



TENDER DESCRIPTION:

**DESIGN, CONSTRUCTION, INSTALLATION, TESTING, COMMISSIONING
AND VERIFICATION OF THE ENGINEERING OPERATIONS CENTRE
(EOC), ANCILLARY BUILDINGS AND INFRASTRUCTURE SERVICES
FOR SARAO AT KLEREFONTEIN, NORTHERN CAPE**

BID NO: NRF/SARAO SHAO/04/2023-24

Closing date: Friday, 30 June 2023

NAME OF BIDDER: _____

CSD NUMBER: _____

GENERAL TENDER INFORMATION

TENDER ADVERTISED

: DESIGN, CONSTRUCTION, INSTALLATION, TESTING, COMMISSIONING AND VERIFICATION OF THE ENGINEERING OPERATIONS CENTRE (EOC), ANCILLARY BUILDINGS AND INFRASTRUCTURE SERVICES FOR SARAO AT KLEREFONTEIN, NORTHERN CAPE

CIDB CONTRACTOR GRADING

: Contractors must have a minimum CIDB contractor grading designation of 8GB or higher. Potentially emerging enterprises who satisfy criteria stated in the Tender Data may submit tender offers

COMPULSORY CLARIFICATION MEETING

: A virtual compulsory clarification meeting will take place on **Monday, 29 May 2023 at 10.00AM**. To register in advance for the briefing session, click on the following link:
[https://ska.zoom.us/meeting/register/tJMtfu2sqDsjGNBJx0YKq9j8cFOSarLyxUQr](https://ska.zoom.us/join/https://ska.zoom.us/meeting/register/tJMtfu2sqDsjGNBJx0YKq9j8cFOSarLyxUQr)

After registering, bidders will receive a confirmation email containing information about joining the meeting

COMPULSORY SITE MEETING

A site visit will take place on **Wednesday, 31 May 2023 at 11:00 am**, at:

Venue: Klerefontein Support Base, Northern Cape; Latitude: 30°58'24.28"S; Longitude: 21°59'43.21"E

CLOSING DATE

: **Friday, 30 June 2023**

CLOSING TIME

: **11:00 AM**

SUBMISSION INSTRUCTIONS

: Electronic submissions must be sent to tenders@sarao.ac.za

Bids must be submitted in two separate electronic folders, one with the compliance and technical response, and the second with the financial response. Technical submissions should preferably be in searchable PDF format

BIDDER'S REPRESENTATIVE CONTACT INFORMATION:

NAME OF BIDDER:

CONTACT PERSON:

TELEPHONE NUMBER: CODE.....NUMBER.....

CELL PHONE NUMBER:

E MAIL ADDRESS:

SOUTH AFRICAN RADIO ASTRONOMY OBSERVATORY**BID NO: NRF/SARAO SHAO/04/2023-23****DESIGN, CONSTRUCTION, INSTALLATION, TESTING, COMMISSIONING AND VERIFICATION OF THE
ENGINEERING OPERATIONS CENTRE (EOC), ANCILLARY BUILDINGS AND INFRASTRUCTURE SERVICES FOR
SARAO AT KLEREFONTEIN, NORTHERN CAPE**

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T1: Tendering Procedures

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T1.1 TENDER NOTICE AND INVITATION TO TENDER

SOUTH AFRICAN RADIO ASTRONOMY OBSERVATORY

BID NO: NRF/SARAO SHAO/04/2023-24

DESIGN, CONSTRUCTION, INSTALLATION, TESTING, COMMISSIONING AND VERIFICATION OF THE ENGINEERING OPERATIONS CENTRE (EOC), ANCILLARY BUILDINGS AND INFRASTRUCTURE SERVICES FOR SARAO AT KLEREFONTEIN, NORTHERN CAPE

BID NOTICE

INVITATION AND SCOPE OF WORK

Suitably experienced and qualified Contractors are invited to respond to this bid invitation for the South African Radio Astronomy Observatory (SARAO), a business unit of the National Research Foundation (NRF) (Hereinafter referred to as the "Employer"

Bid Number	Bid Description	CIDB Grading	Bid Closing Date and Time
NRF/SARAO SHAO/04/2023- 24	DESIGN, CONSTRUCTION, INSTALLATION, TESTING, COMMISSIONING AND VERIFICATION OF THE ENGINEERING OPERATIONS CENTRE (EOC), ANCILLARY BUILDINGS AND INFRASTRUCTURE SERVICES FOR SARAO AT KLEREFONTEIN, NORTHERN CAPE	It is estimated that contractors must have a CIDB contractor grading designation of 8GB or higher ¹	Friday, 30 June 2023 at 11.00 AM

COMPULSORY CLARIFICATION MEETING AND SITE VISIT

A virtual compulsory clarification meeting will take place on Monday, 29 May 2023 at 10.00AM. To register in advance for the clarification meeting, click on the following link:

<https://ska.zoom.us/joining/register/tJMtfu2sqDsJGNBjX0YKq9j8cFOSarLyxUQr>

After registering, bidders will receive a confirmation email containing information about joining the meeting.

Following the clarification meeting, a compulsory site visit will be held as detailed below:

Venue: Klerefontein Support Base, Northern Cape Province; Latitude: 30°58'24.28"S; Longitude: 21°59'43.21"E

Date: Wednesday, 31 May 2023

Time: 11:00AM

Persons attending the compulsory clarification meeting and site visit must be duly authorised to represent the bidder.

PREFERENTIAL PROCUREMENT SYSTEM:

The 90/10 price and preference points system, as prescribed by the Preferential Procurement Regulations, 2022 issued under the Preferential Procurement Policy Framework Act, (Act No 5 of 2000) (PPPFA) will be applied to evaluate this bid.

EVALUATION CRITERIA:

Only bids achieving a minimum score of 75% for Functionality (in both Stages 2.1 & 2.2 of the Functionality Evaluation) will be evaluated further on Price and Specific Goals.

¹ Potentially emerging enterprises who satisfy criteria stated in the Tender Data may submit tender offers

BID PUBLICATION:

The bid document will be available from 10 May 2023 and may be accessed on the following websites: www.sarao.ac.za/tenders, and www.etenders.gov.za.

BID SUBMISSION:

Electronic bid submissions must be sent to tenders@sarao.ac.za

Bids must be submitted in two separate electronic folders, one with the compliance and technical response, and the second with the financial response. Technical submissions must be in searchable PDF format.

BID CONDITIONS:

SARAO does not bind itself to accept the lowest or any tender and reserves the right to accept any tender or portion of a tender.

BID ENQUIRIES:

No telephonic enquiries relating to this tender will be permitted. All enquiries regarding this tender must be in writing and directed to:

Technical Queries:

Thulani Fihlani, Project Manager

Email: tfihlani@sarao.ac.za

Procedural Queries:

Ms. Anwuli Okecha, SCM Specialist

Email: anwuli@sarao.ac.za

T1.1.1 LOCALITY PLAN: SITE VISIT

A site visit will be held as detailed below. Bidders are responsible for the logistics required to attend the clarification meeting and site visit.

Venue: The Klerefontein Support Base Location, in the Northern Cape Province.

GPS Coordinates: -30.96922, 21.98906

Date: Wednesday, 31 May 2023

Time: 11:00 AM



T1.2 TENDER DATA

T1.2.1 Standard Conditions of Tender

The conditions of tender are the Standard Conditions of Tender as contained in Board Notice 423 of 2019 in Government Gazette No 42622 of 8 August 2019, Construction Industry Development Board (CIDB) Standard for Uniformity in Construction Procurement. (see www.cidb.org.za).

T1.2.2 Variations to the Standard Conditions of Tender

The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall take precedence in the interpretation of any ambiguity or inconsistency between it and the standard conditions of tender. Each item of data given below is cross-referenced to the clause in the Standard Conditions of Tender to which it mainly applies.

The following variations, amendments and additions to the Standard Conditions of Tender shall apply to this tender.

Clause No.	Variation, Amendment or Addition
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C.1	General
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C.1.2	Tender Documents
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*Add the following to the end of **Clause C.1.2**:*

“The Tender Document for this Contract comprises the following:

Not issued to Tenderers, but available from the S.A. Federation of Civil Engineering Contractors, the S.A. Institution of Civil Engineering, the S.A. Bureau of Standards, the Government printers, the Construction Industry Development Board, and the Employer, as applicable:

1. CIDB, “The Standard for Uniformity in Construction Procurement Annex C, Standard Conditions of Tender”, Board Notice 423 of 2019 of Government Gazette No. 42622 of 9 August 2019.
2. The General Conditions of Contract for this project is the Second Edition 2017 FIDIC (International Federation of Consulting Engineers) Yellow Book, Conditions of Contract for Plant and Design-Build for Electrical and Mechanical Plant, and for Building and Engineering Works, Designed by the Contractor.
3. The Preferential Procurement Policy Framework Act No 5 of 2000, and the Preferential Procurement Policy Framework Act Regulations, 2022.published in Government Gazette 47452 on 4 November 2022
4. The Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the Construction Regulations (2014).

C.2	Bidder’s Obligations
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C.2.1	Eligibility
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C.2.1.1	<i>Add the following to the end of Clause C.2.1.1:</i>
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A.	Construction Industry Development Board (CIDB) Registration
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Only those tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for a 8 GB class of construction work, are eligible to have their tenders evaluated.

B. Joint Ventures and Consortia are eligible to submit a tender offer provided that:

Joint ventures are eligible to submit tenders provided that:

1. Every member of the joint venture is registered with the CIDB;
2. The lead partner has a contractor grading designation in the GB class of construction work; or not lower than one level below the required grading designation in the class of works under consideration and possesses the required recognition status.
3. The combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a 8GB class of construction work or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations;
4. Tenders submitted by joint ventures or consortia of two or more firms must be accompanied by a document of formation of the joint venture, authenticated by a notary public or other official deputed to witness sworn statements, in which it defines precisely the conditions under which the joint venture will function, its period of duration, the persons authorised to represent and obligate it, the participation of the several firms forming the joint venture, and any other information necessary to permit a full appraisal of its functioning;
5. The Bidder, if a joint venture or consortium, must submit a signed JV or consortium agreement specific to the tendered Contract and showing clearly the percentage contribution of each partner to the Joint Venture. The value of work to be undertaken by each partner must be within their CIDB grading limit.
6. The following joint venture agreements are recommended for use or to serve as a basis for the development of an agreement –
 - (a) The CIDB Joint Venture Agreement, which is intended for use by all types of contractors, including professional service providers;
 - (b) The South African Federation of Civil Engineering Contractors (SAFCEC) Joint Venture Agreement, which is intended only for joint ventures between established contractors and is not suitable for use by professional service providers;
 - (c) The International Federation of Consulting Engineers (FIDIC) Joint Venture Consortium Agreement, which is intended only for joint ventures between professional service providers and is not suitable for use by contractor.

C. National Treasury Central Supplier Database Registration

Bidders must register on the National Treasury Central Supplier (CSD) Database and provide their CSD registration number where required in this bid document. Bidders who are not registered are not precluded from submitting bids, but must be registered prior to Contract Award.

In the case of Joint Venture partnerships this requirement will apply individually to each party to the Joint Venture.

Bidders who wish to register as service providers on the CSD can register online at <https://secure.csd.gov.za/Account/Register>.

D. Attendance of Compulsory Tender Briefing

Only Bidders who have attended both the compulsory virtual clarification and site clarification tender briefing and have form A2 "Clarification Meeting Certificate and Proof of Attendance" signed by the Employer's agent or his representative will be eligible to submit a tender offer.

E. Bidder's Tax Clearance Certificate

Bidders must be registered with the South African Revenue Services (SARS) and must submit/append documentary evidence/proof in the form of a CSD registration number and/or valid Tax Clearance PIN Number issued by SARS.

At the point of award of the tender, the recommended bidder must be in good standing with SARS, failing which the bidder must be in good standing within such extended period as may be granted at the discretion of SARAO, failing which the bidder will be disqualified from further consideration.

Each party to a Consortium/Joint Venture shall submit a separate CSD registration number and/or Tax Clearance PIN Number.

F. Further Compulsory Documents to be submitted with Tender

In addition to all the documents relating to A to E above and all other documents requested in Section T2.2 (Returnable Documents), it is further required that copies of the following current and valid company certificates be provided:

1. Letter of Good Standing from Compensation Commissioner (COID) or Compensation Insurer.
2. Letter of Good Standing from Department of Labour (UIF).

The above shall be provided for each JV Partner in the case of Joint Ventures.

G. Minimum Functionality Score to be Achieved

Any tender which scores less than the minimum threshold values stated in the functionality evaluation criteria, will be held to be non-responsive and disqualified.

C.2.7 Clarification Meeting

*Add the following to the end of **Clause C.2.7**:*

“The arrangements for a compulsory clarification meeting and site visit are as stated in the Tender Notice and Invitation to Tender.

Bidders should be represented by a person or persons who are suitably qualified and experienced to comprehend the aspects of the work involved.”

Bidders shall bear all costs for attendance of the clarification meeting and site visit.

C.2.13 Submitting a Tender Offer

C.2.13.2 Add the following to the end of **Clause C.2.13.2**:

“Bid submissions must be in electronic format only.”

Bid submissions shall comprise two separate electronic folders or subfolders as follows:

- “**Technical**” (T1) **submission** (Technical submissions should preferably be in searchable PDF format), and
- “**Financial**” (F2) **submission**

Failure to comply with these requirements may result in the tender being deemed non-responsive.”

C.2.13.3 Delete the contents of **Clause C.2.13.3** and replace with the following:

“Electronic bid submissions must be sent to tenders@sarao.ac.za.

C.2.13.4 Add the following after the first sentence of **Clause C.2.13.4**:

“The tender shall be signed by a person duly authorised to do so.”

C.2.13.5 Delete the contents of **Clause C.2.13.5**.

C.2.13.6 Delete the contents of **Clause C.2.13.6** and replace with the following:

“A two-envelope procedure as described in **Clause C.3.5** will be followed.

Bids must be submitted in two separate electronic folders, one with the Technical response (T1), and the second with the Financial response (F2). Each main folder may have sub-folders, and if this is the case, each sub-folder must be clearly indicated as such.”

C.2.13.7 Delete the contents of **Clause C.2.13.7**.

C.2.13.8 Delete the contents of **Clause C.2.13.8**.

C.2.13.9 Delete the contents of **Clause C.2.13.9** and replace with the following:

“Only tender offers submitted in electronic format to tenders@sarao.ac.za will be accepted by the Employer.”

C.2.15 Closing Time

C.2.15.1 *Add the following to the end of Clause C.2.15.1:*

"The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender"

C.2.16 Tender Offer Validity

C.2.16.1 *Add the following to the end of Clause C.2.16.1:*

"The tender offer validity period is 12 weeks (90 days)."

C.2.16.2 *Add the following to the end of Clause C.2.16.2:*

"The maximum extension on the tender offer validity period is 12 weeks (90 days)."

C.2.17 Clarification of Tender Offer after Submission

Add the following to the end of Clause C.2.17:

"A tender may be rejected as non-responsive if the Bidder fails to provide any clarification requested by the Employer within such time as is granted by the Employer to provide such clarification. A tender may be rejected if the unit rates or lump sums for some of the items in the Activity Pricing Schedule are, in the opinion of the Employer, unreasonable, and the Bidder fails, within such time as is granted by the Employer, to justify any specific rates or lump sums (i.e. to provide a financial breakdown of how such rates or sums were obtained) or to adjust the unit rates or lump sums for such items while retaining the total of the prices unchanged."

C.2.23 Certificates

Add the following to the end of Clause C.2.23:

"Bidders are required to submit the following certificates -

A. Certificate of Contractor Registration (CIDB)

Certificate of Contractor Registration issued by the Construction Industry Development Board. Where a Bidder satisfies CIDB contractor grading designation requirements through a joint venture or consortium, a JV/consortium CIDB certificate, together with CIDB certificates for each JV partner must be submitted."

B. Letter of Good Standing issued by the Compensation Commissioner (COID) or Compensation Insurer

C. Letter of Good Standing issued by the Department of Labour (UIF)

C.3 The Employer's Undertakings

C.3.1 Respond to Requests from the Bidder

C.3.1.1 *Substitute the contents of Clause C.3.1.1 with the following:*

"The Employer will respond to a request for clarification received up to five working days before the tender closing time stated in the Tender Data and circulate responses to all bidders who attended the compulsory tender briefing meeting."

C.3.5 Two-envelope System

C.3.5.1 *Substitute the contents of Clause C.3.5.1 with the following:*

"Where it is stated in the Tender Data that a two-envelope (two separate electronic folders) process is to be followed, open only the technical proposal of valid bids for evaluation by the Employer's evaluation committee. Technical proposals will not be opened in the presence of bidders' representatives, however a list of bids received on the closing date will be published on the Employer's website within 10 days of the tender closing date."

C.3.5.2 *Substitute the contents of **Clause C.3.5.2** with the following:*

“Evaluate functionality of the technical proposals offered by bidders, and only open the financial proposals of bidders who score the minimum number of functionality points or higher.

Financial proposals will not be opened in the presence of bidders’ representatives.”

C.3.7 **Grounds for rejection and disqualification**

*Add the following to the end of **Clause C.3.7**:*

“Bids will be disqualified if -

- (a) There is no evidence that the bidding entity was represented at the compulsory bid clarification meeting and site visit.
- (b) Any of the Bidder’s directors or shareholders are listed on the National Treasury Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004, as a person prohibited from doing business in the public sector.
- (c) If, from information given in the completed Compulsory Enterprise Questionnaire or SBD forms, the Employer considers that there is a potential conflict of interest concerning the bidder which may potentially compromise the tender process.
- (d) The bidding entity has been restricted from doing business with the Employer.
- (e) In a two-envelope (two separate electronic folders) system, the bidder fails to submit both a technical proposal and a financial proposal.

C.3.8 **Test for Responsiveness**

C.3.8.2 *Add the following to the end of **Clause C.3.8.2**:*

“Tenders will also be considered non-responsive if:

- (a) Subject to clause C.3.11.1.1 below, the Tender offer does not meet any one of the eligibility criteria indicated as mandatory in Part T2.
- (b) The Bidder has not fully and correctly completed the Offer portion of D2.1 Form of Offer and Acceptance i.e. the price has not been completed in words and numbers, the Bidder’s details are not completed fully and correctly, and the Bidder has failed to sign the Offer portion of D2.1.
- (c) The Bidder fails to respond, within such time frame granted by the Employer, to any written request for clarification, and such failure renders it impossible for the Employer to clarify any ambiguities in the bid submission, and therefore renders it impossible to evaluate the bid submission any further.
- (d) There are any other material deficiencies in the bid submission which cannot be cured by clarification.

