

Request for Proposal

For

**Supply & Installation of Telecom
Towers**

For

MTML Mauritius



Requested by:

Mahanagar Telephone (Mauritius) Ltd.

(A subsidiary of MTNL-A Govt. of India Enterprise)

**MTML Square, 63, Cyber City, Ebene
Mauritius**

Phone(230)-52943333, FAX(230)-52940606, Email: mtml@mtmltd.net

TENDER DOCUMENT

Ref: Global Tender Notice No. MTML/RFP/Tower/2022/1 dated 02-05-2022 for supply and installation of telecom (mobile BTS) towers/ poles in MTML Mauritius on turn key basis.

Please find enclosed the following bid documents to be used for submission of the bid.

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1.	Notice Inviting Tender (NIT)	I	3
2.	Instructions to bidders	II	5
3.	General (commercial) conditions of contract	III	19
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10.	Letter of Authorisation for attending Bid Opening	Annex-III	68
11.	AMC Terms & Conditions	Annex-IV	69

Your offer complete in all respects as per enclosed documents must reach latest by **14.00 Hrs. of 03-06-2022** at the following address:

Chief Technical Officer
Mahanagar Telephone (Mauritius) Limited,
'MTML Tower', 63, Cyber City, Ebene
Mauritius

The "Instructions to Bidder" and "General (Commercial) conditions" are applicable for this Tender. However, the clauses mentioned in the "Special Conditions of Contract" & "Technical Specifications" will supersede the General (Commercial) Conditions.

Tender bids shall be opened at **15.00 Hrs.on the same day**. The representatives of the bidders who wish to be present during tender opening may kindly make it convenient to attend the same.

Thanking you,

Yours faithfully,
CEO MTML

SECTION-1

GLOBAL NOTICE INVITING TENDER

Tender Enquiry No. & Date	: MTML/RFP/Tower/2022/1 Dated 02.05.2022
Sale of tender document	: 02.05.2022
Last date for seeking clarifications	: Up to 17:00 Hrs on 13.05.2022
Last date for issuing clarifications	: 16.05.2022
Last Date of Submission	: Up to 14:00 Hrs on 03.06.2022
Date of opening	: At 15:00 Hrs on 03.06.2022

-- All timings given above are Mauritius Local time.

1. MTML intends to call for open tender for supply and installation of a total of 25 mobile BTS towers/ poles of different size, design and structures. The scope includes the following type of structures

- (i) Ground Based Palm Tree Type Tower**
- (ii) Ground Based Lattice Type Tower**
- (iii) Roof Top Tower (RTT)– Lattice structure**
- (iv) Roof Top Pole (RTP)**
- (v) Roof Top Pole (RTP) with Camouflaging structure**

The interested parties may bid for either one type of structure or multiple or all types along with all accessory materials required for deployment including site survey, structural suitability check, obtaining various permits like BLUP (Building & Land Use Permit), CEB clearance etc, as detailed in this RFP.

2. ELIGIBILITY REQUIREMENT FOR VENDORS:

Please see Clause 3 of section II of RFP.

3. SCOPE:

- (i)** The scope of this tender includes design, supply of material and installation of various types of towers e.g. Ground Based Tower – Lattice Structure (GBT), Ground Based Palm Tree Type Towers (Palm Tree), Roof Top Tower – Lattice Structure (RTT), Roof Top Poles – Single Camouflage Pole and Normal 3-4 pole structure etc. Installation of CEB Meter boxes and earthing system is also part of the scope of this RFP.

- (ii) As an additional item, the scope also includes the site survey work in the areas identified by MTML for tower installation work based on the RF coverage and capacity requirements, for finding a suitable site, keeping in view the structural suitability and guidelines issued by municipalities/ district councils and other government bodies. The bidder of this item will be responsible for doing the necessary formalities for getting ICTA permit, BLUP, CEB clearance after doing necessary consultation in the region. Coordination with municipalities and other government bodies for getting the permit will be the full responsibility of the bidder.

For details regarding equipment, technical requirements & special conditions/requirements please refer to RFP.

The bid security of US \$ 10,000 (US Dollar Ten thousand only) shall be submitted in the form of a Bank Guarantee, Demand draft or Wire Transfer as per details given in Section II Clause 11.

Intending Bidders may download the document from MTML's Web site **www.chili.mu/services** or collect the same from **CFO MTML, Ebene, Mauritius** on all working days till the last date of submission of bid mentioned above on payment of **USD 500 (USD Five Hundred only) or MUR 21,000 as tender/bid fee**, which is non-refundable. Outstation bidders may transfer USD 500 in the following account and submit proof of payment alongwith the bid document:

Name of beneficiary: Mahanagar Telephone (Mauritius) Ltd
Bank: SBI (Mauritius) Ltd, Bank Account: USD 156002723102.
Swift code: INILMUMUXXX
Corresponding Bank: Standard Chartered Bank, New York,
Account No: 3582-08867-0001 of SBI (Mauritius), Swift Code: SCBLUS33

Bidders who have downloaded the tender document shall also have to deposit the payment of USD 500 as above and attach the wire transfer copy along with their bids. In case of failure to submit the same, the bid will not be accepted.

**Sd /-
CEO MTML**

SECTION - II

INSTRUCTIONS TO BIDDERS

1. Introduction

Mahanagar Telephone (Mauritius) Ltd. (hereinafter referred to as “Purchaser” or “MTML”) invites offers for implementation on turn-key basis to carry out survey, design, engineering, supply, installation, testing and commissioning of the goods, materials, services and equipment (such goods, material, services and equipment hereinafter referred to as ‘Goods’) as described in Schedule of Requirements, Section-V, at Mauritius and making over the system to the Purchaser. Subsequent warranty support and AMC (Annual Maintenance Contract) after warranty period shall also come within the scope of this RFP.

