

Annexure 1.4:

Returnable Documents

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1 GENERAL

1.1 Purpose of the Document

- 1.1.1 The purpose of this document is to provide the list of Minimum Returnable Documents which form part of the minimum Requirements of the Passenger Rail Agency of South Africa ("PRASA") for the planning, design, supply, construction, installation, testing, commissioning and maintenance of a new and expanded fully integrated, functional, complete and future-proofed National Global System for Mobile Communications-Railway ("GSM-R") Redundancy Network in PRASA's Gauteng ("GP"), KwaZulu-Natal and Western Cape ("WC") service regions ("the Project") that the Bidder shall meet and deliver at the Bidder's cost therefore within the Bid Price.

1.2 Executive Overview

- 1.2.1 The information and requirements specified in this document is additional to, and does not replace, all other information requested, from the Bidder as part of the Bid, throughout the RFP.

2 RETURNABLE DOCUMENTS

2.1 General

2.1.1 Project description and understanding:

- a) The Bidder shall submit a detailed description and understanding of the Project as understood by the Bidder.

2.1.2 Statement of Compliance:

- a) The Bidder shall submit a clause-by-clause/item-by-item unambiguous statement of full compliance to all requirements and specifications provided throughout the RFP.
- b) The Bidder shall submit a clause-by-clause/item-by-item unambiguous statement of compliance with all relevant standards, specifications, regulations and procedures in the MTR.

2.1.3 References:

- a) The Bidder shall submit detailed case studies for similar projects implemented in the last 5 years in suburban areas together with associated verifiable client references and contact details.
- b) The Bidder will provide a list of GSM-R projects or railway projects with a GSM-R scope completed in the last 15 years, with client contact information for each project (Only contactable projects will be considered).
 - The Bidder will provide completion/handover certificates for each project as proof of completion.
 - In the case of a joint venture or consortium, each member of the joint venture/consortium will provide an individual list.
- c) The Bidder will provide a list of GSM-R projects or railway projects completed in the last 15 years, with client contact information for each project (Only contactable projects will be considered), which meets ALL the following criteria:
 - I. GSM-R scope tender value higher than or equal to R500 million.
 - II. Less than 12 months total delay compared to tender project baseline.
 - III. Less than 20% Variance at Completion based on the Earned Value Model utilised on each Project
 - The tender value of the project (in ZAR - calculated at an exchange rate of GBP1=ZAR19 / EUR1=ZAR17 / USD1=ZAR15) will be provided for verification.

- In the case of a joint venture or consortium, each member of the joint venture/consortium will provide an individual list and the total number of projects, from all members of the joint venture/consortium, will be used for scoring.

2.2 Works Delivery Method Statements

2.2.1 The Bidder shall provide comprehensive method statements on how all aspects of the Planning, Design, Supply, Construction, Installation, Testing, Commissioning and Maintenance of the Works shall be delivered by the Bidder, in strict compliance and adherence with the RFP. The method statements to be provided include, but are not limited to:

- a) General.
- b) Management and Implementation.
- c) Project Programme and Time Management.
- d) Interface Management.
- e) Key Personnel Requirements.
- f) Project Office Co-location and Resourcing.
- g) Document Management.
- h) Reporting.
- i) Project Meetings.
- j) Occupational Health and Safety Management.
- k) Environmental and Heritage Management
- l) Quality Management.
- m) Temporary Works, Site(s) Services and Construction Constraints.
- n) Reporting of Faults and Failures.
- o) Occupations.
- p) Operational Readiness.
- q) Training and Technology Transfer.
- r) Inspections, Interim Tests, Tests on Completion, Commissioning, Completion, Taking Over and Defects After Taking Over.
- s) Decommissioning.
- t) Spares, Maintenance and Life Cycle Cost ("LCC") Replacement Plan and Financial Model.
- u) Project Exit Strategy

- v) Any other method statements as required to clearly demonstrated how the Works shall be delivered.

2.3 General Technical Requirements

2.3.1 Systems descriptions:

- a) The Bidder shall submit a detailed description of all systems and sub-systems that the Bidder shall provide as part of the Works.
- b) Such description shall include a description of all systems, sub-systems, Plant and Materials that shall be delivered as part of the Works.
- c) The systems descriptions shall, where applicable, for each System, sub-System and Plant and Materials describe the diagnostic features of the System, sub-System and Plant and Materials together with the data that shall be transmitted to the Maintenance server.