C.3.11 **Evaluation of Tender Offers**

C.3.11.1 **General**

*Add the following clauses after **Clause C.3.11.1**:*

C.3.11.2 **The Evaluation Method**

Subsequent to the Prequalification Assessment (refer to the Tender Notice & Invitation to Tender), bids will be evaluated in a three-stage process, as follows –

STAGE 1: Compliance with administrative requirements in Part T2 (namely, completion of Schedules A1-A7, the Standard Bidding Documents, and submission of the returnable documents in Schedules B1-B5). In this stage, discretion may be applied to allow bidders to complete and/or sign returnable schedules not completed and/or signed in the first instance or to submit returnable documents not submitted in the first instance, provided that such returnable schedules or documents are of a purely administrative nature and do not pertain to the substance of the bid such as to affect the competitive position of bidders, by giving one or more bidders a second and unfair opportunity to augment the quality (substantive) aspects of their bid. Only compliant bids will proceed to Stage 2.

STAGE 2: Bids will be evaluated on the functionality criteria summarised in Clause C.3.11.2.1. This Stage will consist of two sub-stages, namely Stage 2.1 and Stage 2.2. Only bids which –

- (i) meet the minimum score of 195 points (75%) out of a possible 260 points in stage 2.1 Capability & Capacity; and
- (ii) meet the minimum score of 75 points (75%) out of a possible 100 points in Stage 2.2, Experience & Planning

will proceed to Stage 3.

STAGE 3: Bids will be scored on the 90/10 price and preference points system.

The lowest priced bid will not necessarily be accepted and the Employer reserves the right to accept the whole or part of any tender, or not to consider any tender at all.

The Employer reserves the right to conduct due diligence on shortlisted bidders' ability to undertake the project."

SARAO reserves the right to reject overpriced or under-priced bids.

C.3.11.2.1 Score Functionality

The Functionality sub-criteria and maximum score in respect of each of the sub-criteria are listed in the table below.

Stage 2.1 – Capability & Capacity

Functionality Criteria	Maximum Points (W2)	Schedule
Capability – Qualifications, Experience and Professional Registration of Design and Construction Teams Project Organisational Chart for Key Design and Construction Personnel	260	Schedules B6-B10
Total	260	

Note: Bidders must score a minimum of 195 points (75%) in Stage 2.1 to proceed to Stage 2.2

Stage 2.2 – Experience & Planning

Functionality Criteria	Maximum Points (W2)	Minimum Points (W2)	Schedule
Previous Experience and Track Record	40	30	Schedule B11
Method Statement, Project Management, Project Plan and SHEQ Management Plans	50	37.5	Schedules B12-B15
Localisation specific to the project	10	7.5	Schedule B16
Total	100	75	

Note: Bidders must score an overall minimum of 75 points (75%) in Stage 2.2 to proceed to Stage 3

The total number of tender evaluation points for functionality will be the sum of the points scored for each of the sub-criteria. The points for each sub-criteria will be calculated using the following equation:

$$N_Q = W_2 \times \frac{S_0}{M_S}$$

Where:

NQ = Bidder's functionality points (per sub-criteria)

W2 = the maximum possible number of tender evaluation points awarded for the functionality as stated in the tender data

S0 = the score for functionality allocated to the submission under consideration

Ms = the maximum possible score for functionality in respect of a submission

Functionality shall be scored in accordance with ten separate schedules in Part T2.2: Returnable Schedules. The basis of scoring for each of the evaluation criteria are listed overleaf:

Functionality will be scored by not less than three evaluators. Each evaluator will assess each bid on the mandatory functionality criteria. With regard to the scored functionality criteria, the scores of all evaluators will be totalled and averaged to obtain the final score for Functionality.

B-BBEE status level of contributor	Number of points
1	10
2	9
3	6
4	5
5	5
6	3
7	2
8	1
Non-compliant contributor	0

C.3.17 Provide Copies of the Contracts

Add the following to the end of **Clause C.3.17**:

“The number of paper copies of the signed contract to be provided by the Employer is ONE.”

T1.2.3 Additional Conditions of Tender

The additional conditions of tender are:

C.4.1 Compliance with Occupational Health and Safety Act 1993 and Construction Regulations (as amended 2014)

Bidders are to note the requirements of the Occupational Health and Safety Act No. 85 of 1993 and the latest amended Construction Regulations (2014) issued in terms of Section 43 of the Act. The Bidder shall be deemed to have read and fully understood the requirements of the above Act and Regulations and to have allowed for all costs in compliance therewith.

In this regard the Bidder shall submit with the tender, appended to Schedule B15: Health, Safety, Environmental and Quality (SHEQ) Management Plan in T2.2 Returnable Documents, a detailed SHEQ Plan prepared in accordance with the Health and Safety Specification (given in respect of the Works in order to

demonstrate the necessary competencies and resources to perform the construction work all in accordance with the Act and Regulations).

C.4.2 Claims Arising after Submission of Tender

No claim arising out of any doubt or obscurity as to the true intent and meaning of anything contained in the Conditions of Contract, Scope of Work and Pricing Data, will be accepted by the Employer after the submission of any tender and the Bidder shall be deemed to have:

- (1) Read and fully understood the Conditions of Contract.
- (2) Read and fully understood the whole text of the Scope of Work and Pricing Data and thoroughly acquainted himself with the nature of the works proposed and generally of all matters which may influence the Contract.
- (3) Visited the site of the proposed works, carefully examined existing conditions, the means of access to the site, the conditions under which the work is to be done, and acquainted himself with any limitations or restrictions that may be imposed by the Municipal or other Authorities in regard to access and transport of materials and plant to and from the site and made the necessary provisions for any additional costs involved thereby.
- (4) Requested the Employer to make clear the actual requirements of anything contained in this bid document, the exact meaning or interpretation of which is not clearly intelligible to the Bidder.

C.4.3 Imbalance in Tendered Rates

In the event of tendered rates or lump sums being declared by the Employer to be unacceptable to it because they are either excessively low or high (in comparison to the Employer market price range determination), or not in proper balance with other rates or lump sums, the Bidder may be required to produce evidence and advance arguments in support of the tendered rates or lump sums objected to. If, after submission of such evidence and any further evidence requested, the Employer is still not satisfied with the tendered rates or lump sums objected to, it may request the Bidder to amend these rates and lump sums along the lines indicated by it.

The Bidder will then have the option to alter and/or amend the rates and lump sums objected to and such other related amounts as are agreed on by the Employer, but this shall be done without altering the Contract Amount.

Should the Bidder fail to amend the Tender in a manner acceptable to the Employer, the Employer may reject the Tender.

Optimise employment and business opportunities for local black people and black women in particular;

Contractors will be required to provide proof of labour residential status and that the proposed Labour was in actual fact resident in the area for at least a period of 2 years prior to the Commencement Date.

T2: Returnable Documents

Number	Heading	Pages
T2.1	Schedule of Returnable Documents	18
T2.2	Returnable Documents	21

T2.1 SCHEDULE OF RETURNABLE DOCUMENTS

T2.1.1. General

The Tender Document must be submitted as a whole. All schedules and forms must be properly completed as instructed, and the document shall not be taken apart or altered in any way whatsoever.

Bidders are required to complete each and every schedule and form listed below to the best of their ability, as the evaluation of tenders and the eventual contract will be based on the information provided by the Bidder.

Completion of the returnable schedules and submission of the returnable documents is mandatory. Failure to do so will result in a bid being held to be non-responsive, except in limited circumstances, namely, the Employer will allow bidders to complete returnable schedules not completed in the first instance or to submit returnable documents not submitted in the first instance where these are purely of an administrative nature (specifically, Schedules A1-A7, the Standard Bidding Documents, and Schedules B1-B5), and do not pertain to the substance of the bid such as to affect the competitive position of bidders, by giving one or more bidders a second and unfair opportunity to augment the quality (substantive) aspects of their bid.

T2.1.2. List of Returnable Schedules, Forms and Certificates

SCHEDULE	DESCRIPTION	PAGE
Company Specific Schedules		
A1	Authority to Sign Documents	22
A2	Certificate of attendance at site clarification meeting / site visit	23
A3	Certificate of Authority for Joint Ventures / Consortia	24
A4	Compulsory Enterprise Questionnaire	25
A5	Bidder's bank account details and financial references	27
A6	Certificates of Insurance Cover	28
A7	Form concerning the fulfilment of the Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the Construction Regulations (2014)	29
Standard Bidding Documents (SBD) for Compliance Assessment		
SBD 4	Bidder's Disclosure	30
SBD 6.1	Preference Points Claim Form in terms of the Preferential Procurement Regulations 2022	32
Returnable Documents for Compliance Assessment		
B1	Certificate of CIDB Registration of Contractor	36
B2	Tax Clearance, COID and UIF Certificates	37
B3	Proof of registration on National Treasury Central Supplier Database	38
B4	BBBEE Certificate or Sworn Affidavit	39
B5	Schedule of Proposed Subcontractors	40
Returnable Documents for Functionality Assessment		
B6	Schedule of Key Design and Construction Personnel	41
B7	Certified copies of Professional Qualification of Key Design and Construction Personnel	57
B8	Certified copies of Professional Registration of Key Design and Construction Personnel	58
B9	Curriculum Vitae of Key Design and Construction Personnel	59
B10	Project Organisational Chart for Key Design and Construction Personnel	60
B11	Bidding Entity past experience in delivering similar design and construct/ space planning/ interior design contracts and other projects of similar scale	61

B12	Method Statement based on the scope of work specific to this project (include any required equipment shutdowns)	63
B13	Project Management Plan (PMP) Specific to this Project	64
B14	Project Plan (Programme) in Primavera P6 or Microsoft Project (MSP)	65
B15	Health, Safety, Environmental and Quality (SHEQ) Management Plans for the execution of this project	66
B16	Evidence of the Bidder's Existing socio-economic development activities and what will be implemented specific to this contract	68
Returnable Documents pertaining to the Contract		
B17	Amendments/ Alternatives and Qualifications by Bidder	70
B18	Record of Addenda to Tender Documents	71
B19	Joint Venture Agreement	72
D1.1	Background to the National Research Foundation (NRF) and the South African Radio Astronomy Observatory (SARAO)	74
D1.2	Scope of Works	75
D2.1	Form of Offer and Acceptance	84
D2.2	Contract Data	89
D3.1	Pricing Instructions	99
D3.2	Priced Activity Schedule	101
D3.3	Schedule of Rates – People Cost	104
D3.4	Schedule of Rates – Contractor Equipment Cost	105

T2.2 RETURNABLE DOCUMENTS

NB: BIDDERS MUST COMPLETE THESE DOCUMENTS / FORMS IN BLACK TYPE OR BLACK INK

A1. AUTHORITY TO SIGN DOCUMENTS

I/We*, the undersigned, am/are* duly authorised to sign the form of tender on behalf of

by virtue of the Articles of Association/Resolution of the Board of Directors*, of which a copy is attached, or

*Delete whichever is inapplicable

1.					
	NAME		SIGNATURE		DATE

2.					
	NAME		SIGNATURE		DATE

WITNESSES:

1.					
	NAME		SIGNATURE		DATE

2.					
	NAME		SIGNATURE		DATE

23

A3. CERTIFICATE OF AUTHORITY FOR JOINT VENTURES / CONSORTIA

This Returnable Schedule is to be completed only if the bidder is a joint venture or consortium.

We, the undersigned, are submitting this tender offer as a joint venture / consortium, and hereby authorise

Mr/Ms _____, authorised signatory of _____ company,
close corporation or partnership, acting in the capacity of lead partner, to sign all documents in connection with the tender
offer and any contract resulting from it on our behalf.

NAME OF FIRM	ADDRESS	DULY AUTHORISED SIGNATORY
Lead partner		Signature : Name : Designation :
		Signature : Name : Designation :
		Signature : Name : Designation :
		Signature : Name : Designation :

Note:

A copy of the Joint Venture / Consortium Agreement showing clearly the percentage contribution of each partner to the Joint Venture / Consortium must be included in the bid submission.

A4. COMPULSORY ENTERPRISE QUESTIONNAIRE

The following particulars must be furnished. In the case of a joint venture / consortium, **separate** enterprise questionnaires in respect of each partner must be completed and submitted.

Section 1: Name of enterprise

Section 2: VAT registration number, if any

Section 3: CIDB registration number, if any

Section 4: Particulars of sole proprietors and partners in partnerships

Name*	Identity number*	Personal income tax number*

* Complete only if sole proprietor or partnership and attach separate page if more than 3 partners

Section 5: Particulars of companies and close corporations

Company registration number

Close corporation number

Tax reference number

Section 6: The attached SBD 4 must be completed for each attender and be attached as a tender requirement

Section 7: The attached SBD 6.1 must be completed for each attender and be attached as a tender requirement

The undersigned, who warrants that he/she is duly authorised to do so on behalf of the enterprise:

- authorises the Employer to obtain a tax Clearance certificate from the South African Revenue Services that my / our tax matters are in order;
- confirms that neither the name of the enterprise nor the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;
- confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise, has within the last five years been convicted of fraud or corruption;
- confirms that I/we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the bidders or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest;
- confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

SIGNED:

	ENTERPRISE NAME		DATE	

	NAME		POSITION	
				SIGNATURE

A5. BIDDER'S BANK ACCOUNT DETAILS AND FINANCIAL REFERENCES

Notes to Bidder:

1. The Bidder shall attach to this form a letter from the bank at which he declares he conducts his account. The contents of the bank's letter must state the credit rating that it, in addition to the information required below, accords to the bidder for the business envisaged by this tender. Failure to provide the required letter with the tender submission may render the Bidder's offer unresponsive.
2. The Bidder's banking details as they appear below shall be completed.
3. In the event that the bidder is a joint venture enterprise, details of all the members of the joint venture shall be similarly provided and attached to this form.

The bidder must provide the following information:

(i)	Name of Account Holder:	
(ii)	Account Number:	
(iii)	Bank Name:	
(iv)	Branch Number:	
(v)	Bank and Branch Contact Details:	

SIGNED BY/ON BEHALF OF BIDDER:

	NAME		SIGNATURE	

Note to Bidder:

Professional Indemnity Insurance must be as indicated in the Contract Data.

Bidders shall provide the following details of this insurance cover:

(i) Name of Bidder:

(ii) Period of Validity:

(iii) Value of Insurance:

- Insurance for Works and Bidder's Equipment:

Company:

Value:

- Insurance for Bidder's Personnel:

Company:

Value:

- Motor Vehicles liability:

Company:

Value:

- Third Party liability:

Company:

Value:

[illegible]

A7. FORM CONCERNING THE FULFILLMENT OF THE CONSTRUCTION REGULATIONS, 2014

In terms of regulation 4(3) of the Construction Regulations, 2014, as amended (hereinafter referred to as the Regulations), promulgated on 18 July 2003 in terms of Section 43 of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) and the Construction Regulations (2014) the Employer shall not appoint a contractor to perform construction work unless the Contractor can satisfy the Employer that his/her firm has the necessary competencies and resources to carry out the work safely and has allowed adequately in his/her tender for the due fulfilment of all the applicable requirements of the Act and the Regulations.

1. I confirm that I am fully conversant with the Regulations and that my company has (or will acquire/procure) the necessary competencies and resources to timeously, safely and successfully comply with all of the requirements of the Regulations.

YES	
NO	

2. Proposed approach to achieve compliance with the Regulations (Tick)

Own resources, competent in terms of the Regulations (refer to 3 below)	
Own resources, still to be hired and/or trained (until competency is achieved)	
Specialist subcontract resources (competent) – specify:	

3. Provide details of proposed key persons, competent in terms of the Regulations, who will form part of the team as specified in the Regulations (CVs to be attached):

4. Provide details of proposed training (if any) that will be undergone:

5. Potential key risks identified and measures for addressing risks:

I have fully included in my tendered rates and prices (in the appropriate payment items provided in the Schedule of Quantities) for all resources, actions, training and any other costs required for the due fulfilment of the Regulations for the duration of the construction and defects repair period.

YES	
NO	

SIGNED BY/ON BEHALF OF BIDDER:

[illegible]

SBD 4 BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

- 1.1 Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.
Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. BIDDER'S DECLARATION

- 2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest² in the enterprise, employed by the state? **YES / NO**

- 2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in the table below –

Full Name	Identity Number	Name of State Institution

- 2.2 Do you, or any person connected with the bidder, have a relationship with any person employed by the procuring entity? **YES / NO**

- 2.2.1 If so, furnish particulars
.....
.....

- 2.3 Does the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? **YES / NO**

- 2.3.1 If so, furnish particulars
.....
.....

² The power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

3. DECLARATION

I, the undersigned, (name)..... in submitting the accompanying bid, do hereby make the following statements that I certify to be true and complete in every respect –

- 3.1 I have read and understand the contents of this disclosure;
- 3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;
- 3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium³ will not be construed as collusive bidding;
- 3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates;
- 3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid;
- 3.6 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

CERTIFICATION

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 AND 3 ABOVE IS CORRECT.

I ACCEPT THAT THE STATE MAY REJECT MY BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
Date

.....
Signature

.....
Position

.....
Name of bidder

³ Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

SBD 6.1 PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for specific goals.

NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF THE TENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to invitations to tender:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

1.2 **To be completed by the organ of state:**

a) The applicable preference point system for this tender is the 90/10 preference point system.

1.3 Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:

- (a) Price; and
- (b) Specific Goals (namely, BBBEE status level of contributor)

1.4 **To be completed by the organ of state:**

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	90
SPECIFIC GOALS	10
Total points for Price and SPECIFIC GOALS	100

1.5 Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.