2. Definitions

- a) “The Purchaser” means the Mahanagar Telephone (Mauritius) Ltd (MTML).
- b) “The Vendor” means the individual or company who / which participates in this RFP and submits his / its offer.
- c) “The Proposal” or “The Offer” means the offer submitted by the Vendor in response to the RFP.
- d) “The Goods” mean all the equipment, machinery and other materials which the Vendor is required to supply/provide to the Purchaser under the contract for commissioning/proper operation of the system and also includes any spares for the equipment.
- e) “Letter of Intent (LOI)” means letter indicating the intention of the Purchaser to place Purchase Order on the successful Vendor.
- f) “The Purchase Order” means the order placed by the Purchaser on the Contractor duly signed by the Purchaser and includes all attachments and appendices thereto and all documents incorporated by reference therein. The purchase order shall be deemed to be the contract, which is defined below.
- g) “Contract” means the agreement between the Purchaser and the successful Vendor
- h) “The Contractor” means the successful Vendor with whom Purchaser has entered in to contract for the execution of the works including supply of all documents to which reference may be made in order to ascertain the rights and obligations of the parties and shall include the Instructions to Participants, General Conditions of Contract, Special Conditions of Contract, Addenda, Supplementary Agreement(s) (if any) as part of the Contract.
- i) “The Contract Price” means the price payable to the Contractor under the purchase order for the complete fulfillment and proper performance of its contractual obligations to the satisfaction of the Purchaser.
- j) “Contract Date” means the date on which the Contract comes into effect.
- k) “Certificate of Acceptance” means the certificate issued by the Purchaser to the Contractor upon completion of the acceptance tests of the Equipment/Works.
- l) “Progress Report” means the reports prepared by the Contractor containing details of the progress and implementation of the project as required by the Purchaser.
- m) “Site” means the place(s) other than the Contractor’s premises, to which the Equipment(s) and System(s) are to be delivered and installed.

- n) "Variation Orders" means a written agreement entered between the parties varying the items mentioned in the Schedule of Prices.
- o) "Works" means the jobs undertaken by the Contractor in order to complete the tasks falling within the scope of the Contract.
- p) "Commissioning" means successful completion of acceptance testing procedures as may be prescribed by the Purchaser and three months of successful trial operation i.e. stabilization period, thereafter.
- q) "Testing" is a process of testing the equipments & services as per the Requirements as spelt out in various sections of the RFP.

3. Vendors Eligibility Criteria

- (I)** The Vendor should be registered as a Civil contractor for doing infrastructure works OR for supplying/ manufacturing the tendered item(s) OR a registered Company, duly authorised by the original manufacturer of the tendered item(s), to submit the offer on their behalf and having Memorandum of Understanding (MOU) with the original manufacturer for supply, installation, commissioning, warranty and Annual maintenance Contract(AMC) of the tendered item(s) & equipment during the contract period. The registration certificate, proof of manufacturing the requested items(s) OR registration to manufacture telecom equipment in the country of manufacturing, authorisation by the manufacturer to submit the offer against this RFP and MOU shall form part of the Offer.

II Work experience.

- (a) The bidder or its parent company or the OEM must possess experience in supply, installation and commissioning of at least 20 Mobile BTS towers for atleast 2 mobile network operators in Mauritius or abroad. The bidder must have the experience of atleast 2 years as constructor and civil engineering works and must have experience in design and installation of mobile tower or similar structure.
- (b) The bidder must have enough human and financial resources to simultaneously work on atleast 3 tower sites. The required plant & machinery and workforce must be available to start the work immediately on award of the PO. The bidder must submit qualification and experience of his managers & superwisers proposed to be associated with this project.
- (c) Required Technical and Supervisory personnel should already be employed by the bidder, which he proposes to utilise for the works. All structural designs are to be certified for approval by structural engineers who are duly Registered Professional Engineers of Mauritius or Chartered Engineers of United Kingdom or equivalent.

- III** The bidder shall submit references in the form of a certificate with company seal from the network operator or the main contract of the network operator for civil works, signed by the senior official of the company (including name, designation, telephone number, fax numbers and e-mail id of the signatory and that of the company) of all such existing networks in operation. References shall be considered valid provided the networks

mentioned thereof are existing and are in operation for the period as mentioned above. References shall also mention performance of network equipment supplied and installed.

4. Cost of Participation in RFP

The Vendor shall bear all costs associated with the preparation and submission of the offer against this RFP. The Purchaser, will in no case, be responsible or liable for these costs, regardless of the conduct or outcome of the RFP process.

5. RFP Documents

5.1 The goods and services required, RFP procedure and contract terms are prescribed in the RFP Document. The RFP document includes the following:

S.No.	Title	Section
1.	Notice Inviting Tender (NIT)	I
2.	Instructions to bidders	II
3.	General (commercial) conditions of contract	III
4. (a)	Special Conditions of Contract	IV-A
4. (b)	Detailed Technical Requirements	IV-B
5.	Schedule of Requirements	V
6.	Delivery Schedule	VI
7.	Price Schedule	VII
8.	Bid Security Form	Annex-I
9.	Performance Security Guarantee Bond	Annex-II
10.	Letter of Authorisation for attending Bid Opening	Annex-III
11.	AMC Terms & Conditions	Annex-IV

5.2 The Vendor is expected to examine all instructions, forms, terms and specifications in the RFP Documents. Failure to furnish all information required as per the RFP Documents or submission of offers, which are not substantially responsive to the RFP Documents in every respect, may result in rejection of the offer.

In respect of interpretation/clarification of each and every clause of this RFP and in respect of any matter relating to this RFP, the decision of CEO, MTML will be final.