2.3.2 Theft and Vandalism method statement:

- a) The Bidder shall submit a detailed method statement on all measures, techniques and Installation rules the Bidder shall implement toward addressing the Theft and Vandalism concerns and requirements stated throughout the RFP to suitably and adequately protect and deliver the Works.
- b) •The Bidder will provide a concept anti-theft and vandalism design for the sample site provided, based on the solution offered by the Bidder, clearly indicating which elements will be protected:
 - In line with the minimum requirements specified in the RFP; and/or
 - In line with minimum requirements specified in the RFP and through additional measures proposed by the Bidder (Clearly indicating which is additional from the RFP).

2.3.3 Environmental and Heritage:

- a) In conjunction with other Environmental and Heritage method statements requirements specified throughout the RFP, the Bidder shall:
 - Indicate applicable certificates
 - Provide evidence that systems, sub-systems and Plant and Materials shall work in the PRASA environment.

2.4 GSM-R System

2.4.1 References:

- a) The Bidder shall submit detailed case studies for the offered GSM-R, subsystems and Plant and Materials being in operation during the last 5 years in suburban projects and situated preferably in subtropical coastal areas together with associated verifiable client references and contact details.

2.4.2 Maintenance and Life Cycle Cost (“LCC”) Replacement Plan and Financial Model:

- a) The Bidder shall submit the estimated detailed, all-inclusive; Planned and Preventative Maintenance and LCC Replacement Plan and Financial Model for the whole of the Works.
- b) The Planned and Preventative Maintenance and LCC Replacement Plan and Financial Model shall adhere OEM requirements and specifications, proven local best practice and proven international best practice.
- c) The Financial Model shall be based on a useable life of 20 years for all Plant and Materials further transparently showing all detailed calculations and assumptions.
- d) The Financial Model shall include Equipment price increases based on the Consumer Price Index (“CPI”) estimations for the next 20 years, also taking into consideration any foreign exchange factors.
- e) The calculations shall further be based on the detailed theoretical RAMS calculations done by the Bidder.
- f) The strategy shall include resource requirements for maintaining the Works. Resource requirements shall show number of technical workers, Engineering technicians and technologists needed to carry out effective; planned Maintenance, preventative Maintenance and Life Cycle replacements whilst minimising disruption to PRASA operations.

2.4.3 Method statement:

- a) The Bidder shall submit a high-level implementation, Testing and Commissioning method statement.
- b) The method statement shall include details regarding Installation methods, FAT, SAT and final Testing and Commissioning, indicating which activities shall be conducted under Occupation-between-trains conditions and which shall require total Occupation.

2.4.4 Equipment Life Cycle:

- a) The Bidder shall submit the following information for each System, sub-System and Plant and Material type that the Bidder shall implement:
 - The date at which the product was released

- The anticipated date at which the product shall be withdrawn from sale, but support shall continue to be supplied.
- The anticipated date that product support shall be withdrawn, i.e. Spare shall no longer be available and technical support is no longer provided.

2.4.5 Certificates:

- a) The Bidder shall submit all necessary Equipment certification, showing compliance with the standards in the GTR and MTR, with detailed relevant documentation (Safety and Performance standards, etc.).

2.4.6 RAMS calculations:

- a) The Bidder shall submit detailed theoretical RAMS calculations for the Telecommunication systems and sub-systems.
- b) The Bidder shall provide the predicted mean time to failure and the mean time to repair of the Equipment.
- c) Where insufficient historical dates are available, the Bidder shall state the methods used to determine the reliability performance.

2.4.7 Power consumption calculations:

- a) The Bidder shall submit detailed theoretical power consumption calculations for:
 - The Telecoms CTCC systems
 - The Telecoms systems as it shall be implemented at Rosburgh station

2.4.8 Maintenance and Life Cycle Cost (“LCC”) Replacement Plan and Financial Model:

- a) The Bidder shall submit the estimated detailed, all-inclusive; Planned and Preventative Maintenance and LCC Replacement Plan and Financial Model for the whole of the Works.
- b) The Planned and Preventative Maintenance and LCC Replacement Plan and Financial Model shall adhere OEM requirements and specifications, proven local best practice and proven international best practice.
- c) The Financial Model shall be based on a useable life of 20 years for all Plant and Materials further transparently showing all detailed calculations and assumptions.
- d) The Financial Model shall include Equipment price increases based on the Consumer Price Index (“CPI”) estimations for the next 20 years, also taking into consideration any foreign exchange factors.
- e) The calculations shall further be based on the detailed theoretical RAMS calculations done by the Bidder.

- f) The strategy shall include resource requirements for maintaining the Works. Resource requirements shall show number of technical workers, Engineering technicians and technologists needed to carry out effective; planned Maintenance, preventative Maintenance and Life Cycle replacements whilst minimising disruption to PRASA operations.