1.6 The organ of state reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.

2. DEFINITIONS

- (a) **“tender”** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;
- (b) **“price”** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;
- (c) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;
- (d) **“tender for income-generating contracts”** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and
- (e) **“the Act”** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

3.1.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 points is allocated for price on the following basis:

$$\begin{array}{ccc} \mathbf{80/20} & \mathbf{or} & \mathbf{90/10} \\ P_S = 80 \left(1 - \frac{P_t - P}{P} \right) & \mathbf{or} & P_S = 90 \left(1 - \frac{P_t - P}{P} \right) \end{array}$$

Where

P_s = Points scored for price of tender under consideration

P_t = Price of tender under consideration

P_{min} = Price of lowest acceptable tender

3.2. FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT

3.2.1. POINTS AWARDED FOR PRICE

A maximum of 80 or 90 points is allocated for price on the following basis:

$$\begin{array}{ccc} \mathbf{80/20} & \mathbf{or} & \mathbf{90/10} \\ P_S = 80 \left(1 + \frac{P_t - P}{P} \right) & \mathbf{or} & P_S = 90 \left(1 + \frac{P_t - P}{P_{max}} \right) \end{array}$$

Where

P_s = Points scored for price of tender under consideration

P_t = Price of tender under consideration

P_{max} = Price of highest acceptable tender

4. POINTS AWARDED FOR SPECIFIC GOALS

4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:

4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—

- (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or
- (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system, then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

Table 1: Specific goals for the tender and points claimed are indicated per the table below.

Note to tenderers: The tenderer must indicate how they claim points for each preference point system).

The specific goals allocated points in terms of this tender	Number of points allocated (90/10 system) (To be completed by the organ of state)	Number of points claimed (90/10 system) (To be completed by the tenderer)
BBBEE status level of contributor (Note: Bidders are required to submit their BBBEE certificates or sworn affidavits (in the case of EMEs/QSEs) in order to be eligible to claim points)	10	

DECLARATION WITH REGARD TO COMPANY/FIRM

4.3. Name of company/firm.....

4.4. Company registration number:

4.5. TYPE OF COMPANY/ FIRM

- Partnership/Joint Venture / Consortium
- One-person business/sole proprietor
- Close corporation
- Public Company
- Personal Liability Company
- (Pty) Limited
- Non-Profit Company
- State Owned Company

[TICK APPLICABLE BOX]

4.6. I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;
- iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –
 - (a) disqualify the person from the tendering process;
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
 - (d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
 - (e) forward the matter for criminal prosecution, if deemed necessary.

.....
SIGNATURE(S) OF TENDERER(S)

SURNAME AND NAME:

DATE:

ADDRESS:
.....
.....

B1. CERTIFICATE OF CIDB REGISTRATION OF CONTRACTOR

A certificate of the bidder's CIDB registration issued by the Construction Industry Development Board (CIDB) must be included in the bid submission as per the requirements of Clause C.2.1.1 of T1.2.2: Variations to the Standard Conditions of Tender.

Where a bidder satisfies CIDB Contractor grading designation requirements through a joint venture or consortium, such bidder must submit the joint CIDB grading, and certificates of contractor registration in respect of each partner.

SIGNED BY/ON BEHALF OF BIDDER:

NAME		SIGNATURE	DATE

B2. TAX CLEARANCE

Tenderers must be registered and in good standing with the South African Revenue Services (SARS), and as evidence of this, must append their CSD registration number and valid SARS Tax Clearance PIN Number to this Schedule (see Clause C.2.1.1 of T1.2.2: Variations to the Standard Conditions of Tender).

Bidders who are not registered with, or in good standing with SARS are not precluded from submitting bids, but must be registered and in good standing prior to Contract Award.

Each party to a Consortium/Joint Venture shall submit a separate Tax Clearance PIN Number and CSD Supplier Number.

--

PIN NUMBER

--

CSD SUPPLIER NUMBER

SIGNED BY/ON BEHALF OF BIDDER:

NAME		SIGNATURE	DATE

B3. PROOF OF REGISTRATION ON NATIONAL TREASURY CENTRAL SUPPLIER DATABASE

Bidders must be registered with the National Treasury Central Supplier Data Base (CSD) and must submit documentary evidence/proof in the form of a valid CSD Registration Number issued by National Treasury as per the requirements of Clause C.2.1.1 of T1.2.2: Variations to the Standard Conditions of Tender.

Bidders who are not registered are not precluded from submitting bids, but must be registered prior to Contract Award.

Each party to a Consortium/Joint Venture must submit a separate CSD Registration Number.

--

CSD REGISTRATION NUMBER

SIGNED BY/ON BEHALF OF BIDDER:

NAME		SIGNATURE	DATE

B4. B-BBEE CERTIFICATE OR SWORN AFFIDAVIT

In order to claim points for 'specific goals' in terms of the Preferential Procurement Regulations (2022), bidders must submit a Valid BBBEE certificate issued by a Verification Agency accredited by SANAS; or in the case of Exempted Micro Enterprises (EMEs), a sworn affidavit confirming annual total revenue and level of black ownership or a BBBEE certificate issued by the Companies and Intellectual Property Commission; and in the case of Qualifying Small Enterprises (QSEs), a sworn affidavit confirming annual total revenue and level of black ownership.

Unincorporated joint ventures and consortia must submit a consolidated B-BBEE certificate.

SIGNED BY/ON BEHALF OF BIDDER:

NAME		SIGNATURE	DATE

B5. SCHEDULE OF PROPOSED SUBCONTRACTORS

We notify you that it is our intention to employ the following Subcontractors for work in this contract.

SUBCONTRACTORS				
Category/ type	Subcontractor Name/Address/Contact Person/Phone/e-mail/Details of Organisation/Firm/ Experience	Items of work (pay items) to be undertaken by the Subcontractor	% sub- contracted	Local EME's or • Lo cal QSE's

NB: If there is insufficient space above, the Tenderer may include the additional sheets in the Supporting Documentation file, to be submitted in accordance with Clause C2.13.3 of T1.2.2 Variations to the Standard Conditions of Tender.

Number of additional sheets submitted by the Bidder to this Schedule

(If nil, enter NIL)

Acceptance of this tender shall not be construed as approval of all or any of the listed subcontractors. Should any of the subcontractors not be approved subsequent to acceptance of the tender, this shall in no way invalidate this tender, and the tendered unit rates for the various items of work shall remain final and binding, even in the event of a subcontractor not listed above being approved by the Engineer.

SIGNED BY/ON BEHALF OF BIDDER:

NAME		SIGNATURE	DATE

B6. SCHEDULE OF KEY DESIGN AND CONSTRUCTION PERSONNEL

The tender offer shall include an organogram clearly showing the team of key design and construction personnel the Bidder proposes to assign to the Contract and how responsibilities for the various disciplines or work and components of the Works will be assigned. The appointed contractor may not replace the key design and construction personnel provided in this schedule without the prior written approval of the Employer. The Personnel identified in Schedule B6 will be incorporated into the Contract as the **“Contractor’s Representative”** (Clause 1.1.18) and **“Key Personnel”** (Clause 1.1.48).

In the case of a Joint Venture or where major sub-contractors are made use of, the organogram must show how respective responsibilities are to be allocated.

Stage 2.1 Functionality Assessment

STAGE 2.1 - CAPABILITY AND CAPACITY CRITERIA (KEY DESIGN AND CONSTRUCTION PERSONNEL) (All Key Personnel will be required during the Design and Construction Phase of the Project)			
No.	Criteria	Score Allocation	Maximum Score
1.	Contractor’s Representative		15
1.1	Registration with Professional Bodies		5
1.1.1	Registration with either Project Management South Africa or SACPCMP	5	
1.1.2	PMP	3	
1.1.3	Not registered with SACPCMP or PMP	0	
1.2	Professional Experience		10
1.2.1	10 or more years’ experience managing similar projects, with a value of at least R50m, and ensuring integration of various built environments with specialist disciplines during design and construction	10	
1.2.2	5-9 years’ experience managing similar projects, with a value of at least R50m, and ensuring integration of various built environments with specialist disciplines during design and construction	7,5	
1.2.3	1 to 5 years’ experience managing similar projects, with a value of at least R50m, and ensuring integration of various built environments with specialist disciplines during design and construction	5	
1.2.4	Less than 1 year or no experience managing similar projects, with a value of at least R50m, and ensuring integration of various built environments with specialist disciplines during design and construction	0	
2.	Architect		20
2.1	Qualifications		5
2.1.1	Architecture Degree	5	
2.1.2	B-Tech Degree in Architecture	3.75	

STAGE 2.1 - CAPABILITY AND CAPACITY CRITERIA (KEY DESIGN AND CONSTRUCTION PERSONNEL) (All Key Personnel will be required during the Design and Construction Phase of the Project)			
No.	Criteria	Score Allocation	Maximum Score
2.1.3	Diploma in Architecture	2	
2.1.4	None of the above qualifications	0	
2.2	Registration with Professional Bodies		5
2.2.1	Professional registration with SACAP (South African Council for the Architectural Profession).	5	
2.2.2	Candidate registration with SACAP	3.75	
2.2.3	Not registered with SACAP	0	
2.3	Professional Experience Post Registration		10
2.3.1	10 or more years' experience with at least 5 years' post-date of professional registration designing offices/multi-use spaces - similar to a Scientific Research building, industrial building or similar, which incorporates the surrounding landscape.	10	
2.3.2	5-9 years' experience, with at least 5 years' post-date of professional registration designing offices/multi-use spaces similar to a Scientific Research building, industrial building, or similar, which incorporates the surrounding landscape.	7,5	
2.3.3	1-5 years' experience post-date of professional registration designing offices/multi-use spaces similar to a Scientific Research building, industrial building, or similar which incorporates the surrounding landscape.	5	
2.3.4	No post-date of professional registration experience designing offices/multi-use spaces similar to a Scientific Research building, industrial building, or similar which incorporates the surrounding landscape.	0	
3.	Mechanical Engineer (Mech. Services)		20
3.1	Qualifications		5
3.1.1	Mechanical Engineering Degree	5	
3.1.2	B-Tech Degree in Mechanical Engineering	3.75	
3.1.3	Mechanical Engineering Diploma	2	
3.1.4	None of the above qualifications	0	
3.2	Registration with Professional Bodies		5

STAGE 2.1 - CAPABILITY AND CAPACITY CRITERIA (KEY DESIGN AND CONSTRUCTION PERSONNEL) (All Key Personnel will be required during the Design and Construction Phase of the Project)			
No.	Criteria	Score Allocation	Maximum Score
3.2.1	Pr-Eng. ECSA registration	5	
3.2.2	Pr-Tech-Eng. ECSA registration	3.75	
3.2.3	Not registered with ECSA (as specified in 3.2.1 and 3.2.2)	0	
3.3	Professional Experience Post Registration		10
3.3.1	10 or more years' experience with at least 5 years post-date of professional registration, in designing and commissioning HVAC systems, fire detection & gas suppression services for typical data centre applications and other mechanical services, such as lifts	10	
3.3.2	5-9 years' experience with at least 5 years post-date of professional registration, in designing and commissioning HVAC systems (including CFD modelling for data centres), fire detection and gas suppression services for typical data centre applications and other mechanical services, such as lifts	7,5	
3.3.3	1-4 years' experience, post-date of professional registration, in designing and commissioning HVAC systems (including CFD modelling for data centres), fire detection and gas suppression services for typical data centre applications and other mechanical services, such as lifts	5	
3.3.4	No post-date of professional registration experience in designing and commissioning HVAC systems (including CFD modelling for data centres), fire detection and gas suppression services for typical data centre applications and other mechanical services, such as lifts	0	
4	Building Electrical Engineer		20
4.1	Qualifications		5
4.1.1	Degree in Electrical Engineering	5	
4.1.2	B-tech in Electrical Engineering	3.75	
4.1.3	Electrical Engineering Diploma	2	
4.1.4	No applicable qualification	0	
4.2	Registration with Professional Bodies		5
4.2.1	Pr-Eng. ECSA registration	5	
4.2.2	Pr-Tech-Eng. ECSA registration	3.75	
4.2.3	Not registered with a professional body	0	

STAGE 2.1 - CAPABILITY AND CAPACITY CRITERIA (KEY DESIGN AND CONSTRUCTION PERSONNEL) (All Key Personnel will be required during the Design and Construction Phase of the Project)			
No.	Criteria	Score Allocation	Maximum Score
4.3	Professional Experience Post Registration		10
4.3.1	10 or more years' experience, with at least 5 years post-date of professional registration, in designing internal building electrical reticulation and oversight during construction	10	
4.3.2	8-9 years' experience with at least 5 years post-date of professional registration, in designing internal building electrical reticulation and oversight during construction	7.5	
4.3.3	5-7 years' experience with at least 5 years post-date of professional registration, in designing internal building electrical reticulation and oversight during construction	5	
4.3.4	1- 4 years' experience, post-date of professional registration, in designing internal building electrical reticulation and oversight during construction	3	
4.3.5	No experience in designing internal building electrical reticulation and oversight during construction	0	
5	Bulk Services Electrical Engineer		20
5.1	Qualifications		5
5.1.1	Electrical Engineering degree or higher	5	
5.1.2	M-Tech Degree in Electrical Engineering	3.75	
5.1.3	B-Tech Degree in Electrical Engineering	2	
5.1.4	None of the above qualifications	0	
5.2	Registration with Professional Bodies		5
5.2.1	Pr-Eng. ECSA registration	5	
5.2.2	Pr-Tech-Eng. ECSA registration	3.75	
5.2.3	Not registered with a professional body	0	
5.3	Professional Experience Post Registration		10

STAGE 2.1 - CAPABILITY AND CAPACITY CRITERIA (KEY DESIGN AND CONSTRUCTION PERSONNEL) (All Key Personnel will be required during the Design and Construction Phase of the Project)			
No.	Criteria	Score Allocation	Maximum Score
5.3.1	15 or more years' experience with at least 5 years post-date of professional registration, in designing building wet services, and oversight during construction	10	
5.3.2	10-14 years' experience with at least 5 years post-date of professional registration, in designing building wet services, and oversight during construction	7.5	
5.3.3	5-9 years' experience with at least 5 years post-date of professional registration in designing building wet services, and oversight during construction	5	
5.3.4	1- 4 years' experience, post-date of professional registration in designing building wet services, and oversight during construction	3	
5.3.5	No experience designing building wet services, and oversight during construction	0	
6	Civil Engineer		20
6.1	Qualifications		5
6.1.1	Civil Engineering degree or higher	5	
6.1.2	M-Tech Degree in Civil Engineering	3.75	
6.1.3	B-Tech Degree in Civil Engineering	2	
6.1.4	None of the above qualifications	0	
6.2	Registration with Professional Bodies		5
6.2.1	Pr-Eng. ECSA registration	5	
6.2.2	Pr-Tech-Eng. ECSA registration	3.75	
6.2.3	Not registered with a professional body	0	
6.3	Professional Experience Post Registration		10
6.3.1	15 or more years' experience with at least 5 years post-date of professional registration, in designing building wet services, and oversight during construction	10	
6.3.2	10-14 years' experience with at least 5 years post-date of professional registration, in designing building wet services, and oversight during construction	7.5	

STAGE 2.1 - CAPABILITY AND CAPACITY CRITERIA (KEY DESIGN AND CONSTRUCTION PERSONNEL) (All Key Personnel will be required during the Design and Construction Phase of the Project)			
No.	Criteria	Score Allocation	Maximum Score
6.3.3	5-9 years' experience with at least 5 years post-date of professional registration in designing building wet services, and oversight during construction	5	
6.3.4	1- 4 years' experience, post-date of professional registration in designing building wet services, and oversight during construction	3	
6.3.5	No experience designing building wet services, and oversight during construction	0	
7	Construction Manager (Full time of Site) (This role could also be fulfilled by the Contractor's Representative)		20
7.1	Qualifications		5
7.1.1	Degree in construction management	5	
7.1.2	B-tech in construction management	3.75	
7.1.3	Diploma in construction management	2	
7.1.4	None of the above qualifications	0	
7.2	Registration with Professional Bodies		5
7.2.1	Professional registration with SACPCMP	5	
7.2.2	Candidate Construction Manager registration with SACPCMP	3.75	
7.2.3	Not registered with SACPCMP	0	
7.3	Professional Experience		10
7.3.1	10 or more years' experience in similar Construction Manager role combined with Project Management experience for similar projects with a value of at least R50m, and should be able to ensure integration of various built environment with specialist disciplines during design and construction	10	
7.3.2	5-9 years' experience in similar Construction Manager role combined with Project Management experience for similar projects with a value of at least R50m, and should be able to ensure integration of various built environment with specialist disciplines during design and construction	7.5	
7.3.3	1-4 years' experience in similar Construction Manager role combined with Project Management experience for similar projects with a value of at least R50m, and should be able to ensure integration of various built environment with specialist disciplines during design and construction	5	

STAGE 2.1 - CAPABILITY AND CAPACITY CRITERIA (KEY DESIGN AND CONSTRUCTION PERSONNEL) (All Key Personnel will be required during the Design and Construction Phase of the Project)			
No.	Criteria	Score Allocation	Maximum Score
7.3.4	No experience in similar Construction Manager role combined with Project Management experience for similar projects with a value of at least R50m, and should be able to ensure integration of various built environment with specialist disciplines during design and construction	0	
8	Structural Engineer		20
8.1	Qualifications		5
8.1.1	Post-graduate Degree in Structural Engineering	5	
8.1.2	Structural Engineering Degree	3.75	
8.1.3	M-Tech Degree in Structural Engineering	2	
8.1.4	None of the above qualifications	0	
8.2	Registration with Professional Bodies		5
8.2.1	Professional registration with ECSA (Engineering Council of South Africa)	5	
8.2.2	Professional registration with IStructE SA (The Institute of Structural Engineers)	3.75	
8.2.3	Not registered with a professional body	0	
8.3	Professional Experience Post Registration		10
8.3.1	15 or more years' experience with at least 5 years post-date of professional registration, in designing concrete and steel structures, and oversight during construction	10	
8.3.2	10-14 years' experience with at least 5 years post-date of professional registration in designing concrete and steel structures and oversight during construction	7.5	
8.3.3	1-9 years' experience with at least 5 years post-date of professional registration in designing concrete and steel structures and oversight during construction	5	
8.3.4	No experience, and less than 5 years' post-date of professional registration, in designing concrete and steel structures and oversight during construction	0	
9	Fibre/Network Specialist		15