6 Clarifications to RFP

6.1 A prospective Vendor, requiring any clarification of the RFP may request the Purchaser in writing at the Purchaser's mailing address indicated in the Clause 6.2 below. The Purchaser may, but shall not be obliged to, respond in writing to any request for clarification of the RFP, which is received within the time frame as specified in Section-I of the RFP. Copies of the queries (without identifying the source) and clarifications by the Purchaser may be sent to all the prospective Vendors who have purchased the RFP documents and will be uploaded on MTML's website www.mtmltd.net.

- 6.2 Address for communication: Chief Executive Officer, Mahanagar Telephone (Mauritius) Ltd, 63, Cyber City, Ebene, Mauritius. **Fax No. (230) -52940606, email mtml@mtmltd.net** .

7 Amendment to RFP Document

- 7.1 At any time, prior to the scheduled date for submission of offers, the Purchaser may for any reason, whether at its own initiative or in response to a clarification requested by a prospective Vendors, modify/alter any terms & conditions of the RFP by amendments as long as they are uniformly applied to all.
- 7.2 The amendments shall be notified by email to all prospective Vendors who had purchased the RFP and these amendments will be binding on them. For this reason, prospective Vendors purchasing the RFP shall provide the Purchaser with their contact details and email addresses, failing which the Purchaser shall be under no obligation to notify them of any amendment under this clause.
- 7.3 In order to give prospective Vendors reasonable time to take the amendments into account while preparing their offers or for any other reason, the Purchaser may, at its discretion, extend the last date / time for the submission of offers suitably.
- 7.4 Vendors who have downloaded the tender forms from the web-site are required to take the amendments issued from time to time from the Purchaser's web site www.chili.mu/services.

8 Preparation of the Offers

8.1 Language of Offer

The offer prepared by the Vendor and all correspondence and documents relating to the offer exchanged by the Vendor and the Purchaser shall be written in English language, provided that any printed literature furnished by the Vendor may be written in another language but it is to be accompanied by an English translation of its pertinent passage(s) duly signed and verified as true English translation. The responsibility for the correctness of the translation will be solely and completely on the Vendor and the Purchaser shall not be responsible for any loss/likely loss due to error in translation whatsoever. In such cases, for the purpose of interpretation of the offer, the English translation shall only govern.

8.2 Documents comprising the Offer

The offer prepared by the Vendor shall comprise the following documents:

- a) Authorization to the person signing the offer.

- b) Documents supporting Vendors eligibility to submit offers as per the eligibility conditions given in Clause 3 above along with the Certificate of Incorporation and VAT / GST / TAX registration.
- c) Receipt for USD 10,000 by Wire Transfer / Demand Draft / Bid Security in format as per Annexure.
- d) Receipt for tender/bid fees of USD 500 or MUR 21,000.
- e) A Clause by Clause compliance of the goods/services offered with the various terms & conditions spelt out in the sections II, III, IV, V and VI of this RFP, along with a separate annexure containing summary of clauses/specifications not being complied giving detailed reasons.

“Compliant” shall be written against the clauses where the offer meets the RFP requirements fully. “Non Compliant” shall be written against the clauses where the offer does not meet the RFP requirements fully. In case of unclear/ ambiguous statements of compliance for any specified requirement e.g. “Noted & Understood”, “Noted” etc. shall be taken as “Non Compliant”. Mere “Compliant” shall also not be sufficient. Reference to the enclosed documents showing compliances must be given. An offer without clause-by clause compliance shall not be considered.

- f) A copy of price schedule with all relevant tables incorporating all items without prices. This is to be enclosed with techno-commercial offer and shall constitute bill of material.
- g) The experience of the Bidder can include the experience of its parent company or holding company of the parent company. Multiple bids, if any, received from same Bidder under this arrangement shall be rejected.
- h) A certificate that all the pages (printed, typed, literature etc.) in the original copy of the offer document have been signed and sequentially numbered, indicating total number of pages in the offer.
- i) Documentary evidence of the goods and services in conformity to the RFP document may be in the form of literature, drawings and data. It may comprise of:
 - A detailed description of the goods with essential technical and performance characteristics and sketches, drawings and circuit diagram, physical and technical parameters for all equipments offered including constituent of set of maintenance spares.
 - Detailed project implementation schedule covering all the activities of the work and Bar/Pert Chart.
 - The Vendor shall note that the standards for the workmanship, material and equipment and reference to the brand names or catalogue number, designated by the Purchaser in its Technical specifications are intended to be descriptive only and not restrictive.

9. Currencies

The prices shall be quoted in US Dollar (**USD**) **only** as provided in Price Schedule (Section-VII).

10. Prices

- 10.1 The prices quoted shall be CIP at Mauritius and shall be in USD for all items as per the schedule of requirement (Section-V) and other items, if any, strictly in appropriate price schedule tables attached to these documents as per Section VII. The Purchaser shall be responsible for paying all the duties/ levies on equipment & software within Mauritius and the duties/ levies outside Mauritius shall be responsibility of the Vendor.
- 10.2 Vendors shall quote itemized basic price for each item of equipment. These may be consolidated as indicated in Price Schedule in Section VII for each parts separately. Separate annexure giving the detailed quantity and break-up of prices shall be provided in support of the consolidated prices arrived in each table of Price Schedule. The formats are strictly to be complied with while quoting.
- 10.3 The prices quoted by the Vendor shall remain fixed during the entire period of contract and shall not be subject to variation on any account. An offer submitted with an adjustable price quotation will be treated as non-responsive and rejected.
- 10.4 The unit prices quoted by the Vendor shall be in sufficient detail to enable the Purchaser to arrive at prices of equipment/system as offered.
- 10.5 **'DISCOUNT', if any, offered by the Vendor shall not be considered unless they are specifically indicated in the price schedule, for each part separately. Vendor desiring to offer discount, should therefore, quote clearly net price taking all such factors like Discount, free supply, etc. into account.**
- 10.6 The quoted price shall be all-inclusive and payment of income tax/any other taxes by recipient of payments under this clause shall not be the responsibility of the Purchaser either at the time of supply of equipment or at any time thereafter.
- 10.7 It shall be mandatory for the Vendors to undertake the work of Annual maintenance contract (AMC) as detailed in Annexure, if MTML so desires.

