMENT

1. The Occupational Health & Safety Act comprises of SECTION 1-50 and all unrepealed REGULATIONS promulgated in terms of the former Machinery and Occupational Safety Act No.6 of 1983 as amended as well as other REGULATIONS which may be promulgated in terms of the Act and other relevant Acts pertaining to the job in hand.
2. "Mandatory" is defined as including as agent, a principal contractor or a contractor for work, but WITHOUT DEROGATING FROM HIS/HER STATUS IN HIS/HER RIGHT AS AN EMPLOYER or user of the plant
3. Section 37 of the Occupational Health & Safety Act potentially punishes Employers (PRINCIPAL CONTRACTOR) for unlawful acts or omissions of Mandataries (CONTRACTORS) save where a Written Agreement between the parties has been concluded containing arrangements and procedures to ensure compliance with the said Act BY THE MANDATARY.
4. All documents attached or refer to in the above Agreement form an integral part of the Agreement.
5. To perform in terms of this agreement Mandataries must be familiar and conversant with the relevant provisions of the Occupational Health & Safety Act 85 of 1993 (OHS Act) and applicable Regulations.
6. Mandatories who utilise the services of their own Mandatories (contractors) must conclude a similar Written Agreement with them.
7. Be advised that this Agreement places the onus on the Mandatory to contact the CLIENT in the event of inability to perform as per this Agreement.
8. This Agreement shall be binding for all work the Mandatory undertakes for the client.
9. All documentation according to the Safety checklist including a copy of the written Construction Manager appointment in terms of construction regulation 8, must be submitted 7 days before work commences.

THE UNDERTAKING

The Mandatory undertakes to comply with:

INSURANCE

1. The Mandatary warrants that all their employees and/or their contractor's employees if any are covered in terms of the COID Act, which shall remain in force whilst any such employees are present on the Client's premises. A letter is required prior commencing any work on site confirming that the Principal contractor or contractor is in good standing with the Compensation Fund or Licensed Insurer.
2. The Mandatary warrants that they are in possession of the following insurance cover, which cover shall remain in force whilst they and /or their employees are present on the Client's premises, or which shall remain in force for that duration of their contractual relationship with the Client, whichever period is the longest.
 1. Public Liability Insurance Cover as required by the Subcontract Agreement.
 2. Any other Insurance cover that will adequately makes provision for any possible losses and/or claims arising from their and /or their Subcontractors and/or their respective employee's acts and/or omissions on the Client's premises.

**COMPLIANCE WITH THE OCCUPATIONAL HEALTH & SAFETY
ACT 85 OF 1993**

The Mandatary undertakes to ensure that they and/or their subcontractors if any and/or their respective employees will at all times comply with the following conditions:

1. All work performed by the Mandatary on the Client's premises must be performed under the close supervision of the Mandatary's employees who are to be trained to understand the hazards associated with any work that the Mandatary performs on the Client's premises.
2. The Mandatary shall be assigned the responsibility in terms of Section 16(1) of the OHSAct 85 of 1993, if the Mandatary assigns any duty in terms of Section 16(2), a copy of such written assignment shall immediately be forwarded to the Client.
3. The Mandatary shall ensure that he/she familiarise himself/herself with the requirements of the OHS Act 85 of 1993 and that s/he and his/her employees and any of his subcontractors comply with the requirements.
4. The Mandatary shall ensure that a baseline risk assessment is performed by a competent person before commencement of any work in the Client's premises. A baseline risk assessment document will include identification of hazards and risk, analysis and evaluation of the risks and hazards identified, a documented plan and safe work procedures to mitigate, reduce or control the risks identified, and a monitoring and review plan of the risks and hazards.

5. The Mandatary shall appoint competent persons who shall be trained on any Occupational Health & Safety aspect pertaining to them or to the work that is to be performed.
6. The Mandatary shall ensure that discipline regarding Occupational Health & Safety shall be strictly enforced.
7. Any personal protective equipment required shall be issued by the Mandatary to his/her employees and shall be worn at all times.
8. Written safe working practices/procedures and precautionary measures shall be made available and enforced and all employees shall be made conversant with the contents of these practises.
9. No unsafe equipment/machinery and/or articles shall be used by the Mandatary or contractor on the Client's premises.
10. All incidents/accidents referred to in OHS Act shall be reported by the Mandatary to the Provincial Director: Department of Labour as well as to the Client.
11. No use shall be made by the Mandatary and/or their employees and or their subcontractors of any of the Client's machinery/article/substance/plant/personal protective equipment without prior written approval.
12. The Mandatary shall ensure that work for which the issuing of permit is required shall not be performed prior to the obtaining of a duly completed approved permit.
13. The Mandatary shall ensure that no alcohol or any other intoxicating substance shall be allowed on the Client's premises. Anyone suspected to be under the influence of alcohol or any other intoxicating substance shall not be allowed on the premises. Anyone found on the premises suspected to be under the influence of alcohol or any other intoxicating substance shall be escorted off the said premises immediately.
14. Full participation by the Mandatary shall be given to the employees of the Client if and when they inquire into Occupational Health & Safety.