STAGE 2.1 - CAPABILITY AND CAPACITY CRITERIA (KEY DESIGN AND CONSTRUCTION PERSONNEL) (All Key Personnel will be required during the Design and Construction Phase of the Project)			
No.	Criteria	Score Allocation	Maximum Score
9.1	Qualifications		5
9.1.1	Degree/B-Tech in Electronic Engineering	5	
9.1.2	Degree/B-Tech in Network Engineering.	3.75	
9.1.3	Degree/B-Tech in Electrical Engineering	2	
9.1.4	None of the above qualifications	0	
9.2	Registration with Professional Bodies		5
9.2.1	Professional registration with ECSA	5	
9.2.2	Professional registration with ICASA	3.75	
9.2.3	Not registered with ECSA or ICASA	0	
9.3	Professional Experience Post Registration		5
9.3.1	10 or more years' experience with at least 5 years post-date of professional registration, in fibre network design. Experience specializing in Fibre Designs, Quality Assurance and Quality Control, AutoCAD, et. Cetera.	5	
9.3.2	5-9 years' experience with at least 5 years post-date of professional registration, in fibre network design. Experience specializing in Fibre Designs, Quality Assurance and Quality Control, AutoCAD, et. Cetera.	3.75	
9.3.3	1-4 years' experience with less than 5 years post-date of professional registration, in fibre network design. Experience specializing in Fibre Designs, Quality Assurance and Quality Control, AutoCAD, et. Cetera.	2.5	
9.3.4	No experience post-date of professional registration, in fibre network design. Experience specializing in Fibre Designs, Quality Assurance and Quality Control, AutoCAD, et. Cetera.	0	
10	Quantity Surveyor		15
10.1	Qualifications		5
10.1.1	BSc Honours Degree in Quantity Surveying	5	
10.1.2	BSc/B-Tech in Quantity Surveying	3.75	
10.1.3	Diploma in Building Engineering / Quantity Surveying	2	
10.1.4	No appropriate qualification	0	

STAGE 2.1 - CAPABILITY AND CAPACITY CRITERIA (KEY DESIGN AND CONSTRUCTION PERSONNEL) (All Key Personnel will be required during the Design and Construction Phase of the Project)			
No.	Criteria	Score Allocation	Maximum Score
10.2	Registration with Professional Bodies		5
10.2.1	Professional registration with SACQSP (South African Council for the Quantity Surveying Profession)	5	
10.2.2	Candidate registration with SACQSP	3.75	
10.2.3	Not registered with SACQSP	0	
10.3	Professional Experience Post Registration		5
10.3.1	5 or more years' experience from date of professional registration, in preparing detailed bills of quantities in coordination with other built environment disciplines and undertaking financial evaluation of bids to ensure correctness and compiling payment certificates	5	
10.3.2	A minimum of 5 years' experience from date of professional registration, in preparing detailed bills of quantities in coordination with other built environment disciplines and undertaking financial evaluation of bids to ensure correctness and compiling payment certificates	3.75	
10.3.3	1-4 years' experience from date of professional registration, in preparing detailed bills of quantities in coordination with other built environment disciplines and undertaking financial evaluation of bids to ensure correctness and compiling payment certificates	2.5	
10.3.4	No experience, post-date of professional registration	0	
11	Occupational Health, Safety Agent (Full time on site)		15
11.1	Qualifications		5
11.1.1	Occupational Certificate: Occupational Health and Safety Practitioner QCTO	5	
11.1.2	Occupational Health and Safety Management Systems	3.75	
11.1.3	Occupational Health and Safety Training	0	
11.2	Registration with Professional Bodies		5
11.2.1	Registration with SAIOSH (South African Institute of Occupational Safety & Health)	5	
11.2.2	Candidate registration with SAIOSH (South African Institute of Occupational Safety & Health)	3.75	

STAGE 2.1 - CAPABILITY AND CAPACITY CRITERIA (KEY DESIGN AND CONSTRUCTION PERSONNEL) (All Key Personnel will be required during the Design and Construction Phase of the Project)			
No.	Criteria	Score Allocation	Maximum Score
11.2.3	Not registered with a professional body	0	
11.3	Professional Experience Post Registration		5
11.3.1	10 or more years in drafting health and safety specifications, implementation plans and undertaking health, safety and environmental audits	5	
11.3.2	5-9 years in drafting health and safety specifications, implementation plans and undertaking health, safety and environmental audits	3.75	
11.3.3	1-4 years in drafting health and safety specifications, implementation plans and undertaking health, safety and environmental audits	2.5	
11.3.4	No experience in drafting health and safety specifications, implementation plans and undertaking health, safety and environmental audits	0	
12	Environmental Specialist		15
12.1	Qualifications		5
12.1.1	Degree in Environmental Sciences/Management	5	
12.1.2	B-Tech Degree in Environmental Sciences/Management	3.75	
12.1.3	Diploma in Environmental Sciences/Management	2	
12.1.4	None of the above qualifications	0	
12.2	Registration with Professional Bodies		5
12.2.1	Registered with EAPASA (Environmental Assessment Practitioner Association of South Africa)	5	
12.2.2	Candidate registration with EAPASA	3.75	
12.2.3	Not registered with EAPASA	0	
12.3	Professional Experience		5
12.3.1	5 or more years' experience drafting environmental management plans, method statements, implementation of environmental management plans and method statements, including undertaking environmental inspections/audits	5	
12.3.2	1-4 years' experience drafting environmental management plans, method statements, implementation of environmental management plans and	3.75	

STAGE 2.1 - CAPABILITY AND CAPACITY CRITERIA (KEY DESIGN AND CONSTRUCTION PERSONNEL) (All Key Personnel will be required during the Design and Construction Phase of the Project)			
No.	Criteria	Score Allocation	Maximum Score
	method statements, including undertaking environmental inspections/audits		
12.3.3	No experience drafting environmental management plans, method statements, implementation of environmental management plans and method statements, including undertaking environmental inspections/audits	0	
13	Quality Assurance Officer (Full time on site)		15
13.1	Qualifications		5
13.1.1	ISO 9001: 2015 Quality Management Systems Diploma	5	
13.1.2	ISO 9001: 2015 Quality Management Systems Training Certificate	3.75	
13.2	Registration with Professional Bodies		5
13.2.1	Senior Membership Registration with SAQI (The South African Quality Institute)	5	
13.2.2	Not registered with SAQI	3.75	
13.3	Professional Experience		5
13.3.1	7 or more years' experience developing QA plans, monitoring implementation and undertaking QA audits on construction contractor	5	
13.3.2	4-7 years' experience developing QA plans, monitoring implementation and undertaking QA audits on construction contractor	3.75	
13.3.3	1-3 years' experience developing QA plans, monitoring implementation and undertaking QA audits on construction contractor	2.5	
13.3.4	1No experience developing QA plans, monitoring implementation and undertaking QA audits on construction contractor	0	
14	Site Management (Full time on site)		27
14.1	Site Manager		
	Demonstrable Experience		9
14.1.1	10 years or more experience in the commercial building industry	9	
14.1.2	5-9 years' experience in the commercial building industry	7.5	

STAGE 2.1 - CAPABILITY AND CAPACITY CRITERIA (KEY DESIGN AND CONSTRUCTION PERSONNEL) (All Key Personnel will be required during the Design and Construction Phase of the Project)			
No.	Criteria	Score Allocation	Maximum Score
14.1.3	1-4 years' experience in the commercial building industry	3	
14.1.4	No experience in commercial construction	0	
14.2	Civil Foreman		
	Demonstrable Experience		6
14.2.1	10 years or more experience in the commercial building industry	6	
14.2.2	5-9 years' experience in the commercial building industry	3	
14.2.3	1-4 years' experience in the commercial building industry	1	
14.2.4	No experience in commercial construction	0	
14.3	Building Foreman		
	Demonstrable Experience		6
14.3.1	10 years or more experience in the commercial building industry	6	
14.3.2	5-9 years' experience in the commercial building industry	3	
14.3.3	1-4 years' experience in the commercial building industry	1	
14.3.4	No experience in commercial construction	0	
14.4	Finishing Foreman		
	Demonstrable Experience		6
14.4.1	10 years or more experience in the commercial building industry	6	
14.4.2	5-9 years' experience in the commercial building industry	3	
14.4.3	1-4 years' experience in the commercial building industry	1	
14.4.4	No experience in commercial construction	0	
15	Organogram		3
15.1	Project Organisational Chart for Key Design and Construction Personnel		3
15.1.1	The organogram and supplementary documentation meet the requirements of this bid, showing the hierarchy of all the key design and construction roles on the project team, and reporting lines and confirms	3	

STAGE 2.1 - CAPABILITY AND CAPACITY CRITERIA (KEY DESIGN AND CONSTRUCTION PERSONNEL) (All Key Personnel will be required during the Design and Construction Phase of the Project)			
No.	Criteria	Score Allocation	Maximum Score
	the Bidder's capacity to undertake this project		
15.1.2	The organogram and supplementary documentation demonstrate minimal compliance to the requirements of this bid, showing unclear hierarchy of all the key design and construction roles on the project team, and reporting lines and limited demonstration of Bidder's capacity to undertake this project	2.25	
15.1.3	The organogram and supplementary documentation do not meet the requirements of this bid, do not show the hierarchy of all the key design and construction roles on the project team, and reporting lines and do not confirm the Bidder's capacity to undertake this project	0	
	Sub-total		260

Note: Bidders must score a minimum of 195 points (75%) out of a possible 260 points, in the above Functionality Assessment (Schedule B6-B10) in order to be considered for further evaluation in Stage 2.2.

Additional Key Design and Construction Resources

The appointed contractor may have to provide the below listed resources with required levels of experience and registration before execution of works. The cost for these additional key design and construction resources must form part of the overall offer price. SARAo shall require that CV's and proof of professional registration be submitted for approval.

Additional Design and Construction Personnel			
Resource	Experience	Qualification	Registration
Archaeologist	5 years' experience in undertaking walkthroughs prior to and during construction	Relevant degree specialising in archaeology or equivalent	
Town-planner	5 years' experience from date of registration in undertaking town-planning schemes and rezoning applications	Town-planning degree or equivalent	Registration with the South African Council for Planners (SACPLAN)
RFI Engineer	10 years' experience from date of registration specialising in radio frequency interference design including earthing, lightning protection	Degree in RF engineering or equivalent, RFI specialist, earthing & lightning protection	Professional registration with ECSA (Engineering Council of South Africa)

The Stage 2.2 Functionality Assessment continues on Schedules B11-B16.

Table 1: Schedule of Key Design and Construction Personnel

Note: In addition to Table 1, Bidders must submit a Project Organisational Chart identifying all resources indicated above and all support staff required to ensure successful delivery of the project, including interfaces with SARAO

Key Design & Construction Personnel	Name	Qualifications	Registration Number	No of years' experience in terms of required skills	Company Name & Physical address and contact details of local office
Design & Construction Team:					
Contractor Representative					
Architect					
Mechanical Engineer (Mechanical services)					
Building Electrical Engineer					
Bulk Services Electrical Engineer					
Civil Engineer					
Construction Manager (Full time on site)					
Structural Engineer					
Fibre/Network specialist					

Quantity Surveyor					
Occupational Health, Safety Agent (Full time on site)					
Environmental Specialist					
Quality Assurance Officer (Full time on site)					
Site Manager (Full time on site)					
Civil Foreman (Full time on site)					
Building Foreman (Full time on site)					
Finishing Foreman (Full time on site)					
Archaeologist					
Town-planner					
RFI Engineer					

B7. COPIES OF PROFESSIONAL QUALIFICATIONS OF KEY DESIGN AND CONSTRUCTION PERSONNEL

Copies of the professional qualifications of each Team Member listed in Schedule B6: Table 1, above, must be attached to this Schedule.

SIGNED BY/ON BEHALF OF BIDDER:

NAME		SIGNATURE		DATE

B8. COPIES OF PROFESSIONAL REGISTRATION OF KEY DESIGN AND CONSTRUCTION PERSONNEL

Copies of professional registration certificates of each individual Team Member listed in Schedule B6: Table 1, must be attached to this Schedule 1.

SIGNED BY/ON BEHALF OF BIDDER:

NAME		SIGNATURE		DATE

B9. CURRICULUM VITAE OF KEY DESIGN AND CONSTRUCTION PERSONNEL

CVs must be submitted in the required format.

Only include CVs for the required personnel as listed in the above table and in the format of the CV template provided in this schedule. Attach CVs in the order that the key Design and Construction Personnel are listed in Schedule B6.

Please note that if any changes are made to any personnel from the initial approved lists at the time of the tender award, written communication of all changes should be submitted to SARAO for approval to minimise any unforeseen risks.

Do NOT include CVs for support staff.

Please Note:

The Bidder should respond to the requirements listed in Table 1 and insert the details of the required personnel in the Schedule of Key Design and Construction Personnel and attach the supporting documentation and sub-contracting agreements (where applicable);

The Bidder must clearly indicate in the Table where one person can fulfil various roles;

The names listed in Table 1 for the Key Design and Engineering disciplines will be those personnel that carry design responsibility for the respective design engineering discipline;

Do not include support staff in the Schedule of Key Design and Construction Personnel. Only key personnel will be assessed. Support staff will therefore not be assessed. It is however the responsibility of the Bidder to ensure that the project is provided with adequate support capacity;

Where there are no names next to the suggested Key Design and Construction Personnel, it will be assumed that the Bidder does not have the personnel included in the professional team;

In order to qualify, the team must include all the Key Design and Construction Personnel (or indicate where one person fulfils other roles) and each Team Member must meet the minimum requirements in relation to qualification, registration and number of years' experience as stated in Table 1.

The Key Design and Construction personnel must be registered with their respective related regulatory bodies and have recognised qualifications. Registration with Councils, for those professions where Councils exist, and with Associations or Institutes for those professions where only Associations and / or Institutes exist is required.

Please Note: Provide a detailed CV as an attachment highlight the following:

Surname (and maiden name in brackets where applicable); First name/s; Date of birth; Nationality; Education and Specialist training; Membership of Professional Bodies; Registration Number; Key Qualifications relevant to this project; Key skills and expertise relevant to this project; High-level overview of professional experience directly related to the role of the team member in this project.

B10. PROJECT ORGANISATIONAL CHART FOR KEY DESIGN AND CONSTRUCTION PERSONNEL

Bidders must append an organisational chart for the key design and construction personnel to this Schedule.

B11. BIDDING ENTITY PREVIOUS EXPERIENCE AND PLANNING IN DELIVERING SIMILAR DESIGN AND BUILD CONTRACTS AND OTHER PROJECTS OF SIMILAR SCALE

Bidders must familiarise themselves with the evaluation criteria listed below and submit a list of current and completed projects and references to support the allocation of points.

Stage 2.2 Functionality Assessment – Experience & Planning

Note: In Stage 2.2, bidders must score an overall minimum of 75 points of a possible 100 points, in order to be evaluated further in Stage 3

Criteria	Sub criteria	Indicators	Scoring Allocation	Minimum Acceptable Score
Previous experience and Track Record	Past experience in delivering similar design and build contracts	The bidding entity has <u>extensive</u> experience in delivering Scientific Research facility projects (i.e. More than 5 design and construction, space planning/ interior design contracts with a value of at least R50 million, completed in the preceding 10 years to this tender)	40	30
		The bidding entity has <u>adequate</u> experience in delivering Scientific Research facility projects (i.e. 2 design and construct, space planning/ interior design contracts with a value of at least R50 million completed in the preceding 10 years to this tender)	30	
		The bidding entity has <u>limited</u> experience in delivering Scientific Research facility projects (1 design and construct, space planning/ interior design contracts with a value of at least R50 million completed in the preceding 10 years to this tender)	15	
		The Bidding entity has <u>no</u> experience in delivering similar space planning/ interior design contracts of similar scale	0	
Sub-total			40 Points	

Note: The minimum acceptable score for this Schedule is 30 points out of a possible 40 points. Failure to achieve this score will result in disqualification

Table 2: List of Previous and Completed Projects

Please Note: Provide a signed/ stamped reference document on a company letterhead.

NAME OF COMPANY

PROJECT/EMPLOYER (Name, Tel. No and Fax No.)	NATURE OF WORK	VALUE OF WORK	YEAR OF COMPLETION	ANY DISPUTES

B12. METHOD STATEMENT BASED ON THE SCOPE OF WORK SPECIFIC TO THIS PROJECT (INCLUDE ANY REQUIRED EQUIPMENT SHUTDOWNS)

Bidders must familiarise themselves with the evaluation criteria listed below and submit a method statement based on the scope of work for this project.

Note: Bidders must score a minimum of 15 points (75%) out of a possible 20 points, in the below functional assessment (Schedule B12) in order to be considered for further evaluation.

Criteria	Indicators	Sub-criteria	Scoring Allocation	Minimum Acceptable Score
Method Statement	<p>The method statement must as a minimum address the following aspects:</p> <ul style="list-style-type: none">● Planning;● Detailed Design process and approvals;● Lead time for manufactured products & transportation to site;● Safety, Health, Environmental & Quality considerations during the design phase;● Construction process (including all testing);● Safety, Health, Environmental & Quality compliance during the construction phase;● Testing and Verification;● Completion and handover;● Skills development;● Corporate Social Investment	<p>The method statement provides an extensive overview of works and a detailed, clear preliminary program of a project of R 50m minimum within the period of 10 years and details ways to improve the project outcomes and the quality of the outputs which address the specific project objectives and requirements. The approach is sufficiently flexible to accommodate changes that may occur during execution</p>	20	13
		<p>The method statement provides an overview of works and a clear preliminary program of a project of R 50m minimum within the period of 10 years and addresses the specific project objectives provided within the requirements documentation accompanying this tender. The approach is sufficiently flexible to accommodate changes that may occur during execution</p>	13	
		<p>The method statement is generic and not tailored to similar R 50m projects within the period of 10 years and does not address the specific project objectives and requirements. The approach does not adequately deal with the critical characteristics of the project</p>	10	
		<p>The method statement does not address the minimum objectives and requirements of the project and is of poor quality. It is unlikely to satisfy the project objectives or requirements as stated in previous fields</p>	6	
		<p>The Tenderer has submitted no information.</p>	0	
Sub-total			20 Points	

Note: The minimum acceptable score for this Schedule is 13 points out of a possible 20 points. Failure to achieve this score will result in disqualification

B13. PROJECT MANAGEMENT PLAN (PMP) SPECIFIC TO THIS PROJECT

Bidders must familiarise themselves with the evaluation criteria listed below and submit a project management plan specific to this project.