11. Bid Security

- 11.1 The bid security is required to protect the Purchaser against the risk of Vendor's conduct, which would warrant the forfeiture of the security.
- 11.2 The bid security of US \$ 10,000 (US Dollar Ten thousand only) or equivalent in MUR, valid for 180 days shall be submitted in one of the following forms:

- a) A Bank Guarantee as per enclosed Proforma at Annexure-I issued by a First Class Commercial Bank in Mauritius in favour of the Purchaser.
 - b) Demand draft in favour of Mahanagar Telephone (Mauritius) Ltd payable at Mauritius.
 - c) Wire Transfer of the full amount of bid security in MTML's account mentioned on page 4 above before the last date of bid submission
 - d) Cash deposit in MUR with DM(Fin) MTML, a receipt of which needs to be enclosed with the bid document
- 11.3 In case the security is submitted in the form of a Demand draft, the Purchaser will be entitled to encash the same. In the case of return of the bid security, the Vendor shall not be entitled to claim any interests thereon from the Purchaser.
- 11.4 An offer without bid security and bid fee of requisite amount & validity shall be summarily rejected**
- 11.5 The bid security of the unsuccessful Vendor will be returned as promptly as possible and in any event not later than 45 days after the placement of firm Purchase Order by the Purchaser or on expiry of the offer validity whichever is earlier.
- 11.6 The successful Vendor's bid security will be discharged upon the Vendor's acceptance of the Letter of Intent (LOI) and furnishing the performance security as per Clause 4 of Section III.
- 11.7 The bid security may be forfeited:
- a) If a Vendor withdraws his offer during the period of validity of the offer or
 - b) In the case of a successful Vendor, if the Vendor fails to furnish performance security in accordance with clause 28.

12. Period of Validity of Offers

- 12.1 Offer shall remain valid for 180 days after the date of opening prescribed by the Purchaser. The Purchaser shall reject offers valid for a shorter period, as non-responsive.
- 12.2 In exceptional circumstances, the Purchaser may request the Vendor's consent for an extension to the period of offer validity. The requests and responses thereto shall be made in writing. The bid security provided under clause 11 shall also be suitably extended. A Vendor may refuse the request without forfeiting his bid security. A Vendor accepting the request and granting the extension, will not be permitted to modify his offer.

13. Format and Signing of Offers

- 13.1 The Vendor shall prepare Two copies of his offer, clearly marking one as 'Original Offer' and the other as copy. In the event of any discrepancy between them the 'Original Offer' shall govern/prevail.
- 13.2 The original and copy of the Offer shall be typed or printed, numbered sequentially and shall be signed with date, by the Vendor or a person or persons duly authorized to bind the Vendor to the contract. The letter of authorization shall be indicated by written power-of-attorney accompanying the offer. The offer submitted shall be sealed properly.
- 13.3 The offer shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the Vendor in which case such corrections shall be initialed by the person or persons signing the offer with date.

14. Procedure for Submission of Offers

- 14.1 Offers along with documents as indicated in clause 8.2 shall be submitted in the following manner in separately sealed envelopes duly super scribed as below: -
Part 'A' - Techno-Commercial Offer
Part "B" - Financial Offer
- 14.2 Part "A" shall contain, in one envelope, one original and a copy of Techno Commercial Offer complete with all technical and commercial details along with unpriced bill of material i.e. copy of the price schedule without mention of prices.
- The original bid security of requisite value or proof of its payment and also the proof of depositing tender/bid fee must be enclosed in a separate cover which will be opened first.**
- 14.3 Part "B" (Financial Offer) shall contain in, in one envelope, one original and a copy super scribing on the sealed envelope "Financial Offer".
- 14.4 At least original Copy of 'Techno-Commercial Offer' and 'Financial Offer' should be signed by the Vendor on each page.

15 Sealing and Markings of Offers

- 15.1 The Vendor shall seal the original and each copy of the offer in an envelope duly marking the envelopes as 'Original' and 'copy'. Unsealed offers will not be accepted. Unsealed offers will neither be opened nor evaluated. The seal should be the official seal of Vendors.
- 15.2 The envelopes shall
(a) be addressed and sent at the following address:

Chief Technical Officer
Mahanagar Telephone (Mauritius) Ltd.,
63,Cyber City, Ebene

Mauritius

(b) bear Name of works "Supply and installation of towers for MTML", the RFP No. and the **words "DO NOT OPEN BEFORE** (date and time of opening of offers as indicated in RFP)"

15.3 In addition to above, the envelopes shall indicate the name and address of the Vendor to enable the offer to be returned unopened in case it is received 'Late'.

15.4 Outstation offers shall either be sent by registered post or delivered in person. The responsibility for ensuring that outstation offers are delivered in time would vest with the Vendor.

16. Deadline for Submission of Offers

16.1 Offers must be received by the Purchaser at the address specified under clause 15.2 and not later than **the date & time mentioned in section I.**

17. Late Offers

Any offer received by the Purchaser after the prescribed time for submission of the offer as per Clause 16, shall be rejected and returned unopened to the Vendor.

18. Modifications and Withdrawal of Offers

18.1 The Vendor may modify or withdraw his offer after submission provided that written notice of the modification or withdrawal is received by the Purchaser prior to the deadline prescribed for submission of offers.