FURTHER UNDERTAKING

1. Only a duly authorised representative appointed in terms of Section 16.2 of the OHS Act is eligible to sign this agreement on behalf of the Mandatary. The signing power of this representative must be designated in writing by the Chief Executive Officer of the Mandatary. A copy of this letter must be made available to the Client.
2. The Mandatary confirms that he has been informed that he must report to the Client's management, in writing anything he/she deems to be unhealthy and /or unsafe. He has versed his employees in this regard.

3. The Mandatary warrants that he/she shall not endanger the health & safety of the Client's employees and other persons in any way whilst performing work on the Client's premises.
4. The Mandatary understands that no work may commence on the Client's premises until this procedure is duly completed, signed and received by the Client.
5. Non-compliance with any of the above clauses may lead to an immediate cancellation of the contract.

ACCEPTANCE BY MANDATARY

In terms of section 37(2) of the Occupational Health & Safety Act 85 of 1993 and section 5.1(k) of the Construction Regulations 2014,

Ia duly authorised 16.2 Appointee acting for and on behalf of
.....(company name) undertake to ensure that the requirements and the
provision of the OHS Act 85 of 1993 and its regulations are complied with.

Mandatary – WCA/ Federated Employers Mutual No.....

Expiry date

SIGNATURE ON BEHALF OF MANDATARY

(Warrant his authority to sign)

DATE

SIGNATURE ON BEHALF OF THE CLIENT

AIRPORT COMPANY SOUTH AFRICA

DATE

ANNEXURE E

BRIDGE CORRIDOR DIMENSIONS

Dimensions are based on the Employer-provided VRV Space Volumes calculations and are subject to Contractor verification during FIPDM Stage 3. A3 Departure uses the A3 Arrival dimensions as instructed by the Employer.

Zone	Bridge	Corridor	Length (m)	Width (m)	Height (m)	Area (m ²)	Bottom height (m)
A	A1	Arrival	49	2.2	3.5	107.8	6
A	A1	Departure	50	2.2	3.5	110.0	6
A	A1R	Arrival	49	2.2	3.5	107.8	6
A	A1R	Departure	50	2.2	3.5	110.0	6
A	A2	Arrival	49	2.2	3.5	107.8	6
A	A2	Departure	50	2.2	3.5	110.0	6
A	A3	Arrival	100	2.5	2.7	250	6
A	A3	Departure	100	2.5	2.7	250	6
A	A4	Arrival	30	2	2.7	60	10
A	A4	Departure	30	2	2.7	60	10
A	A5	Arrival	30	2	2.7	60	10
A	A5	Departure	30	2	2.7	60	10
A	A6	Arrival	30	2	2.7	60	10
A	A6	Departure	30	2	2.7	60	10
A	A7	Arrival	20	2.4	2.7	48	10
A	A7	Departure	80	2.4	2.7	192	10
A	A8	Arrival	20	2.4	2.7	48	10
A	A8	Departure	80	2.4	2.7	192	10
A	A9	Arrival	20	2.4	2.7	48	10
A	A9	Departure	80	2.4	2.7	192	10
A	A10	Arrival	20	2.4	2.7	48	10
A	A10	Departure	80	2.4	2.7	192	10
A	A11	Arrival	20	2.4	2.7	48	10
A	A11	Departure	80	2.4	2.7	192	10
A	A12	Arrival	20	2.4	2.7	48	10
A	A12	Departure	80	2.4	2.7	192	10
A	A13	Arrival	20	2.4	2.7	48	10
A	A13	Departure	80	2.4	2.7	192	10
C	C1	Arrival	40	2	2.4	80	8
C	C1	Departure	40	3	2.4	120	10
C	C2	Arrival	40	2	2.4	80	8
C	C2	Departure	40	3	2.4	120	10
C	C3	Arrival	40	2	2.4	80	8