Criteria	Indicators	Sub-criteria	Scoring Allocation	Minimum Acceptable Score
Project Management Plan (PMP) specific to this project	<p>Provide a detailed Project Management Plan (PMP) for the duration of this contract. The PMP must as a minimum address the following aspects:</p> <ul style="list-style-type: none">• Overview and project strategy• Project standards and setup• Project Scope• Cost and financial management• Project Schedule (<i>Including Appointment and Commencement of contract, Design Activities, Reviews and Approvals, Construction, Testing and Verification and Handover to Client</i>)• Risk Management• Subcontractor management• information & document management• Communication and reporting• Traffic Management	The Project Management Plan exceeds the requirements in that it clearly defines how the contract will be successfully managed and leaves no doubt that the Bidder understands the requirements in terms of the project management and system engineering process and proposes clear processes & procedures in terms of the management of cost, schedule, quality and risk	10	7.5
		The Project Management Plan adequately meets the requirements with all the aspects required as part of the criteria are described in detail and the SARAO is satisfied that the Bidder is capable of managing the execution of the contract	7.5	
		The Project Management Plan is generic and average and does not address all the requirements for this criterion to be deemed sufficient for the project	3	
		The Project Management Plan (PMP) does not meet the majority of the requirements.	1	
		The Tenderer has submitted no information.	0	
Sub-total			10 Points	

Note: The minimum acceptable score for this Schedule is 7.5 points out of a possible 10 points. Failure to achieve this score will result in disqualification

B14. PROJECT PLAN (PROGRAMME) IN PRIMAVERA P6 OR MICROSOFT PROJECT (MSP)

Bidders must detail the proposed programme below (refer to section D1.2), or refer to their proposed programme and attach it to this schedule. Bidder's attention is drawn to Clause 8.3 of the Second edition FIDIC Contract (Yellow Book) regarding the items to be shown on a programme, as well as the Specific Requirements attached hereto.

Bidders are also advised that the activities identified in its programme will be used for its Priced Activity Schedule (Part C3)

Bidders must provide a level 3 programme in soft copy and pdf complying with, but not limited to, the minimum format requirements, as follows:

- Activity ID
- Activity Description
- Activity Duration
- Start and Finish dates (assuming C0)
- Total Float

The Programme should clearly demonstrate alignment with the project management plan including, but not limited to resources, time risk allowances, et cetera.

Criteria	Indicators	Sub-criteria	Scoring Allocation	Minimum Acceptable Score
Project Plan (Programme) in Primavera P6 or Microsoft Project (MSP)	Provide a detailed programme for the duration of this contract. The programme must as a minimum address the following aspects: <ul style="list-style-type: none"> • Project Schedule • Key Milestones as stipulated in the SOW (section D1.2) • Sequence and durations • Programme calendar • The events that influence the carrying out of the Works, including float and the Contractor's time risk allowances • Detailed cash flow and invoicing 	Over and above meeting the "80%" rating, the applicable section of the programme addresses the issues in an innovative and efficient way, giving confidence to SARAO	10	
		The applicable section of the overall programme is complete, resource loaded, sufficiently decomposed with all key milestones synchronized, adequate duration estimates and meaningful critical path. The tenderer has allowed sufficient timing of critical approvals and clearly demonstrates adequate provision of time risk allowance	8	
		The applicable section of the programme addresses the specific project objectives. The programme/ scope elements in question are complete, sufficiently decomposed and sequenced in a logical manner. The tenderer has included key milestones and SARAO is satisfied that the Bidder is capable of managing the execution of the contract	7.5	
		The applicable section of the programme is generic, not practical and unrealistic, therefore is unlikely to satisfy project objectives or Employer's requirements. The tenderer has misunderstood certain aspects of the scope of the works and does not deal with the critical aspects of the project/Scope element in question as a subset of the overall project	6	
		The applicable section of the programme is not acceptable as it will not satisfy project objectives or requirements	4	
		The Tenderer has submitted no information	0	

Criteria	Indicators	Sub-criteria	Scoring Allocation	Minimum Acceptable Score
Sub-total			10 Points	

Note: The minimum acceptable score for this Schedule is 7.5 points out of a possible 10 points. Failure to achieve this score will result in disqualification

B15. HEALTH, SAFETY, ENVIRONMENTAL AND QUALITY (SHEQ) MANAGEMENT PLAN FOR THE EXECUTION OF THIS PROJECT

Bidders must familiarise themselves with the evaluation criteria listed below and submit a Health, Safety, Environmental and Quality Plan for the execution of this project.

Criteria	Indicators	Sub-criteria	Scoring Allocation	Minimum Acceptable Score
Health & Safety Management Plan for the execution of this Contract	Provide a detailed Health & Safety plan for the duration of this contract. The Health & Safety plan must as a minimum address the following aspects: <ul style="list-style-type: none"> • Applicable Health & Safety standards • Health & Safety measures during the contract • Health & Safety Compliance management • Health & Safety meetings • Communication and reporting 	The Health & Safety Plan exceeds the requirements where innovative options (through technology/options/processes) are considered to manage Health & Safety for the contract whilst also addressing: Health and Safety analysis during the design phase and how the Bidder will manage (and audit) during construction	4	7.5
		The Health & Safety Plan meets the requirements with all the aspects required as part of the criteria are described in detail by the Health & Safety checklist provided by SARAO	3	
		The Health & Safety Plan is generic and does not address project specific requirements	2	
		The Health & Safety Plan is poor and does not meet the requirements	1	
Criteria	Indicators	Sub-criteria	Scoring Allocation	
Environmental Management Plan for the execution of this Contract	Provide a draft Environmental Management Plan for the duration of the contract. The Environmental Management Plan must as a minimum address the following: <ul style="list-style-type: none"> • All applicable environmental legislation • Project description • Roles and responsibilities of personnel implementing the EMP • Environmental Awareness Plan 	The Environmental plan exceeds the requirements where innovative options (through technology/options/processes) are considered to manage Environmental for the contract whilst also addressing: Environmental analysis during the design phase and how the Bidder will manage (and audit) during construction	3	
		The Environmental plan meets the requirements with all the aspects required as part of the criteria are described in detail	2	
		The Environmental Plan is generic and does not address project specific requirements	1.5	
		The Environmental plan is poor and does not meet the requirements	1	

Criteria	Indicators	Sub-criteria	Scoring Allocation	Minimum Acceptable Score
	Impacts and Mitigation measures and how will they be monitored <ul style="list-style-type: none"> • How environmental incidents will be reported • Rehabilitation measures/plan of disturbed areas 			
Criteria	Indicators	Sub-criteria	Scoring Allocation	
Quality Management System or Equivalent, based on Quality Management principals, Certification and Compliance Standard	Quality Management System or Equivalent, based on the following principals - <ul style="list-style-type: none"> • Customer focus; • Leadership; • Involvement of people; • Process approach; • System approach; • Continual improvement; • Fact-based decision making, and • Mutually beneficial supplier relationships 	Quality Management System or Equivalent exceeds the requirements where innovative options (through technology/options/processes) are considered to manage Quality during the design phase and how the Bidder will manage (and audit) during construction	3	
		Quality Management System or Equivalent meets all the aspects and requirements of Quality Management principles	2	
		Quality Management System or Equivalent is generic and does not address Quality Management principles	1.5	
		Quality Management System or Equivalent is poor and does not address Quality Management principles	1	
		Sub-total	10 Points	

Note: The minimum acceptable score for this Schedule is 7.5 points out of a possible 10 points. Failure to achieve this score will result in disqualification

B16. EVIDENCE OF THE EXISTING SOCIO-ECONOMIC DEVELOPMENT ACTIVITIES OF THE BIDDER

Bidders must familiarise themselves with the evaluation criteria listed below and submit evidence of its existing socio-economic development activities to support the allocation of points.

Criteria	Indicators	Sub-criteria	Scoring Allocation
Evidence of the Bidder's, its sub-contractors, and JV or consortium partners <u>existing Socio-Economic development activities and proposed Skills Transfer development plan specific for this contract</u>	Existing Socio-Economic development activities or plans	Socio-Economic development activities or plans which exceed the Bidders company objectives and provided evidence	2
		Socio-Economic development activities or plans which meets the Bidders company objectives	1.5
		Generic Socio-Economic development activities or plans	0.5
		Poor Socio-Economic development activities or plans	0
	Skills Transfer development plan (Training, Local Labour, community approved CSI*, Subcontracting, Suppliers) specific for this contract. [*any of the local towns may be selected for a CSI project]	The Skills Transfer development plan is <u>specifically tailored and details ways</u> on how to transfer skills through this project and other skills not associate through this contract	8
		The Skills Transfer development plan is <u>tailored and details ways</u> on how to transfer skills through this project	6
		The Skills Transfer development plan is <u>generic</u> on how to transfer skills through this project	4
		The Skills Transfer development plan is of poor quality and does not address how skills transfer will occur	0
Sub-total			10 Points

Note: The minimum acceptable score for this Schedule is 7.5 points out of a possible 10 points. Failure to achieve this score will result in disqualification

Table 4: Evidence of the Socio-Economic Development Activities and Proposed Activities of the Bidder, its Sub-Contractors and Joint Venture / Consortium Partners

The bidder, its joint venture or consortium partners and sub-contractors must provide evidence of the entities implementing skills development, and /or mentorship programmes and corporate social investment programmes within each entity and the value of all entity's investment into skills development and /or mentorship programmes. The bidder must provide information on these programmes as part of its response to this bid as well as what skills development programme / corporate social investment programme will be proposed for the scope of this project. The response must be provided in the following format:

Bidder Name / Joint Venture Name / Subcontractor	
Description of skills development programme/s & number of staff participating	
Description of mentorship programmes (if any) and number of people in programme	
Monetary value of programmes to date & awards	
Description of corporate social investment (CSI) programmes implemented by bidding entities	
Number of people impacted by implementation of CSI programme	
Total monetary value of CSI programmes implemented	

B17. AMENDMENTS/ ALTERNATIVES AND QUALIFICATIONS BY BIDDER

The schedules below are not an invitation for amendments, deviations or alternatives but should the Bidder desire to make any departures from the provisions of this contract he shall set out his proposals clearly hereunder.

I / We herewith propose the amendments, alternatives and discounts as set out in the tables below:

(1) AMENDMENTS

PAGE, CLAUSE OR ITEM NO	PROPOSED AMENDMENT

- (a) *Amendments to the General and Special Conditions of Contract are not acceptable;*
(b) *The Bidder must give full details of all the financial implications of the amendments and qualifications in a covering letter attached to his tender.*

(2) ALTERNATIVES

PROPOSED ALTERNATIVE	DESCRIPTION OF ALTERNATIVE

- (a) *Individual alternative items that do not justify an alternative tender and an alternative offer for time for completion should be listed here.*
(b) *In the case of a major alternative to any part of the work, a separate Bill of Quantities, programme, etc, and a detailed statement setting out the salient features of the proposed alternatives must accompany the tender.*
(c) *Alternative tenders involving technical modifications to the design of the works and methods of construction shall be treated separately from the main tender offer.*

(3) QUALIFICATIONS

ITEM ON WHICH QUALIFICATION IS MADE	DESCRIPTION OF QUALIFICATION

- (a) *The Bidder must give full details of the discounts offered in a covering letter attached to his tender, failing which, the offer will be prejudiced.*

If there is insufficient space above, the Bidder may append additional sheets.

Number of additional sheets appended by the Bidder to this Schedule

(If nil, enter NIL)

SIGNED BY/ON BEHALF OF BIDDER:

NAME		SIGNATURE	DATE

B18. RECORD OF ADDENDA TO TENDER DOCUMENTS

We confirm that the following communications received from the Employer before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer:

No.	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

If there is insufficient space above, the Bidder may include the additional sheets in the Supporting Documentation file, to be submitted in accordance with Clause C.2.13.3 of T1.2.2 Variations to the Standard Conditions of Tender.

Number of additional sheets submitted by the Bidder in respect of this Schedule (If nil, enter NIL)

SIGNED BY/ON BEHALF OF BIDDER:

NAME		SIGNATURE	DATE

B19. JOINT VENTURE AGREEMENT

If the Tendering entity is a Joint Venture, a certified copy of the signed Joint Venture Agreement is to be included in the bid submission as per the requirements of Clause C.2.1.1 of the T1.2: Variations to the Standard Conditions of Tender.

SIGNED BY/ON BEHALF OF BIDDER:

NAME		SIGNATURE		DATE

D1: Scope of Works

Any reference to 'Scope of Works' in any of the documents forming part of this agreement shall mean the **“Employer’s Requirements”** per Clause 1.1.33 of the General Conditions of Contract as identified in Part C2.2

Number	Heading	Pages
D1.1	Background to the National Research Foundation and the South African Radio Astronomy Observatory (SARAO)	74
D1.2	Scope of Works	75

D1.1 BACKGROUND TO THE NATIONAL RESEARCH FOUNDATION AND THE SOUTH AFRICAN RADIO ASTRONOMY OBSERVATORY

The National Research Foundation (“NRF”) is a juristic person established in terms of section 2 of the National Research Foundation Act, Act 23 of 1998. The NRF supports and promotes research and human capital development through funding, the provision of National Research Facilities and science outreach platforms and programmes to the broader community in all fields of science and technology, including natural science, engineering, social science and humanities. The NRF is a Schedule 3A entity in terms of the Public Finance Management Act of 1999 (Act 1 of 1999 as amended by Act 29 of 2000).

The South African Radio Astronomy Observatory (SARAO), a facility of the National Research Foundation, is responsible for managing all radio astronomy initiatives and facilities in South Africa, including the MeerKAT Radio Telescope in the Karoo, and the Geodesy and VLBI activities at the HartRAO facility. SARAO also coordinates the African Very Long Baseline Interferometry Network (AVN) for the eight SKA partner countries in Africa, as well as South Africa’s contribution to the infrastructure and engineering planning for the Square Kilometre Array (SKA) Radio Telescope. To maximise the return on South Africa’s investment in radio astronomy, SARAO is managing programmes to create capacity in radio astronomy science and engineering research, and the technical capacity required to support site operations. In the reference documentation, SKA SA is understood to mean SARAO.

South Africa and its 8 African partner countries were jointly awarded the SKA together with Australia. The SKA will be Africa’s largest science project which will be a hub for both local and international collaboration. The SKA Organisation has been established with its headquarters at Jodrell Bank in Manchester, United Kingdom. The five key science projects that will be undertaken by the SKA include:

- Probing the Dark Ages
- Galaxy Evolution
- The Origin and Evolution of Cosmic Magnetism
- Strong Field Tests of Gravity using Pulsars and Black Holes
- The Cradle of Life.

The first phase of the SKA1-MID project includes the addition of 133 antennas to the 64-dish MeerKAT radio telescope and the second phase of the project and will include up to 2000 antennas distributed across South Africa and its eight African partner countries.

SARAO has offices based in Johannesburg and Cape Town, as well as the HartRAO facility at Hartebeesthoek and radio-quiet SKA host site in the Karoo, 90km from Carnarvon in the Northern Cape, which hosts the Square Kilometre Array mid-frequency telescopes, MeerKAT, and KAT-7 radio telescope installations, as well as a number of guest instruments, including the HERA telescope.

Further information about SARAO can be found on www.ska.ac.za and the international SKA on www.skatelescope.org.za

D1.2 SUMMARY SCOPE OF WORKS (EMPLOYER'S REQUIREMENTS)

OVERVIEW

The SKA Engineering Operation Centre (EOC) is the support base for the SKA instrument located approximately 80 km away. Due to the expansion of the current MeerKAT Project into the SKA_MID 1 project, the requirements for the EOC has increased in both the number of support functions and personnel needed to perform these functions. This necessitates the expansion of the current facility.

The EOC is an expansion of the existing SARAO workshops which are located at Klerefontein. The decision to locate the workshops and ultimately the EOC at Klerefontein is twofold; firstly, the distance from the instrument which prevents RFI interference and secondly, logistics with good access to Klerefontein made possible due to its proximity to the town of Carnarvon and the main access routes in the area.

SCOPE OF WORKS

SARAO will require the services of various specialists (Architectural including Structural) Engineers conduct the necessary inspections and provide detailed designs ready for execution including regulatory compliance and approval. SARAO requires the construction and addition of the EOC Main Building (to accommodate 150 Staff); EOC Workshop Building; EOC Vehicle Service Workshop Building; EOC Generator and Diesel Storage Building; Revamp of the EOC Old Shed/Workshop Building; Revamp of the EOC Old Farmhouse Building; Special Installations of building services (incl. Security systems, Sprinkler/Fire Suppression systems, Fibre & Data Network, Signage, Genset & Back-up, Air Conditioning); External Works (incl. Roadworks, Paving, Landscaping, Pathway Lighting, Fencing) and Bulk Services Works (incl. Electrical supply, Electrical Powerline rerouting, Water supply, Waste Water disposal, Soil drainage, Stormwater drainage, Fibre connection, relocation of existing services). For detailed scope of works, please **Refer to Annexure B [EOC Statement of Work F216-0000-007] and all other relevant annexures forming part of the Contract.**

This tender includes for the detailed design, construction/installation, testing, commissioning and verification of the EOC building fit for the intended purpose and environmental and Employer working procedure constraints. Reference concept designs for the work associated with the EOC building have been completed by the SARAO / SKAO team. A list of the applicable Reference Design Documents is included, see [RD4] to [RD9].

There are a number of specific Employer Requirements that the Contractor will need to address as listed below;

- The use of Air Conditioning systems that are compatible with the existing system used on the rest of the Employers facilities, i.e., the Data Centre (commonality of system with existing especially in relation to the service/maintenance of the system),
- Dedicated extraction facility for the Vehicle Ramp bays and Welding Stations,
- Guard Hut and Truck access upgrade. Room requirements, Toilet, WHB, Security Screen, layout, Boom layout and function, Signage, communication with office etc,
- Road upgrade between main road and the site, fit for the intended use and vehicle movement,
- Re-use and use of Employer supplied Vehicle lifts,
- Provision of heavy vehicle inspection pit,
- Gantry for heavy lifting purposes in the 'Store Room' area,
- Provision for the interface and moving of the existing RFI Container,
- Fit for purpose Fire suppression system aligned with the Electrical, Data etc systems in the building, including the Work Shop & Centre Store
- The EOC Building shall be to an 'A Grade' office standard,
- All windows to have roller blinds from a standard colour palette,
- All buildings to be Disabled Person accessible in all areas.