18.2 The Vendor's modification or withdrawal notice shall be prepared, sealed, marked and dispatched as required in the case of offer submission in accordance with the provision of clause 13. A withdrawal notice may also be sent by FAX but shall be followed by a signed confirmation copy, post marked **not later than the deadline for submission of offers.**

18.3 No offer shall be modified subsequent to the deadline for submission of offers.

19. Opening of Offers/ Proposals

19.1 The Purchaser will open Techno-Commercial Offers, in the presence of authorised representatives of Vendors who choose to attend, at the date and time specified in Notice Inviting Proposals. The Vendors' representatives, who are present, shall sign an attendance register. Authority letter to this effect shall be submitted by the Vendor/representative before they are allowed to attend the opening. Techno Commercial offers shall be opened first and Financial offers of only technically and commercially eligible Vendors shall be opened subsequently. In the event that the

specified date of opening of offers is declared a holiday by the Purchaser, offer opening shall take place on the next working day, time and venue remaining unaltered. Similar would be in the case of last date for submission of the offers.

- 19.2 Subject to the requirements contained in Clause 19.1 above, a maximum of two representatives for any Vendor shall be authorized and permitted to attend the opening.

20. Clarifications from Vendors

To assist in the examination, evaluation and comparison of offers, the Purchaser may, at its discretion, ask the Vendor for any clarification(s) of its offer. The request for clarification and the response shall be in writing and no change in the price substance of the offer shall be sought, offered or permitted.

21. Evaluation of Techno-Commercial Offers

- 21.1 During the technical-commercial evaluation, Purchaser at its discretion may call upon the Vendors to give presentation on their offer, to explain their capability to undertake the project and to respond to any question from Purchaser.
- 21.2 The Purchaser will determine the substantial responsiveness of each offer to the RFP conditions. A substantially responsive offer is one, which conforms to all the terms and conditions of RFP Documents without material deviation. The Purchaser shall, at its entire discretion, determine what constitutes a “material deviation” and its decision thereon shall be final and conclusive.
- 21.3 An offer determined as not substantially responsive will be rejected by the Purchaser and may not subsequently be made responsive by the Vendor by correction of the non-conformity.**
- 21.4 Further examination of only such offers determined to be substantially responsive will be taken up and Techno-Commercial clarifications/discussions, if considered necessary, obtained/held with such Vendors to determine the acceptability of the offers.

22. Evaluation of Financial Offers

- 22.1 The financial offers of the technically and commercially acceptable Vendors will be opened in the presence of Vendor’s authorized representative(s) who choose to attend on the date and time of opening of financial offers. The financial bids of those bidders who are not technically acceptable, would be returned to them unopened.
- 22.2 Evaluation of the financial offers will be done and ranking of the Vendors shall be based on the following criteria:**

The total Net Present Value (NPV) of CIF prices of the equipment & services quoted by the Vendor shall be taken for evaluation ***for each of the given tower structure types separately.***

Any discount which has been indicated by the Vendor in their price quotes and calculations will be suitably factored in by the Purchaser while arriving at the final price.

Cost of AMC for a period of three years calculated to present value at a discount rate of 12% per annum for evaluation.

Purchaser has the right to negotiate the prices with the overall lowest quote Bidder of each part on total quoted package price on the prices quoted. The negotiations would be on total package price and/ or itemized prices. The Purchaser reserves the right to counter offer price(s) against price(s) quoted by any bidder.

Note: Arithmetic errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and total price will be corrected. If there is a discrepancy between the total offer amount and the sum of total prices, the sum of total prices shall prevail and the total offer amount will be corrected. If anywhere, prices are quoted in figures and words and if there were discrepancy between the two, words would prevail. Vendors shall accordingly be bound by the terms of their respective offers corrected in accordance with this paragraph.

23. Contacting the Purchaser

23.1 Subject to Clause 18, no Vendor shall try to influence the Purchaser on any matter relating to its offer, from the time of the offer opening till the time the contract is awarded.

23.2 **Any effort by a Vendor to influence the Purchaser in the Offer Evaluation, comparison or contract award decisions may result in the rejection of his offer.**

23.3 **The Purchaser shall in its entire discretion decide on what constitutes “influence” under this Clause and its decision thereon shall be final and conclusive.**

24. Award of Contract

The Purchaser may consider award of contract for commercial supplies on that Vendor whose offer has been found technically, commercially and financially acceptable.

25. Award Criterion

Subject to Clause 27 below, the Purchaser may award the contract to successful Vendor for each structure type separately whose offer has been determined to be substantially responsive, technically and commercially acceptable and has been

determined as the lowest evaluated price offer (L1 bidder) provided further that Vendor is determined by the Purchaser to be fully qualified to perform the contract satisfactorily. **The purchaser reserves the right to divide the work in not more than 2 bidders for each structure type, if they agree to match the negotiated price of the lowest bidder (L1). If purchaser decides to distribute the project/work in 2 bidders, it would be divided in the ratio 60:40 of the total value for each structure type.** Purchaser, on its own discretion, may award different components of the project to different vendors, if it is in the better interest of the purchaser.

26. Purchaser's Right to Vary quantities

- 26.1 The Purchaser reserves the right to increase or decrease the quantity of goods and services specified in the schedule of requirements, without any change in the unit prices and other terms and conditions as applicable *at the time of award of contract*, at its entire discretion.
- 26.2 In exceptional situation where the requirement is of an emergent nature and it is necessary to ensure continued supplies from the existing Contractors, the Purchaser reserves the right to place repeat order of the quantities of goods and services contained in the running contract within a period of twelve months from the date of purchase order, at the same rate or a rate negotiated (downwardly) with the existing Contractors considering the reasonability of rates based on prevailing market conditions.