Zone	Bridge	Corridor	Length (m)	Width (m)	Height (m)	Area (m²)	Bottom height (m)
C	C3	Departure	40	3	2.4	120	10
C	C4	Arrival	40	2	2.4	80	8
C	C4	Departure	40	3	2.4	120	10
C	C5	Arrival	40	2	2.4	80	8
C	C5	Departure	40	3	2.4	120	10
C	C6	Arrival	40	2	2.4	80	8
C	C6	Departure	40	3	2.4	120	10
C	C7	Arrival	40	2	2.4	80	8
C	C7	Departure	40	3	2.4	120	10
C	C8	Arrival	40	2	2.4	80	8
C	C8	Departure	40	3	2.4	120	10
E	E1	Arrival	50	2.7	3.6	135	6.2
E	E1	Departure	50	2.7	3.6	135	6.2
E	E3	Arrival	32	3.5	3.6	112	6.2
E	E3	Departure	51	3.5	3.6	178.5	6.2
E	E6	Arrival	32	3.5	3.6	112	6.2
E	E6	Departure	51	3.5	3.6	178.5	6.2
E	E9	Arrival	32	3.5	3.6	112	6.2
E	E9	Departure	51	3.5	3.6	178.5	6.2
E	E12	Arrival	32	3.5	3.6	112	6.2
E	E12	Departure	51	3.5	3.6	178.5	6.2

ANNEXURE E
BRIDGE CORRIDOR DIMENSIONS

Dimensions are based on the Employer-provided VRV Space Volumes calculations and are subject to Contractor verification during FIPDM Stage 3. A3 Departure uses the A3 Arrival dimensions as instructed by the Employer.

Zone	Bridge	Corridor	Length (m)	Width (m)	Height (m)	Area (m²)	Bottom height (m)
A	A1	Arrival	49	2.2	3.5	107.8	6
A	A1	Departure	50	2.2	3.5	110.0	6
A	A1R	Arrival	49	2.2	3.5	107.8	6
A	A1R	Departure	50	2.2	3.5	110.0	6
A	A2	Arrival	49	2.2	3.5	107.8	6
A	A2	Departure	50	2.2	3.5	110.0	6
A	A3	Arrival	100	2.5	2.7	250	6
A	A3	Departure	100	2.5	2.7	250	6
A	A4	Arrival	30	2	2.7	60	10
A	A4	Departure	30	2	2.7	60	10
A	A5	Arrival	30	2	2.7	60	10
A	A5	Departure	30	2	2.7	60	10
A	A6	Arrival	30	2	2.7	60	10
A	A6	Departure	30	2	2.7	60	10
A	A7	Arrival	20	2.4	2.7	48	10
A	A7	Departure	80	2.4	2.7	192	10
A	A8	Arrival	20	2.4	2.7	48	10
A	A8	Departure	80	2.4	2.7	192	10
A	A9	Arrival	20	2.4	2.7	48	10
A	A9	Departure	80	2.4	2.7	192	10
A	A10	Arrival	20	2.4	2.7	48	10
A	A10	Departure	80	2.4	2.7	192	10
A	A11	Arrival	20	2.4	2.7	48	10
A	A11	Departure	80	2.4	2.7	192	10
A	A12	Arrival	20	2.4	2.7	48	10
A	A12	Departure	80	2.4	2.7	192	10
A	A13	Arrival	20	2.4	2.7	48	10
A	A13	Departure	80	2.4	2.7	192	10
C	C1	Arrival	40	2	2.4	80	8
C	C1	Departure	40	3	2.4	120	10
C	C2	Arrival	40	2	2.4	80	8
C	C2	Departure	40	3	2.4	120	10
C	C3	Arrival	40	2	2.4	80	8

Zone	Bridge	Corridor	Length (m)	Width (m)	Height (m)	Area (m²)	Bottom height (m)
C	C3	Departure	40	3	2.4	120	10
C	C4	Arrival	40	2	2.4	80	8
C	C4	Departure	40	3	2.4	120	10
C	C5	Arrival	40	2	2.4	80	8
C	C5	Departure	40	3	2.4	120	10
C	C6	Arrival	40	2	2.4	80	8
C	C6	Departure	40	3	2.4	120	10
C	C7	Arrival	40	2	2.4	80	8
C	C7	Departure	40	3	2.4	120	10
C	C8	Arrival	40	2	2.4	80	8
C	C8	Departure	40	3	2.4	120	10
E	E1	Arrival	50	2.7	3.6	135	6.2
E	E1	Departure	50	2.7	3.6	135	6.2
E	E3	Arrival	32	3.5	3.6	112	6.2
E	E3	Departure	51	3.5	3.6	178.5	6.2
E	E6	Arrival	32	3.5	3.6	112	6.2
E	E6	Departure	51	3.5	3.6	178.5	6.2
E	E9	Arrival	32	3.5	3.6	112	6.2
E	E9	Departure	51	3.5	3.6	178.5	6.2
E	E12	Arrival	32	3.5	3.6	112	6.2
E	E12	Departure	51	3.5	3.6	178.5	6.2

C4: Site Information

C4.1: Information about the site at time of tender which may affect the work in this contract

The Works are located at OR Tambo International Airport, which is a restricted and access controlled area. It is crucial for the Contractor to note that OR Tambo International Airport is a National Key Point and governed as such. The contractor will have to adhere to all airport requirements regarding access control, security, fire, health and safety.