The Contractor will further be responsible for either validating the reference design carried out by the SARAO / SKAO team and accept it as its own incorporating the specific further Employer Requirements or, alternatively, completing an entirely new compliant and validated design compliant with the overall and detailed Employer Requirements. Either of the two above approaches will require that a formal design and approval process be carried out by the Contractor prior to the commencement of any construction work. All design work undertaken by the Contractor will strictly comply with the specified procedures, relevant requirements documents as well as the relevant Technical Specifications. **Refer to Annexure B [EOC Statement of Work F216-0000-007] for a detailed Statement of Work.**

CONTRACTOR AND LABOUR PARTICIPATION GOALS (CLPG) (Annexure A attached hereto)

Local Participation

Local: Local or local area in the context of this project means, the Northern Cape and more specifically the area in a 200km radius around the Site;

Locals: Locals has a corresponding meaning to Local, in that it refers to the inhabitants of the area designated under local.

Local EMEs, QSEs, labour or suppliers are considered local if they are resident in the surrounding towns within a radius of a 200km radius of the project. If suitable EME and QSE contractors, Labourers or suppliers cannot be found within this area, they may be procured from the wider Northern Cape area.

Contractor's Participation Plan - Infrastructure

6 Focus Areas:

1. *EME: Local Exempted Micro Enterprises*
2. *QSE: Qualifying Small Enterprises*
3. *Local Labour and/or*
4. *Local Suppliers*
5. *Mentoring/Training & Development initiatives*
6. *Corporate Social Investment*

Local Contractor - Tier 1: A South African supplier, contractor, or sub-contractor, of which the business and owner/owners are South African citizens, based and registered within one of the towns/areas outlined in the localised area/primary zone of influence for a period longer than 3 years.

Local Contractor - Tier 2: A South African supplier, contractor, or sub-contractor, of which the business and owner/owners are South African citizens, based and registered within one of the towns/areas outlined in the localised area/secondary zone of influence for a period longer than 3 years.

Local Contractor - Tier 3: A South African supplier, contractor, sub-contractor, registered and based within the Northern Cape Province.

Local Contractor - Tier 4: A South African supplier, contractor, or sub-contractor, registered and based within the Republic of South Africa

It is a requirement of this contract that the Main Contractor, be it a joint venture or a consortium or a single organization must comply with the following:

- The Main Contractor must subcontract a minimum of 20% of the final accepted contract amount. (Local Exempted Micro Enterprises (EME), Local Qualifying Small Enterprises (QSE) & Local Suppliers)
- Targeted labour will be 4% of the final accepted contract amount.
- Mentoring/Training and Development initiatives

The objectives of the Employer are to:

- Preferentially employ Locals through appropriate channels to minimise the chances of an influx of other than Local work seekers, to the extent of using 100% unskilled Labour from the local community; and
- Optimise employment and business opportunities for local black people and black women in particular

It is an express requirement that the Contractor submit a Contractor Participation Plan which complies with the above referenced Employer requirements;

The *Contractor's* Participation Plan describes how the *Contractor* plans to use local

- Exempted Micro Enterprises,
- Qualifying Small Enterprises and
- Historically Disadvantaged Individuals (HDIs) as defined in the Preferential Procurement Regulations, 2001

in Providing the Works.

(1) Exempted Micro Enterprises, Qualifying Small Enterprises and black people has the meaning defined by the law of the Republic of South Africa.

- Exempted Micro Enterprises, Qualifying Small Enterprises and black people are treated as local if they are based within a 200km radius of the Site.

If a local Exempted Micro Enterprise, Qualifying Small Enterprise is not available or suitable to provide part of the *works*, they are treated as local if they based within the Northern Cape province.

The Engineer may instruct the Contractor to correct a failure to comply with its Participation Plan. This instruction is not a change to the Employer Requirements or otherwise, with the Contractor' attention specifically drawn to the Special Conditions Sub-Clause 4.20 Progress Reports.

LOCALITY

The Klerefontein Support Base Location; Latitude: 30°58'24.28"S; Longitude: 21°59'43.21"E is located in the Northern Cape Province, Figure 1 below. The Contractor is responsible to allow for relevant weather or adverse weather based on the 10-year average occurrence of such weather experienced in the month it is experienced based on the public available data for the site or surrounding area.

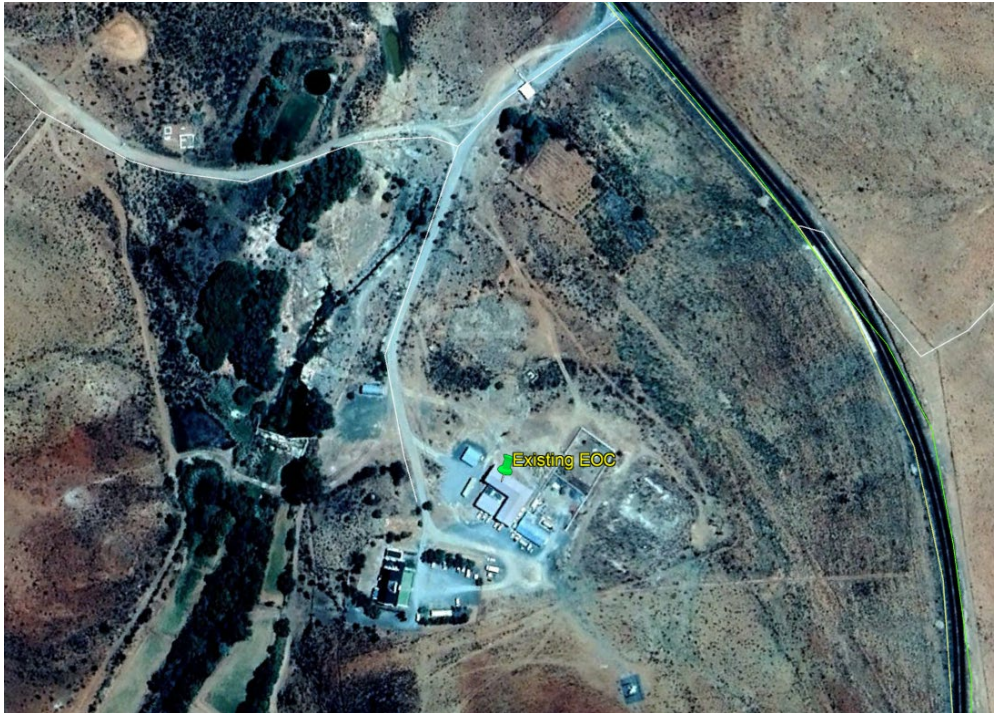


Figure 1: Existing EOC Building on the Klerefontein Support Base

D1.2.1 DESIGN AND CONSTRUCTION MANAGEMENT PROCESS (456 DAYS)

SARAO will follow a System Engineering (SE) process to realise the design, construction, test & verification and handover the works. Based on the design requirements specification and supporting documentation issued by SARAO (refer to Annexure A, EOC Statement of Works) the Bidder is expected to prepare a detailed design for the stated scope of works including regulatory compliance and approval.

The SE process will be managed internally within SARAO, with technical input and assistance from the successful Bidder as and when required. Bidders must also note that SARAO has specific configuration management for projects. All documentation, including drawings, will be compiled on specific templates which will be issued to the successful Bidder. There will also be a specific numbering system which will be provided to the successful Bidder.

Bi-weekly design progress meetings will be held between the design team and the SARAO team via video conferencing. The Project Manager from the contractor's design team will be responsible for keeping minutes for each meeting, including Requests for Information from SARAO. The design reviews and approval meetings will be held via video conferencing or as agreed by SARAO and the winning bidder.

The progress meetings during construction will be held (venue to be confirmed). These meetings will be held bi-weekly on a Wednesday; exact dates will be confirmed at a later stage. The Bidders Project Manager will be responsible for keeping minutes for each meeting, including keeping up to date records of all Requests for Information for the project.

SARAO shall accept updates before commencement to the next stage of works.

High Level Programme for Completion

Time for Completion – Design and Build Phase (456 Calendar Days)									Defects Liability Period (365 Calendar Days)
Section 1: Detailed Design and Municipal Submission & Approvals (91 Calendar days)						Section 2: Construction/Execution (365 Calendar days)			
Contract Award (day 0)	Design Scope Review (7 Calendar days)	Preliminary Designs, On-site assessment & Review Meeting (14 Calendar days)	Detail Designs and review meetings (32 Calendar days)	SARAO Review & Approval (CDR) prior to the start of Construction/ Municipal submission (22 Calendar days)	Municipal Submission & Approval	Construction (344 Calendar days)	Testing and Verification (14 Calendar days)	Commissioning (7 Calendar days)	

Figure 2: SARAO Project Management Plan Process

Note: indicative durations shown in *italics*

D1.2.1.1 DETAILED DESIGN AND MUNICIPAL SUBMISSION/APPROVAL (91 DAYS)

- Design Scope Review, the Bidder will review all issued documentation including requirements and necessary site visits to familiarize themselves with the site and required scope of work (7 Calendar Days);
- Preliminary Designs, conduct on-site assessment including review meetings (14 Calendar days);
- Detail Designs necessary for construction (Specifications, Drawings, Details ready for execution) and design review meetings (32 Calendar days);
- The detailed design will include the submission of the following documents/drawings to SARAO one (1) week prior to the Critical Design Review (CDR) being held:
 - (i) Written Detailed Design report/s in Word and PDF format;

- (ii) Construction Working Drawings in AutoCAD format DWG, DXF and PDF Format (including cable schedules, detailed specifications, LAN schematic, interior design specification) and a detailed Bill of Quantities for construction;
 - (iii) Final Test, Verification and Commissioning plan for the related works and associated infrastructure; (Bidder will prepare a test procedure based on the detailed design)
 - (iv) Maintenance procedures;
 - (v) Final Health & Safety Analysis;
 - (vi) Final Product Assurance and Quality Management Plan for Construction;
 - (vii) Project Management Plan for Construction, Test, Verification, Commissioning and Handover;
 - (viii) Construction Schedule & Deployment strategy (including integration plan between all related work and infrastructure components);
 - (ix) Risk and Opportunity Register
- SARAO Review and Approval (CDR) prior to the start of Construction/ Municipal submission
- The CDR panel will review all documentation upon receipt. The CDR panel will through an Observation Action Register (OAR) raise questions/comments/clarifications which will be submitted to the design team within 4 weeks after receipt. The design team will present their responses to the OAR at the CDR meeting in an effort to close-out these comments. Thereafter the CDR Panel will provide an approval notification within 3 weeks on whether the detailed design can be submitted for Municipal approval and the commencement of the works.
- Municipal Submission for Approval.
- The Bidder will be responsible for submitting all required information, drawings including submission fees and complete the necessary documents for Municipal approval, on behalf of SARAO.
- The Bidders Contractor Representative and design team shall be responsible for the verification and accuracy of the proposed design in terms of the deliverables supplied to them in this contract. These deliverables will include the applicable requirements, specifications including allowable deviation parameters for these requirements approved by SARAO.

D1.2.1.2 CONSTRUCTION/EXECUTION (365 CALENDAR DAYS)

The Contractor Representative and design team will be responsible for executing the following construction administration role:

- Input into content of health, safety and environmental management plan review and approval prior to construction; quality assurance plan review and approval prior to construction;
- Review and approval of the construction programme including project float, critical path items, holding points and items identified critical for integration;
- Convening weekly face to face site coordination meetings with appointed sub-contractors to ensure proper coordination and integration;
- Report on progress on implementing contract participation goals, socio-economic and skills transfer development requirements as defined in the contract;
- Prepare payment valuation for SARAO assessment, submission and approval;
- Undertaking health, safety, environmental, quality assurance audits in conjunction with SARAO team;
- Ensuring that the required design disciplines are involved in inspections as applicable to their work during construction;
- Compiling bi-weekly construction progress reports addressing the construction programme, Health and Safety and Quality, Sub Contractors, Materials on Site, progress photo's, plant and equipment on site, benefits register, targeted procurement goals, socio-economic and skills transfer development;
- Providing cash-flow and expenditure reports on a monthly basis to SARAO;

D1.2.1.3 TEST, VERIFICATION, COMMISSIONING AND TAKE OVER (14 + 7 CALENDAR DAYS)

The Contractor Representative and design team will be responsible for executing the following during this phase:

- Participate in Physical Configuration Audit (PCA). This audit will verify the installation against the following documents: Specification, As-built installation drawings, Shop Drawings including Bill of Materials for all itemised items indicated on drawings
- Coordinate and undertake test and verification events in compliance with the test, verification and commissioning plan/ procedure defined during the detailed design phase;
- Lead all site acceptance tests that need to be undertaken while being witnessed by a SARAO representative;
- Liaise with local authorities to coordinate the required inspections and issuing of the Certificate of Occupancy and Electrical Certificate of Compliance
- Lead the commissioning/integration plan in conjunction with SARAO;
- Taking overall responsibility for coordinating the compilation of the as-built documentation in preparation for achieving an as-built baseline (ABBL):
 - (i) As-built drawings (workshop, construction, Municipal approved, other) in PDF, dwg, dxf, Visio, etc. format both in hard copy and in soft copy. The hard copy must be signed off by the Architect/ design engineer and submitted to the SARAO;
 - (ii) All test, verification and commissioning reports must be reviewed and signed by the relevant design engineer and submitted to the SARAO;
 - (iii) Coordinate and supply operations, maintenance manuals and procedures from all suppliers and sub-contractors as per SARAO defined requirements. This shall include the coordination and compilation of the final hand-over package. The final hand-over package must be submitted in hard and soft copy (PDF, word, dwg, dxf, excel, etc.).
 - (iv) Coordination of the training of operational staff for all equipment and required maintenance procedures as per SARAO requirements;
 - (v) All finishing schedules, samples, attic stock, etc.
 - (vi) All Certificates of Compliance which are signed off by the Architect/ design engineers and the contractor;
- Lessons learnt report, Contractor to provide SARAO with a lessons learnt report including but not limited to Technical, Installation, Management, Resource, Supplier, Supply, Site and facility issues.
- Contractor to manage the defect-liability period by conducting an inspection on a quarterly basis for the period and prior to final handover certificates are signed to identify defects which must be addressed by the contractor.

D1.2.2 SARAO SITE CONSTRAINTS, FACILITIES AND CONDITIONS

Available Facilities and Restrictions

The Bidder must ensure that the construction area is well maintained and regular housekeeping is done. Random audits will be conducted by SARAO representatives to ensure this is achieved.

The Bidder is advised that SARAO has adopted a strict **No alcohol and illegal narcotic or other drugs policy** on site and shall be enforced by both the Contractor and SARAO, resulting in disciplinary action/removal from site for offenders.

Please refer to the SARAO Site Conditions Report.

D1.2.3 SUPPORTING DOCUMENTS

The successful bidder must submit the following documents for Take Over to be certified on the construction phase.

The following shall be submitted to SARAO for the works (2 hard copies and 1 USB flash drive):

- Detailed designs for the above scope of work including necessary site surveys and tests
- As-built drawings for above scope of work provided in the format stated in the Particular Conditions (source files included),

- All design files in all formats (Dwg, Word, Pdf, Visio, etc.) and versions,
- Electrical Certificate of Compliance,
- Occupancy Certificate issued by the relevant authorities,
- Operating and Maintenance Manuals and procedures,
- Equipment selection including manufacturer certified information,
- Shop drawings including wiring diagrams and refrigeration/ condensate piping diagram,
- Inspection record cards/checklists,

D1.2.4 PERFORMANCE LEVELS

The SARAO requires the following levels of performance from the selected Bidder:

Performance Area	Required Level of Performance
<i>Completion – Design and Build Phase</i>	456 Calendar Days
<i>Detailed Design and Municipal Submission & Approvals</i>	91 Calendar Days
Client Requirements Review	7 Days
Preliminary Designs, On-site assessment & Review Meeting	14 Days
Construction/Execution	365 Calendar Days
Construction	344 Days
Test and Verification	14 Days
Commissioning	7 Days
Completion of Defects after notification thereof	14 Days

NOTES:

- The successful bidder must provide a full-time on-site Quality Assurance Officer (QAO) for the full duration of the contract, who's responsibility will be to check, verify and approve quality based on the agreed standards.
- The Employer will provide its own Quality Assurance Officer (who will not be full time on site) who will test and verify quality at random times, and as identified in the Programme.
- Should the quality results of the Bidder/Contractor QAO not meet/deviate from the quality standards as tested by the SARAO QAO, then all remedial work will be for the Bidder's expense.

D2: Agreements and Contract Data

Number	Heading	Pages
D2.1	Form of Offer and Acceptance	84
D2.2	Contract Data	89

D2.1 Form of Offer and Acceptance

Offer

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract in respect of the following works:

BID NO: NRF/SARAO SHAO/04/2023-24 – DESIGN, CONSTRUCTION, INSTALLATION, TESTING, COMMISSIONING AND VERIFICATION OF THE ENGINEERING OPERATIONS CENTRE (EOC), ANCILLARY BUILDINGS AND INFRASTRUCTURE SERVICES FOR SARAO AT KLEREFONTEIN, NORTHERN CAPE

The bidder, identified in the offer signature block below, has examined all the documents listed and included by reference in the tender data and addenda thereto as listed in the Schedule of Returnable, Contract Documents and all documents defining the Employer' Requirements, and by submitting this offer has accepted the conditions of tender and the Contract.

By the representative of the bidder, 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, within the Contract Period stated below.

A) THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VALUE ADDED TAX IS:

RAND (in words);

R(in figures)

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 to the tenderer before the end of the period of validity stated in the Tender Data, whereupon the Tenderer becomes the party named as the Contractor in the Conditions of Contract identified in the Contract Data.

SIGNED ON BEHALF OF/BY THE BIDDER:

	NAME	SIGNATURE	
	CAPACITY	DATE	

Name and Address of Organisation:

SIGNED BY WITNESS:

	NAME	SIGNATURE	DATE	

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 and for the contract period offered. 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 D2.1 & Part D2.2: Agreements and Contract Data (which includes this Agreement)

Part D2.3: Pricing Data

Part D1: Scope of Work (Employer Requirements)

and drawings and documents or parts thereof, which may be incorporated by reference into Parts D1 to D3 above.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto as listed in the Returnable Documents 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 Agreement. No amendments to or deviations from said documents are valid unless contained in this schedule which must be duly signed by the authorised representative(s) of both parties.