27. Purchaser's Right to Accept any Offer and to Reject any or all Offers:

- 27.1 The Purchaser reserves the right to accept or reject any offer, and to annul the RFP process and reject all offers, at any time prior to award of contract without assigning any reasons whatsoever and without thereby incurring any liability to the affected Vendor(s) on the grounds of the Purchaser's action.
- 27.2 Purchaser reserves the right to disqualify such Vendor(s) who have a poor track record of not meeting the contractual obligations, against earlier contracts either entered into directly with the Purchaser, its subsidiary/principals/joint venture companies or acquired as a result of the vendor(s) acquiring interest in other companies.

28. Notification of Award (Issue Of Letter Of Intent)

- 28.1 Prior to the expiry of the period of offer validity, the Purchaser will notify the successful Vendor in writing through a Letter of Intent (LoI) by Registered letter or FAX which will be confirmed in writing by Registered letter.
- 28.2 Upon the successful Vendor furnishing the Performance Bank Guarantee pursuant to Clause 4 of General Conditions of Contract (Section-III) and unconditional/unequivocal acceptance of the LOI, the Purchase Order shall be issued.
- 28.3 The issue of purchase order on the receipt of unconditional acceptance of LOI along with the performance security shall constitute the award of the contract on the Vendor.

28.4 The Purchaser will promptly discharge the bid security to each unsuccessful Vendor.

29. Signing Of Contract

29.1 The issue of Purchase order shall constitute the award of contract on the Vendor.

29.2 Upon the Vendor furnishing the Performance Bank Guarantee, the Purchaser shall discharge its bid security.

30. Annulment of Letter of Intent:

Failure of the successful Vendor to comply with the requirement of clause 28.2 above shall constitute sufficient ground for the annulment of the acceptance of the offer and forfeiture of the bid security in which event the Purchaser may make the offer *to any other Vendor* at its discretion or call for new RFP. The annulment may be effected by the Purchaser without recourse to a Court of law and the Vendor shall not be entitled to make any claim whatsoever against the Purchaser on an annulment properly effected under this Clause.

31. Quality Assurance (QA) Requirements

The Contractor shall have a Quality Management System supported and evidenced by the following:

- A Quality Policy.
- A management representative with authority and responsibility for fulfilling QA requirements and for interfacing with Purchaser in matters of Quality.
- Procedure for controlling design/production engineering, material, choice of components/Vendors manufacturing and packaging process for supplying quality products.
- System of Inwards Goods Inspection.
- System to calibrate and maintain required measuring and test equipment.
- System for tracing the cause for non-conformance(traceability) and segregating products which do not conform to specifications.
- Configuration management and change-control mechanism.
- A Quality Plan for the product.
- Periodical internal quality audits.

32. Outright Rejection of the Non-Compliant Offers

While all the conditions specified in the RFP Documents are critical and are to be complied with, special attention of Vendor is invited to the following clauses of the RFP document, **non-compliance of any one of which shall result in outright rejection of the offer.**

- (i) Clause 15.1 of Section II-The offers will be recorded/returned unopened, if covers are not properly sealed
- (ii) Clause 11 Section II-The offers will be rejected at opening stage if bid security is not submitted as per Clause 11.3 and offer validity is less than the prescribed in Clause 12.1 mentioned above.
- (iii) Clause 3 Section II-If the eligibility condition as per clause 3, Section II is not met and/or the documents prescribed to establish the eligibility are not enclosed, the offers will be rejected without further evaluation.
- (iv) Section-III "General Conditions of Contract" and Section-IV "Special Conditions of Contract" & Section-VI "Technical Section" compliance if given using ambiguous words like 'Noted: Understood', 'Noted & Understood' shall not be accepted as compliance. Mere 'Complied' will also not be sufficient. Reference to the enclosed document showing compliances must be given.
- (v) Section-VII - Price Schedule: Prices are not filled in as prescribed in price schedule.

SECTION - III

GENERAL CONDITIONS OF CONTRACT

1. Application

The General conditions shall apply in contracts made by the Purchaser for the procurement of Goods.

2. Standards

The goods supplied under this contract shall confirm to the standards prescribed in the Technical Section of this RFP.

3. Patent Rights

The Vendor shall indemnify the Purchaser against all third-party claims/actions of infringement of patent, trademark or industrial design rights arising from use of the goods or any part thereof.

4. Performance Bank Guarantee

4.1 Within 15 days after the receipt of the Lol cum APO, the Vendor shall furnish Performance Bank Guarantee (PBG) for the sum equal to 5% of the value of contract price. This guarantee shall be valid for a period of 2 years.

4.2 In the event, guarantee of full value has not been submitted within the stipulated period, Lol will stand automatically cancelled without any further reference or notice unless time is extended in writing by CEO, MTML as the case may be pursuant to the request received from the Vendor prior to expiry of the period disclosing sufficient reasons for grant of further time.

4.3 The proceeds of the performance security shall be forfeited in favour of the Purchaser as compensation for any loss resulting from the Contractor's failure to complete its obligations under the contract.

4.4 The PBG shall be in the form of a bank guarantee issued by First Class Commercial Bank in Mauritius and in the form provided in the RFP in Annexure-II.

4.5 The PBG will be discharged/released by the Purchaser after completion of the Contractor's performance obligations on the successful completion of warranty period, unless there are specific reasons, on record, for not to release the PBG.

5. Factory Inspection and Acceptance Tests

5.1 Factory Inspection

5.1.1 The Purchaser or his representative shall have the right to inspect and test the goods for their conformity to the Specifications. The test schedule will be decided by

Purchaser keeping in mind the facilities of testing & system design. Where the Purchaser decides to conduct such tests on the premises of the Contractor or its sub-contractor(s), all reasonable facilities and assistance like Testing Instruments and other test gadgets including access to drawings and production data shall be furnished to the inspectors at no charge to the Purchaser. Number of personnel to be deputed for the purpose of inspection, testing etc. shall be decided by Purchaser and the costs such as air ticket, lodging and local transportation, daily allowances etc. shall borne by the Purchaser. Any other expenses relating to such inspection testing shall be borne by the Contractor.