4.1.1 Access limitations

1. General

1. The works is within the security area of the Airports Company South Africa (ACSA) and access to the site is governed by the terms and conditions laid down by ACSA Security Officials from time to time. The *Contractor* shall satisfy himself as to these terms and conditions.
2. The *Contractor* shall liaise with the ACSA Security Staff in order to obtain access permits for his staff and vehicle, which will be working within the airport. Personnel and vehicles entering and leaving the site are subject to routine searches.
3. The *Contractor* will have to obtain a "gate permit" from the *Project/Service Manager*, before materials and equipment can be removed from the site. The "gate permit" gives an itemized list of materials and equipment to be removed from site.
4. The *Contractor* shall make his own assessment of, and shall allow in his rates for those access problems which may be encountered and no extra payment or claim of any kind will be allowed on account of difficulties of access to the Works.

1. Permits

1. The Contractor shall ensure that he/she is, at all times, familiar with ACSA's safety and security requirements relating to permits in order prevent work delay as a result thereof.
2. This shall include the permit application process.
3. The Contractor shall have no claim against ACSA in the event that a permit request is refused.
4. The following table is not all inclusive, but is provided for illustration purposes:

Permit	Required by/for	Department
AVOP – Airside Vehicle Operator permit	All drivers of vehicles on airside	ACSA Safety
Airside Vehicle Permit	All vehicles that enter airside	ACSA Safety
Basement Parking permit	All vehicles allowed to enter the	ACSA Parking

	delivery basement	
Personal permit	All persons employed on the airport	ACSA Security
Cell phone permit	All persons taking cell phones to airside	ACSA Security
Tools permit	All persons taking cell phones to airside	ACSA Security
Lap top permit	All persons taking lap top computers to airside	ACSA Security
Camera permit	All persons taking cameras or camera equipment to airside	ACSA Security
Hot Works Permit	All welding and/metal cutting work	ACSA Safety
Airside Projects/Works Permit	For All projects on the Airside	ACSA Airport Operations/Safety
Low /Medium Voltage Permit to Work	For all work on Substation, Distribution Boards and Cables	ACSA Electrical Maintenance

1. Proof of having attended the airside induction training course is required for all personal permit applications.
2. Persons applying for an AVOP must provide proof of having attended an AVOP course.
3. Fees are levied for these courses. Fees are further levied for all permit renewals and refresher courses - where applicable.
4. No work shall be done without a written permission in the form of a permit/works order, displayed on the wall or in a visible area in the work area.

c. Cell phones and two-way radios

1. Use of cell phones on airside is **not** permitted unless the user is in possession of an appropriate Airport permit for the device.
2. Cell phone permit issuing authority lies with the ACSA Security department.
3. The Contractor will **not** be allowed to use two-way radios at the Airport unless these radios are of the type, model and frequency range as approved by the ACSA IT department.
4. Approved radios may be arranged via said department - payment will be for the account of the Contractor.

4.1.2 Ground conditions in areas affected by work in this contract

There are no excavations activities in this project.

4.1.3 Hidden and other services within the site

Existing electrical, communications, fire, water, drainage, ceiling and building services may be present within or adjacent to the bridge corridors and routes serving the Works. The Contractor surveys, locates, verifies and protects all services, treats unidentified cables as live, coordinates all crossings and tie-ins, and immediately reports discrepancies to the Project Manager.

4.1.4 Safety Management

1. ☐ The *Contractor* must be registered with the Occupational Health and Safety Commission.
2. The *Contractor* submits a Health and Safety Plan to the *Employer* for work to be performed.
3. The Health and Safety plan must include a Risk Assessment of the activities with mitigating methods that will be used to prevent accidents.
4. The Health and Safety plan must be implemented and monitored to ensure its integrity.
5. Details of *Contractor's* appointed Health and Safety Committee members must be included and appointed in writing.
6. The *Contractor* in writing must appoint all competent person/s.

Site Location

Equipment ID	Location
Zone A	A1, A1R and A2 to A13 airside arrival and departure corridors
Zone C	C1 to C8 airside arrival and departure corridors
Zone E	E1, E3, E6, E9 and E12 airside arrival and departure corridors
ACSA control room / ICT interfaces	Designated mezzanine office, BMS/IMCS and approved network interface areas