The tenderer shall within two weeks of signing this Agreement, including the Schedule of Deviations (if any), or when or just after this Agreement comes into effect, contact the employer's implementing agent (whose details are given in the Contract Data) to arrange the delivery of any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the Contract Data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this Agreement comes into effect on the date of signature of this document, including the Schedule of Deviations (if any). Unless the tenderer (now Contractor) within five 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.

SIGNED ON BEHALF OF/BY THE EMPLOYER:

	NAME		SIGNATURE
	CAPACITY		DATE

Name and Address of Organisation

SIGNED BY WITNESS:

	NAME		SIGNATURE	DATE

Schedule of Deviations

Notes:

1. 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.
2. A tenderer's covering letter shall not be included in the final contract document. Should any matter in such a letter, which constitutes a deviation as aforesaid, become the subject of agreements reached during the process of Offer and Acceptance, the outcome of such Agreement shall be recorded here.
3. Any other matter arising from the process of Offer and Acceptance either as a confirmation, clarification or change to the tender documents and which it is agreed by the Parties becomes an obligation of the Contract shall also be recorded here.
4. Any change or addition to the tender documents arising from the above Agreements and recorded here shall also be incorporated into the final draft of the Contract.

1. Subject

Details

2. Subject

Details

3. Subject

Details

4. Subject

Details

By the duly authorised representatives signing this Schedule of Deviations, the Employer and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the Returnable Documents, 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 Agreement shall have any meaning or effect in the contract between the parties arising from this Agreement.

Schedule of Deviations (continued)

SIGNED ON BEHALF OF/BY THE TENDERER *(only on award of Contract):*

	NAME		SIGNATURE
	CAPACITY		DATE

SIGNED BY WITNESS *(only on award of Contract):*

	NAME		SIGNATURE
			DATE

SIGNED ON BEHALF OF/BY THE EMPLOYER:

	NAME		SIGNATURE
	CAPACITY		DATE

SIGNED BY WITNESS:

	NAME		SIGNATURE
			DATE

CONFIRMATION OF RECEIPT

The Bidder, (now Contractor), identified in the Offer part of this Agreement hereby confirms receipt from the Employer, identified in the Acceptance part of this Agreement, of one fully completed original copy of this Agreement, including the Schedule of Deviations (if any) today:

the (day) of(month)(year)

at (place)

SIGNED ON BEHALF OF/BY THE CONTRACTOR *(only on award of Contract):*

[illegible]

SIGNED BY WITNESS (*only on award of Contract*):

[illegible]

D2.2 Contract Data

Part 1: Contract Data Provided by the Employer

CONDITIONS OF CONTRACT

The following FIDIC Conditions of Contract are applicable for this Contract:

Conditions which form part of the Conditions of Contract for Plant and Design Build for Electrical and Mechanical Plant, and for Building and Engineering Works, designed by the Contractor, Second Edition 2017 (Yellow Book) published by the International Federation of Consulting Engineers.

Copies of these General Conditions (Yellow Book) may be obtained from the South African Institution of Civil Engineering (SAICE) (tel. 011 805 5947) or Consulting Engineers South Africa (CESA) (tel. 011 463 2022).

C2.2.2 PARTICULAR CONDITIONS

Part A: References from Clauses in the General Conditions:

Sub-Clause

1.1	Definitions	
1.1.30 & 1.3(d)	Employer's Name and Address	The Employer (interchangeably, "the Client") is the National Research Foundation, represented by Project Manager of the business unit South African Radio Astronomy Observatory (SARAO)
	Email	
	Telephone number	
1.1.32	Employer's Personnel	
1.3(a)(ii)	Agreed methods of electronic transmission:	Email
1.3(d)	Contractor's name and address	
	Email	
	Telephone number	
	Contractor's Representative's name	
1.1.27	Defects Notification Period	365 Calendar Days
1.1.35	Engineer's Name and address	
1.1.76	Section 1	Detailed Design and Municipal Submission & Approvals
1.1.76	Section 2	Construction of the Works

1.1.86	Time for Completion Section 1	91 Calendar Days after the 'Commencement Date' Note: SARAO shall provide formal acceptance and approval of each Section.
1.1.86	Time for Completion Section 2	365 Calendar Days after the 'Time for Completion for Section 1' Note: SARAO shall provide formal acceptance and approval of each Section.
1.1.86	The whole of the Works	456 Calendar Days after the 'Commencement Date'
1.4	Contract shall be governed by the law of:	Republic of South Africa
1.4	Ruling Language	English
1.4	Language for communications:	English
1.8	Number of additional paper copies of Contractor's Documents	
1.9	Period for notification of errors, faults or other defects in the Employer's Requirements	14 days
2.1	Time for access to the site	On completion of the Design and Approval Stage, unless otherwise agreed in writing by SARAO.
4.2	Amount of Performance Security	Ten (10)% of the Final Accepted Contract Amount, In the currencies and proportions in which the Contract Amount is payable
4.7.2	period for notification of errors in the items of reference	7 days
6.5	Normal working Hours	08:00 to 16:00 Monday to Saturday, excluding Public Holidays (unless otherwise agreed in writing by SARAO)
8.2	Time for Completion Section 1	91 Calendar Days after the 'Commencement Date' Note: SARAO shall provide formal acceptance and approval of each Section.
8.2	Time for Completion Section 2	365 Calendar Days after the 'Time for Completion for Section 1' Note: SARAO shall provide formal acceptance and approval of each Section.
8.2	Time for Completion of the works	456 Calendar Days after the 'Commencement Date'
8.8	Delay Damages payable for each day of delay for Section 1	<ul style="list-style-type: none"> • 0.1% per day of 30% of the total of the Contract Amount at the Take Over Date, for the first 10 days of delay. • 0.2% per day of 30% of the total of the Contract Amount at the Take Over Date, for the 11th to the 20th day of delay, • 0.4% per day of 30% of the total of the Contract Amount at the Take Over Date, for the 21st to the 25th day of delay,

		<ul style="list-style-type: none"> 1% per day of 30% of the total of the Contract Amount at the Take Over Date, for the 26th to the 30th day of delay,
8.8	Maximum amount of Delay Damages for Section 1	Delay Damages is limited to 3% of the total of the Contract Amount in the currencies and proportions in which the Contract Amount is payable
8.8	Delay Damages payable for each day of delay for Section 2 & The Whole of the Works	<ul style="list-style-type: none"> 0.1% per day of the total of the Contract Amount at the Take Over Date, for the first 10 days of delay. 0.2% per day of the total of the Contract Amount at the Take Over Date, for the 11th to the 20th day of delay, 0.4% per day of the total of the Contract Amount at the Take Over Date, for the 21st to the 25th day of delay, 1% per day of the total of the Contract Amount at the Take Over Date, for the 26th to the 30th day of delay,
8.8	Maximum amount of Delay Damages for Section 2 & The Whole of the Works	<ul style="list-style-type: none"> Delay Damages per Clause 8.8 Is limited to 10% of the total of the Contract Amount at the Take Over Date in the currencies and proportions in which the Contract Amount is payable
13.7	FIXED PRICE Tender	The prices will be fixed and firm for the whole duration of the Contract, with the provisions of Clause 13.7 not applicable to this Contract
14.1	The Contract Price	The Contract Price is the sum total of the lump sum prices for each of the activities on the Priced Activity Schedule unless later changed in accordance with this contract.
14.1	The Contract Price Measurement and Valuation	The work will be paid in accordance with work done, which shall be the sum of each group of completed activities in the Priced Activity Schedule, and each completed activity which is not in a group, with a completed activity being one which is without a notified Defect, and of which the correction thereof will delay following work' The Lumpsum Activities on the Priced Activity Schedule will be aligned with the Contractor's Clause 8.3 Programme and its activities.
14.3	Application for Payment	Each Application for payment shall be made on the 23rd day of each Calendar Month
14.3 (iii)	Percentage of retention	5% of completed works reducing to 2.5% upon issue of the Section 2 and whole of the Works Taking-Over Certificate and the balance released upon issue of the Performance Certificate.
14.3 (iii)	Limit of Retention Money	5% of the Accepted Contract Amount
14.6.2	Minimum amount of Interim Payment Certificates	R50,000.00
14.7(b)	Period of payment	The longer of 30 days after the issue of the Interim Payment Certificate, or 30 days after the receipt of a valid Tax Invoice with the amounts reflected in the issued IPC.
14.15	Currency/Currencies of Payment	South African Rands as named in the Section of the Form of Offer and Acceptance called "Offer"
19.1	Permitted deductible limits:	As per the Contractor' insurance policies

	<ul style="list-style-type: none"> • Insurance required for the Works • Insurance required for Goods • Insurance required for liability for breach of professional duty • Insurance required against liability for fitness for purpose (if any is required) • Insurance required for injury to persons and damage to property • Insurance required for injury to employees • Other insurances required by Laws and by local practice: • Force Majeure 	
19.2.3	Professional Indemnity Insurance	R20,000,000.00 per occurrence or in the aggregate
21.1	Time for appointment of DAAB	30 days after the notification of a Dispute
21.1	List of proposed members of the DAAB	The Association of Arbitrators of South Africa shall nominate and appoint the DAAB member after a dispute has been notified, following the failure by the Parties to agree on a DAAB member within 30 days after a dispute has been notified in connection with this contract

Part B: Additional Clauses:

1 General Provisions

1.1 Definitions

Deleted and replace 1.1.9 with:

“Contract” means the Form of Offer and Acceptance, Contract Data, these Conditions, the Employer’s Requirements, the Specifications (Statement of Work), the Drawings, the Schedules, and the further documents (if any) which are listed in the Form of Offer and Acceptance, and further includes drawings and documents or parts thereof which any of the aforesaid documents incorporate by reference.

Deleted and replace 1.1.10 with:

“Contract Agreement” means the Form of Offer and Acceptance.

Deleted and replace 1.1.50 with:

“Letter of Acceptance” means the Form of Acceptance as contained in part C1.1 of the contract documents.”

Deleted and replace 1.1.51 with:

“Letter of Tender” means the Form of Offer as contained in part C1.1 of the contract document.”

Deleted and replace 1.1.72 with:

“Schedules” means the document(s) completed by the Contractor and submitted with his tender offer, as included in the Contract. Such document(s) may include Price Schedule, data lists and schedules of rates and/or prices”, and will include Tender Returnable B6 :Key Personnel.

Deleted and replace 1.1.17 with:

“Contractor’s Proposal” means the information which the Contractor submitted with the Form of Offer and Acceptance, as included in the Contract. Such information shall include the proposal, structured as indicated in the Tender Data and information listed in the Returnable Schedules and may also include the Contractor’s preliminary design.

Deleted and replace 1.1.83 with:

“Tender” means that section of the Form of Offer and all other documents which the Contractor submitted as the proposal and Returnable Documents, as included in the Contract.

Add the following to 1.1.83:

"The word 'Tender' is synonymous with 'Bid', and the words 'Letter of Tender' with 'Letter of Bid', and the words 'Appendix to Tender' with 'Appendix to Bid', and the words 'Tender Documents' with 'Bidding Documents'."

Deleted and replace 1.1.1.9 with:

"Letter of Tender" means the completed section C1.2.2 "Contract Data" and the Form of Offer, including the Contractors Pricing Document

Add Clause 1.1.91" **Defect**"

'Defect' means • a part of the works which is not in accordance with the Scope or a part of the works designed by the Contractor which is not in accordance with the applicable law or the Contractor's design which the Engineer has accepted

Add Clause 1.1.92" **Priced Activity Schedule**"

'Priced Activity Schedule' means • The Priced Activity Schedule at Part D3.2 of the Pricing Data.

Add Clause 1.1.93 **"Priced Activity Schedule Information"**

"Priced Activity Information" Information in the Priced Activity Schedule is not Scope or Site Information

Sub-Clause 1.5 Priority of Documents

Deleted and replace with:

The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence:

- a) The Form of Offer and Acceptance;
- b) The Letter of Tender within the Contract Data;
- c) The Particular Conditions Part A - Contract Data;
- d) The Particular Conditions Part B – Special Conditions
- e) These General Conditions;
- f) The Employer's requirements;
- g) Standard and Project Specifications; and
- h) The Schedules.
- i) Any other documents forming part of the Contract

If any ambiguity or discrepancy is found in the documents, the Engineer shall issue any necessary clarification or instruction, with the express undertaking by the Parties that the more onerous requirement is deemed to have been allowed for by the Contractor in the specific context of the ambiguity.

Sub-Clause 1.6 Contract Agreement

Delete the last paragraph:

"The cost of stamp duties and similar charges imposed by law in connection with entry into the Contract Agreement shall be borne by the Employer."

Sub-Clause 1.12 Confidential Details

Add the following after the first paragraph:

"Any disclosure of information that form part of the contract shall not be disclosed without prior consent of the other Party."

CLAUSE 2 THE EMPLOYER

Sub-Clause 2.4 Employer's Financial Arrangements

Delete this sub-clause as it is not applicable. It is also not applicable anywhere where it is referenced in the conditions of contract.

CLAUSE 3 THE ENGINEER

Sub-Clause 3.6 Replacement of the Engineer

Change the notification period to:

"15 days"

CLAUSE 4 THE CONTRACTOR

Sub-Clause 4.4 Subcontractors

Add the following at the end of this Sub-Clause:

"The Contractor shall ensure that the requirements imposed on the Contractor by Sub-Clause 1.12 [Confidential Details] apply equally to each Subcontractor."

Sub-Clause 4.16 Transport of Goods

Add the following at the end of this Sub-Clause:

"The Contractor shall request the Engineer's permission to deliver any item of Goods to the Site. No Goods shall be delivered without this permission, which shall not relieve the Contractor from any of its obligations."

Sub-Clause 4.17 Contractor's Equipment

Add the following at the end of this Sub-Clause:

"The Contractor shall provide all necessary storage facilities on Site."

Sub-Clause 4.18 Protection of the Environment

Add the following at the end of this Sub-Clause:

"The contractor must comply with the heritage requirements that will be provided by the Employer in the Heritage Conservation Management Plan"

Sub-Clause 4.20 Progress Reports

Add the following at the end of this Sub-Clause:

- i) "Contractor and Labour participation goals ('CLPG'), sub-contractors and suppliers, including their percentage participation in the Contract."
- ii) The Contractor shall submit a monthly report indicating the targets that have been met, those that have not been met and the reasons thereof. The Engineer will determine whether the reasons for the variations are valid and justifiable. The Engineer shall after making the determination inform the contractor of such determination and the implications thereof.

Failure to reach the CLPG shall render the Contractor liable for the withholding under Clause 14.6.2 of an amount equal to 10% of the Clause 14.3 Statement amount in the applicable month of the failure.

Sub-Clause 4.21 Security of the Site

Add the following to the Sub-Clause:

The Contractor shall in connection with the Works provide and maintain at his own cost all lights, guards, fencing, watching and other appropriate security measures when and where necessary or required by the Employer or by a competent statutory or other authority for the protection and security of the Works and the Contractor's Equipment, or for the safety and convenience of the public and for the protection of life and property.

CLAUSE 5 DESIGN

Sub-Clause 5.1 General Design Obligations

Add the following to the Sub-Clause at the end of the fourth paragraph:

"The Engineer and / or Employer will review the Contractors Documents at the end of the Preliminary Design, the Detail Design Stages and during the Contract as and when required by the Engineer, prior to submission for approval by the Local Municipality."

Sub-Clause 5.6 As-Built Documents

Add the following at the end of the Sub-Clause:

"The As-Built drawings shall be provided in DWG, DXF and PDF formats."

CLAUSE 6 STAFF AND LABOUR

Sub-Clause 6.5 Working Hours

Add the following after the last paragraph:

The days of rest are, Sundays and all gazetted South African public holidays.

Sub-Clause 6.7 Health and Safety of Personnel

Add the following after the second paragraph:

The Employer and the Contractor shall enter into an agreement to complete the work required for the construction of the Works in terms of the provisions of Section 37(2) of the South African Occupational Health and Safety Act (Act No. 85 of 1993) and the Construction Regulations (2014) as amended and the Construction Regulations.

The Contractor shall provide proof to the Employer, within 14 days from the Commencement Date, that he has paid all contributions required in terms of the Compensation for Occupational Injuries and Diseases Act (No 130 of 1993) and the Construction Regulations (2014).

CLAUSE 8 COMMENCEMENT, DELAYS and SUSPENSION

Sub-Clause 8.3 Programme

Add the following:

('l') "The Contractor' Planned Completion.

('m') Provision for Time Risk Allowances

('n') Provision for float

CLAUSE 10 EMPLOYER'S TAKING OVER

Sub-Clause 10.2 Taking Over Parts of the Works

Delete this Sub-Clause and Replace with:

"The Employer will not take over any parts of the works. Taking over of the fully completed works as defined in the scope of works.

CLAUSE 14 CONTRACT PRICE AND PAYMENT

Sub-Clause 14.3 Application for Interim Payment

14.3(i) Insert the following after the words 'estimated contract value of the Works executed' in the first sentence;

*'which shall be the sum of each group of completed activities in the **Activity Pricing Schedule**, and each completed activity which is not in a group, with a completed activity being one which is without a notified Defect, and of which the correction thereof will delay following work'*

Sub-Clause 14.6 Issue of Interim Payment Certificates

Insert the following at the end of the last sentence of the first paragraph:

',' and shall include any amounts due to or from the Contractor in accordance with a decision by the DAB made under Sub-Clause 20.4 [Obtaining Dispute Adjudication Board's Decision]'

Sub-Clause 14.7 Payment

Insert the following before 'and':

'including any amounts due in accordance with a decision by the DAB which have been included in the Interim Payment Certificate'

CLAUSE 15 TERMINATION BY EMPLOYER

Sub-Clause 15.2 Termination for Contractor' Default

15.2.1 Insert the following clause (i);

'The Contractor having reached the limit of Delay Damages per clause 8.8 for either Section 1 of Section 2 or the whole of the works

CLAUSE 19 INSURANCE

19.1 Insurances to be affected by the Contractor

19.1.1. The Contractor, at their own cost, effect and maintain the insurances listed below in the joint names of the NRF and the contractor. The NRF as the Client requires proof of the following insurances.

19.1.1.1 Contract Works insurance

The minimum amount of cover for insurance against loss of or damage to the works Plant, Materials and Equipment. The recommended insurance sum is The Full Value of the Contract. A coupon policy for Special Risks insurance issued by SASRIA must also be provided.