- 5.1.2 Testing/inspection of equipment/material will be carried out after necessary mutual discussions while taking into consideration the facilities of testing and system design.
- 5.1.3 The Contractor shall give a schedule of factory testing and acceptance testing in field against specifications as indicated in Technical Section indicating the type of test and duration of test. It shall be the prerogative of Purchaser to decide on the final test schedule.
- 5.1.4 In case of retesting of equipment/material, on account of failure of the equipment/material during the process of tests, the complete expense of retesting including the air ticket, lodging and local transportation, daily allowances etc. of the representatives of Purchaser, shall be borne by the Contractor and no extension of delivery schedule on this account shall be given to the Contractor without liquidated damages.
- 5.1.5 Should any inspected or tested goods fail to conform to the specifications, the Purchaser may reject them and the Contractor shall either replace the rejected goods or made all alterations necessary to meet specification requirements free of cost to the Purchaser.
- 5.2 Acceptance Testing:** Notwithstanding the pre-supply tests and inspections prescribed in clause 5.1 above, the equipment and accessories, if any, on receipt in the Purchaser's premises will also be tested during and after installation before "take over" and if any equipment or part thereof are found defective, the same shall be replaced free of all costs to the Purchaser as laid down in clause 5.3 below within such time so as not to delay the project commissioning.
- 5.3 If any equipment or any part thereof, before it is taken over, is found to be defective or fails to fulfil the requirements of the contract, the Purchaser shall give notice to the Contractor setting forth details of such defects or failure and the Contractor, shall make the defective equipment good, or alter the same to make it comply with the requirements of the contract forthwith and in any case within a period not exceeding two weeks of the initial report. These replacements shall be made by the Contractor free of all charges at site. Should it fail to do so within this time, the Purchaser reserves the discretion to reject and replace at the cost of the Contractor, the whole or any portion of the equipment as the case may be. Also, any additional cost arising due to such delay shall be borne by the Contractor. This shall also include the cost of extra stay of inspection team etc. The cost of any replacement made by the Purchaser or

additional cost referred above shall be deducted from the amount payable to the Contractor.

- 5.4 When all performance tests to the satisfaction of Purchaser are carried out as per details in Clause 5.3 above and commissioning (Clause 2(p) of Section-II), the Purchaser will issue a "Taking Over Certificate". The Purchaser shall not delay the issue of any "Taking Over Certificate" contemplated by this clause on account of minor defects in the equipment, which do not materially affect the commercial use thereof provided that the Contractor shall undertake to make good the same in a time period not exceeding six weeks.
- 5.5 Nothing in this clause shall in any way release the Contractor from any warranty or other obligations under this contract.
- 5.6 Inspection and testing shall be as per provisions in the Technical Section (Section-VI) or as per details finalized between Contractor and Purchaser.

6. Delivery & Warehousing

- 6.2. The delivery of the equipment/material shall commence as specified and be completed within time schedule specified in schedule of requirements and this along with completion of the turnkey project as per schedule shall be the essence of the contract.
- 6.2. The vendor will make his own arrangement for the storage of the goods at Mauritius. The vendor shall transport the goods to the required Site as per the requirement of the turnkey project at his cost including transportation, handling charges etc.
- 6.3 The goods shall remain at the risk of the Contractor until completion of the turnkey project i.e. issue of "Taking Over Certificate".

7 Warranty

- 7.1 The Contractor shall warrant that equipments / items supplied shall be new and free from all defects and faults in material, workmanship and manufacture and shall be of the highest grade and consistent with the established and generally accepted standards for materials of the type ordered and shall perform in full conformity with the specifications and drawings. The Contractor shall be responsible for any defects that may develop under the conditions provided by the Contractor and under proper use, arising from faulty materials, design or workmanship such as corrosion of the equipment, inadequate quality of material to meet equipment requirements, inadequate contact protection, deficiencies in circuit design and or otherwise and shall remedy such defects at his own cost when called upon to do so by the Purchaser who shall state in what respect equipment is faulty. The warranty shall survive inspection or payment for, and acceptance of goods, but shall expire except in respect of complaints notified prior to such date, **three (3) years after the equipments have been taken over** under clause 5.4.

- 7.2 If it becomes necessary for the Contractor to replace or renew any defective portion/portions of the equipment under this clause, the provisions of the clause shall apply to the portion/portions of equipment so replaced or renewed or until the end of the above mentioned warranty period. If any defect is not remedied within a reasonable time, the Purchaser may proceed to do the work at the Contractor's risk and expenses, but without prejudice to any other rights, which the Purchaser may have against the Contractor in respect of such defects.
- 7.3 To meet the warranty obligations, the Contractor shall store requisite spares at the Purchaser's site. The turn around time for repairs of the faulty equipments shall be same as during the AMC period. The system availability shall be more than 99.99% during warranty period. The spares stocks shall be maintained by the contractor based on detailed MTBF of different components.
- 7.4 Replacement under warranty clause shall be made by the Contractor, free of all charges at site, including freight, insurance and other incidental charges.

8 Spares

8.1 The Vendor shall quote his prices of complete equipment as per Price Schedule, keeping in view the free supply of all spares during warranty period. For this purpose, the Vendor shall submit a detailed list of these spares in the offer itself. These spares shall be supplied along with main equipment. A certificate to ensure that these spares shall be sufficient for system maintenance during the warranty period, shall have to be given by the Contractor and any additional spares, if required shall be supplied free of cost. The Purchaser shall have the right to use these spares during warranty period and these shall be stored at MTML Mauritius *as per requirement*.