19.1.1.2 Public Liability Insurance

The minimum amount of cover for insurance against loss of or damage to property (except the works, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the Contractor) arising from or in connection with the Contractor Providing the Works. The limit of indemnity for Public Liability Insurance must be R3 million.

19.1.2. Special Insurances

In addition to the insurances required above, the following must be in place in the Contractors' name:

19.1.2.1. Personal Accident

The minimum amount of cover for insurance against death of or bodily injury to employees of the Contractor arising out of and in the course of their employment in connection with the contract for any one event is as prescribed by the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 and the Contractor's common law liability for people falling outside the scope of the Act.

19.1.2.2. Professional Indemnity

The minimum amount of cover in respect of any allegation made against a bidder for professional negligence in the practice of their profession. The limit of Indemnity for Professional Indemnity Insurance must be R10 million, and to be maintained for a period for five years after the Performance Certificate has been issued.

19.1 Insurances to be affected by the Employer
None

C1.2.2 Part 2: Data Provided by the Contractor

Clause 1.2.1: Delivery of Notices

The name of the Contractor is

The address of the Contractor is

Physical Address	Postal Address
Telephone:	
Email:	

SIGNED ON BEHALF OF/BY THE BIDDER:

	NAME	SIGNATURE	
	CAPACITY	DATE	

D3: Pricing Data and Pricing Schedule

Number	Heading	Pages
D3.1	Pricing Instructions	99
D3.2	Priced Activity Schedule	101
D3.3	Schedule of Rates – People Cost	104
D3.4	Schedule of Rates – Contractor Equipment Cost	105

D3.1 Pricing Instructions

1. The conditions of contract

1.1. How the contract prices work and assesses it for progress payments

1.1.1. The following clauses in this contract states:

- a) Additional Clauses: Add Clause 1.1.92" Priced Activity Schedule"

'Priced Activity Schedule' means • The Priced Activity Schedule at Part D3.2 of the Pricing Data

- b) Particular Condition 14.1 The Contract Price:

The Contract Price is the sum total of the lump sum prices for each of the activities on the Priced Activity Schedule unless later changed in accordance with this contract.

- c) Particular Condition 14.1 The Contract Price measurement and valuation:

The work will be paid in accordance with work done, which shall be the sum of each group of completed activities in the Priced Activity Schedule, and each completed activity which is not in a group, with a completed activity being one which is without a notified Defect, and of which the correction thereof will delay following work' The Lumpsum Activities on the Priced Activity Schedule will be aligned with the Contractor's Clause 8.3 Programme and its activities.

- d) Additional Clauses: Sub-Clause 14.3 Application for Interim Payment

14.3(i) Insert the following after the words 'estimated contract value of the Works executed' in the first sentence;

'which shall be the sum of each group of completed activities in the Priced Activity Schedule, and each completed activity which is not in a group, with a completed activity being one which is without a notified Defect, and of which the correction thereof will delay following work'

- 1.2. This confirms that the contract 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.

2. Function of the Priced Activity Schedule

2.1.1. Additional Clauses 1.1.93 states: "Information in the Priced Activity Schedule is not Scope or Site Information". This confirms that instructions to do work or how it is to be done are not included in the Priced Activity Schedule but in the Scope. This is further confirmed by Clause 4.1 which states, "The Contractor shall execute the Works in accordance with the Contract". Hence the Contractor does not Provide the Works in accordance with the Priced Activity Schedule. The Priced Activity Schedule is only a pricing document.

3. Preparing the Priced Activity Schedule

3.1.1. The tendering contractor prepares the Priced Activity Schedule. The Employer may have instructed the tendering contractor to include particular activities headings which he has specified and requires the Contractor to identify them in his Priced Activity Schedule.

3.1.2. Generally, it is the Contractor who prepares the Activity Schedule as part of his tender by breaking down the work described within the Scope into suitable activities which can be well defined, priced as a lump sum and shown on the programme.

3.1.3. The Contract Price is defined in clause 14.1 as the lump sum for each activity in the activity schedule and Clause 14.1 Contract Price measurement and valuation (the amount due to the contractor) is defined in clause 14.1 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.

3.1.4. As the Contractor has an obligation to correct Defects the lump sum Prices must also include for the correction of Defects.

3.1.5. 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.

3.1.6. 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 Contract Price is as a result of a Claim. See Clause 20.1.

- 3.1.7. Hence the Prices tendered by the Contractor in the Priced Activity Schedule are inclusive of everything necessary and incidental to Providing the Works in accordance with the Employers Requirements, as it was at the time of tender, as well as correct any Defects not caused by an Employer's risk.
- 3.1.8. Only a Fixed and Firm price will be accepted. Non-fixed and firm prices (including prices subject to rates of exchange variations) will not be considered.
- 3.1.9. Price quotes is fully inclusive of all costs including delivery to the specified NRF site; Value Added Tax (VAT) and other taxes (this includes all disbursement and travel costs) and Consumer Price Adjustment (CPA) per annum.
- 3.1.10. A full breakdown of costs, including the detailed pricing schedules (Annexure A), contingencies, professional fees, travel and disbursements must be in format as set out below and, where applicable, in supporting schedules and provided.
- 3.1.11. The Contractor is required to provide a completed detailed Priced Activity Schedule based on the Programme activities in its Tender Returnable B14 Programme.
- 3.1.12. The Conditions of Contract, the Contract Data and the Scope of Work shall be read in conjunction with the Activity Pricing Schedule.
- 3.1.13. Bid price in South African currency, foreign exchange risk is for the account of the bidder.
- 3.1.14. It will be assumed that prices included in the Pricing Schedules are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date of bids (refer to www.stanza.org.za or www.iso.org for information on standards).
- 3.1.15. All costs associated with compliance to the Occupational Health and Safety Act, the National Environmental Management Act and the Water Act must be included in the bidding price where applicable.

4. A Priced Activity Schedule could have the format as indicated hereunder:

Contractors Priced Activity Schedule

Category Title (Parent)	Group Name (Child)	Description of the group	Activity Reference	Activity Name	Activity Description	Original Price (Excluding VAT)
Category	Group	Group Description	Ref	Activity Name	Description	Cost (ZAR)
<i>Main works</i>	<i>North Section</i>	<i>North Site Area</i>	<i>A1</i>	<i>Description Example</i>	<i>Description Example</i>	R xxx.xx

Category Title (Parent)	Group Name (Child)	Description of the group	Activity Reference	Activity Name	Activity Description	Original Price (Excluding VAT)
Category	Group	Group Description	Ref	Activity Name	Description	Cost (ZAR)

D3.2 Priced Activity Schedule

NOTE: ALL SUMMARY COSTS CARRIED FROM THE DETAILED PRICED ACTIVITY SCHEDULE. THE COMPLETED DETAILED PRICED ACTIVITY SCHEDULE SHALL FORM PART OF THIS TENDER SUBMISSION. THE OFFER WILL BE BASED ON THE PROVIDED THE STATEMENT OF WORK, CONSOLIDATED REQUIREMENTS SPECIFICATION, CONCEPT DESIGN DRAWINGS INCLUDING ALL NECESSARY SAMPLE LIST, FINISHING SCHEDULES AND ASSUMPTION MADE BY THE TENDERER

Item	Description	Bid Amount
1	KEY PERSON & OVERHEAD COST (Applicable to the whole of the Works)	R
1.1	EOC MAIN BUILDING	R
1.2	EOC WORKSHOP BUILDING	R
1.3	EOC VEHICLE SERVICE WORKSHOP BUILDING	R
1.4	EOC GENERATOR & DIESEL STORAGE BUILDING	R
1.5	EOC OLD SHED / WORKSHOP BUILDING	R
1.6	EOC OLD FARMHOUSE BUILDING	R
1.7	EMPLOYER FURTHER REQUIREMENTS PER D1.2	R
2	SPECIAL INSTALLATIONS (HVAC, Electrical & Security)	R
3	EXTERNAL WORKS	R
4	BULK SERVICES (Electrical, Water & Sewer)	R
5	FIXED & LOOSE FURNITURE (Sample list to be provided)	R
6	DESIGN PHASE	R
6.1	PROFESSIONAL FEES FOR DETAIL DESIGNS	R
6.2	PROFESSIONAL FEES FOR VERIFICATION/MONITORING/QUALITY CONTROL DURING CONSTRUCTION	R
	Sub-Total (Excluding VAT)	R
	Value Added Tax (15 %)	R
	TOTAL (Including VAT) CARRIED TO FORM D2.1 FORM OF OFFER AND ACCEPTANCE	R

SUMMARY FOR BID OPENING PURPOSES

Detailed Priced Activity Schedule

The Contractor to include his detailed Priced Activity Schedule, which is linked to his preliminary programme at B14

Contractors Priced Activity Schedule

Category Title (Parent)	Group Name (Child)	Description of the group	Activity Reference	Activity Name	Activity Description	Original Price (Excluding VAT)
Category	Group	Group Description	Ref	Activity Name	Description	Cost (ZAR)
Main works	North Section	North Site Area	A1	Description Example	Description Example	R xxx.xx

NAME OF BIDDER:

OFFERED TOTAL: R.....
(Amount brought forward from
The Form of Offer)*

* Should any discrepancy occur between this figure and that stated in the Form of Offer and Acceptance, the latter shall apply.

SIGNED BY/ON BEHALF OF BIDDER

	NAME	SIGNATURE	DATE
	COMPANY STAMP		

D3.3 Schedule of Rates – People Cost

Detailed hourly People Rates to be used for any Claims under Clause 20.1

D3.4 Schedule of Rates – Contractor Equipment Cost

Detailed hourly/daily Contractor Equipment Rates to be used for any Claims under Clause 20.1

Declaration

(In respect of completeness of Tender)

I/we, the undersigned, do hereby declare that these are the properly priced Bill of Quantities forming Part D2 of this Contract Document in consecutive order upon which my/our tender for the **BID NO: NRF/SARAO SHAO/04/2023-23 – DESIGN, CONSTRUCTION AND HANDOVER OF THE ENGINEERING OPERATION CENTRE (EOC), ANCILLARY BUILDINGS AND INFRASTRUCTURE SERVICES FOR SARAO AT KLEREFONTEIN, NORTHERN CAPE**, has been based.

SIGNED BY/ON BEHALF OF BIDDER

	NAME		SIGNATURE	
				DATE

ANNEXURES

Annexure No.	Annexure Title
Annexure A:	Local Participation Guidelines [SKA-TEL-SKO-0001066]
Annexure B:	EOC Statement of Works [F2160-0000-007 EOC Statement of Work]
Annexure C:	EOC Consolidated Requirements Specification [F2160-0000-000]
Annexure D:	P21105_REPORTS_02. CONCEPT DESIGN REPORT_REV01 [P21105/R8439]
Annexure E:	MID EOC CoDR Design Document Issue 01 [F2160-0000-008 SKA1]
Annexure F:	MID EOC CoDR Development Plan Issue 01 [F2160-0000-005 SKA1]
Annexure G:	SARAO Health and Safety Specification
Annexure H:	MID EOC Compliance Matrix Issue 01 [F2160-0000-002 SKA1]
Annexure I:	EOC PBS sheets 1 to 8
Annexure J:	EnvironmentalConditionsSKA1SiteSA [301-000000-009-02]
Annexure L:	SITE PLAN - KLEREFONTEIN SUPPORT BASE - REV_g [P21105-CC-03-ARC-099]
Annexure M:	GROUND FLOOR - KLEREFONTEIN ENGINEERING OPERATIONS CENTRE (EOC) - REV_g [P21105-CC-03-ARC-100]
Annexure N:	GROUND FLOOR LEVEL - KLEREFONTEIN WORKSHOP - REV_g [P21105-CC-03-ARC-101]
Annexure O:	FIRST FLOOR LEVEL - KLEREFONTEIN ENGINEERING OPERATIONS CENTRE (EOC) - REV_g.pdf [P21105-CC-03-ARC-102]
Annexure P:	GROUND FLOOR - KLEREFONTEIN OLD SHED - REV_g [P21105-CC-03-ARC-104]
Annexure Q:	GROUND FLOOR - KLEREFONTEIN OLD FARMHOUSE - REV_g [P21105-CC-03-ARC-105]
Annexure R:	REV a - ELECTRICAL SINGLE DIAGRAM-SLD [P21105-CC-03-ELE-001]
Annexure S01:	As Built: New Klerefontein Support Base Workshops - General Notes [210-CIV-0000]
Annexure S02:	As Built: New Klerefontein Support Base Workshops - Existing Services [210-CIV-0001]
Annexure S03:	As Built: New Klerefontein Support Base Workshops - Bulk Earthworks [210-CIV-0002]
Annexure S04:	As Built: New Klerefontein Support Base Workshops - Bulk Earthworks Sections and Layerwork [210-CIV-0003]
Annexure S05:	As Built: New Klerefontein Support Base Workshops - Bulk Earthworks Sections and Fills Layerwork [210-CIV-0004]
Annexure S06:	As Built: New Klerefontein Support Base Workshops - Slope Protection [210-CIV-0005]
Annexure S07:	As Built: New Klerefontein Support Base Workshops - Parking Layout [210-CIV-0100]
Annexure S08:	As Built: New Klerefontein Support Base Workshops - Bulk Sewer Layout [210-CIV-0200]
Annexure S09:	As Built: New Klerefontein Support Base Workshops - Septic Tank Details [210-CIV-0201]
Annexure S10:	As Built: New Klerefontein Support Base Workshops - Sewer Manhole Details [210-CIV-0202]
Annexure S11:	As Built: New Klerefontein Support Base Workshops - Sewer Connection Details [210-CIV-0203]
Annexure S12:	As Built: New Klerefontein Support Base Workshops - Drop Inlet Manhole Details [210-CIV-0204]
Annexure S13:	As Built: New Klerefontein Support Base Workshops - Pipe Bedding Details [210-CIV-0205]
Annexure S14:	As Built: New Klerefontein Support Base Workshops - Bulk Water Supply [210-CIV-0300]
Annexure S15:	As Built: New Klerefontein Support Base Workshops - Pipe Thrust Block Details [210-CIV-0301]
Annexure S16:	As Built: New Klerefontein Support Base Workshops - Stormwater Drainage Layout [210-CIV-0400]
Annexure S17:	As Built: New Klerefontein Support Base Workshops - Stormwater Typical Details [210-CIV-0401]
Annexure S18:	As Built: New Klerefontein Support Base Workshops - Sleeves Layout [210-CIV-0500]

Annexure S19:	As Built: New Klerefontein Support Base Workshops - Sleeves MH Typical Detail [210-CIV-0501]
Annexure S20:	As Built: New Klerefontein Support Base - External Electrical Supply [210-ELE-RETIC-0001]
Annexure S21:	As Built: New Klerefontein Support Base Workshops - Small Power Layout [216-ELE-1000]
Annexure S22:	As Built: New Klerefontein Support Base Workshops - Lighting Layout [216-ELE-1001]
Annexure S23:	As Built: New Klerefontein Support Base Workshops - Telephone and Data Layout [216-ELE-1002]
Annexure S24:	As Built: New Klerefontein Support Base Workshops - Access Control Layout [216-ELE-1004]
Annexure S25:	As Built: New Klerefontein Support Base Workshops - DB-KO Schematic Single Line Diagram [216-ELE-2000]
Annexure S26:	As Built: New Klerefontein Support Base Workshops - DB-KW Schematic Single Line Diagram [216-ELE-2001]
Annexure S27:	As Built: New Klerefontein Support Base Workshops - Fire Safety Layout [216-FIRE-1000]
Annexure S28:	As Built: Klerefontein Support Base Workshops - Interior Details 04 [216-STR-900]
Annexure S29:	As Built: Klerefontein Support Base Workshops - Tiling and Screen Wall Details [216-ARC-4007_Rev19]
Annexure S30:	As Built: Klerefontein Support Base Workshops - Door & Window Schedule [216-ARC-5000_Rev19]
Annexure S31:	As Built: Klerefontein Support Base Workshops - Sanitary Schedule [216-ARC-5003_Rev19]
Annexure S32:	As Built: Klerefontein Support Base Workshops - Ironmongery Schedule [216-ARC-5005_Rev19, 216-ARC-5006_Rev19]
Annexure S33:	As Built: New Klerefontein Support Base Workshops - Chemical Store Layout [216-SIGNAGE-1000]
Annexure S34:	As Built: New Klerefontein Support Base Workshops - General Notes [216-STR-900]
Annexure S35:	As Built: New Klerefontein - Foundation Layout & Sections [216-STR-1000]
Annexure S36:	As Built: New Klerefontein Details [216-STR-1002]
Annexure S37:	As Built: New Klerefontein Support Base Workshops - Wet Services Layout [216-WS-1000]
Annexure T:	Klerefontein Support Base: Master Development Plan Layout
Annexure U:	F2100-0001-004_SARAO KSB Electrical Master Development Plan
Annexure V01:	SKA1_MID Infrastructure and Power Element (Level 2) Requirements Specification - [AD2] SKA-TEL-NSA-0000532
Annexure V02:	RFI Threshold Level Calculations Spreadsheet - [AD1] K0000-2001V1-01 R
Annexure V03:	Electromagnetic Environmental Effects Requirements for Systems - [AD1] MIL-STD-024C
Annexure V08:	Adherence to the SANS 61000-5-2 Standard on EMC - [AD1] SSA8010-0000-001
Annexure V09:	SKAO Engineering Operations Centre Building User Requirements (Part 1) - [AD1] SKA-TEL-SKO-0001014 Rev 2
Annexure V10:	SKAO Engineering Operations Centre Building User Requirements (Part 2) - [AD1] SKA-TEL-SKO-0001014 Rev 2
Annexure V11:	Establishment and Delivery Plan, L. Ball et al. - [AD1] SKA-TEL-SKO-0001722 SKAO
Annexure V12:	SKA Integrated Logistic Support Plan (ILSP), C. Taljaard, A. van Zyl - [AD1] SKA-TEL-SKO-0000104
Annexure V13:	SKAO Support Concept, C. Taljaard - [AD1] SKA-TEL-SKO-0000103
Annexure V14:	SKA EMI/EMC Standards, Related Procedures & Guidelines - [AD1] SKA-TEL-SKO-0000202
Annexure V15:	SKA1_MID Engineering Operations Centre Requirements Specification - [AD1] F2160-0000-000
Annexure W01:	SKA EMI/EMC Standards and Procedures - [RD1] SKA-TEL-SKO-0000202