8.2 AMC shall include supply, repair and a turn around of spares. Transportation and return of spares shall be borne by the Vendor.

9 Payment Terms

Payment shall be made in in the following manner:

9.1 For Equipment Supplies

- a) **50%** of the total invoice value of goods would be paid on delivery through either through wire transfer or LC, as per the choice of vendor. This LC will be opened by the purchaser at least two weeks in advance before the expected date of dispatch. To enable the purchaser to make the LC, the supplier shall intimate the expected date of delivery 30 days in advance. For clearing the LC, the following documents are to be sent to our bankers through whom the LC is established.
- (a) Proforma invoice based on the BOQ
 - (b) BoQ & Packing List
 - (c) Certificate of origin
 - (d) Airway/Bill of lading
 - (e) Insurance certificate

- (f) A copy of manufacturers guarantee certificate
 - (g) A copy of the contractor's factory inspection certificate.
- b) **40%** of the value of the goods will be paid on issuance of take over certificate (ToC) through wire transfer on submission of A/T Certificate & TOC from the purchaser.
 - c) **Balance 10%** shall be paid after 1 year of ToC after taking a Bank Guarantee of equivalent amount, as protection against warranty period. In case the bidder is not interested in giving bank guaranty this amount, it would be paid after successful completion of warrantee period.

9.2 For Services

- a) **90% payment** will be made after successful installation, Acceptance testing and commissioning of the system and issuance of "Taking Over Certificate".
- b) **Balance 10%** payment will be made after 1 year of ToC after taking a Bank Guarantee of equivalent amount, as protection against warranty period. In case the bidder is not interested in giving bank guaranty this amount, it would be paid after successful completion of warrantee period.

9.3 **An advance payment equivalent to 15%** of the equipment value may be payable to the vendor on submission of 'Advance Payment Guarranty' from a bank. This advance payment shall be adjusted from the first payment made to the vendor.

9.4 Payment for AMC shall be made on quarterly basis in advance as indicated in AMC conditions. If payment is to be made in advance then Performane Bank Guarantee for the amount of AMC at the time of signing of the AMC agreement will be submitted by contractor.

10 Change in Orders

10.1 The Purchaser may, at any time, by a written order to the Contractor, make changes within the general scope of the contract, without affecting the delivery schedule, in any one or more of the following:

- a) Drawings, designs or specifications, where goods to be furnished under the contract are to be specifically manufactured for the Purchaser;
- b) The method of transportation, packing, delivery or installation;
- c) The place of delivery.

10.2 If any such change causes an increase or decrease in the cost or the time required for the execution of the contract, an equitable adjustment shall be made in the contract price or delivery schedule, or both, and the contract shall accordingly be amended. Any proposal by

the Contractor for adjustment under this clause must be made within thirty days from the date of receipt of the change in order.

11 Sub-Contracts

11.1 The Contractor cannot assign/transfer and sub-contract its interests/obligations under the contract without the prior written permission of the Purchaser.

11.2 The Contractor shall notify the Purchaser in writing of all sub contracts awarded under this contract if not already specified in his offer. Such notification, in his original offer or later shall not relieve the Contractor from any liability or obligation under the contract.

12 Delays in the Contractor's Performance

12.1 Deliveries of the goods and performance of services shall be made by the Contractor in accordance with the time schedule specified by the Purchaser in its purchase order.

12.2 Delay by the Contractor in the performance of its delivery obligations, shall render the Contractor liable to any or all of the following sanctions; forfeiture of its PBG, imposition of liquidated damages and/or termination of the contract for default.

12.3 If at any time during the performance of the contract, the Contractor or its sub Contractor(s), if permitted under Clause 11.1, should encounter conditions impeding timely delivery of the goods and performance of service, the Contractor shall promptly notify the Purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Contractor's notice, the Purchaser shall evaluate the situation and may at its discretion extend the period for performance of the contract (on the merit of the case after mutual discussion with the Contractor).

13 Progress Report

The Contractor shall, at its own costs, compile, prepare and submit on time, periodical progress reports (fortnightly or as required by the Purchaser) on the progress of delivery, implementation or both, whichever applicable, in respect of purchase order issued by the Purchaser.

14 Liquidated Damage

14.1 The date of delivery of the stores and Installation Commissioning stipulated in the acceptance of the tender should be deemed to be the essence of the contract and delivery/Installation & Commissioning must be completed not later than the dates specified therein. Extension will not be given except in exceptional circumstances. Should, however, deliveries be made/installation & commissioning is delayed after expiry of the contracted delivery period, without prior concurrence of the purchaser and be accepted by the consignee, such delivery/installation & commissioning will not deprive the purchaser of his right to recover liquidated damage under clause 14.2 below. However, when supply is made within 21 days of the contracted original delivery period, the consignee may accept the stores and in such cases the provision of clause 14.2 will not apply.

14.2 (a) **For delivery of Stores:**

Should the supplier fails to deliver the store or any consignment thereof within the period prescribed for delivery, the purchaser shall be entitled to recover 0.5 % of the value of the delayed supply for each week of delay or part thereof for a period up to 10 (TEN) weeks and thereafter at the rate of 0.7% of the value of the delayed supply for each week of delay or part thereof for another TEN weeks of delay. In the case of package supply where the delayed portion of the supply materially hampers installation and commissioning of the systems, L/D charges shall be levied as above on the total value of the concerned package of the Purchase Order. However, when supply is made within 21 days of QA clearance in the extended delivery period, the consignee may accept the stores and in such cases the LD shall be levied upto the date of QA clearance.

14.2 (b) **Installation & Commissioning:**

Should the supplier fail to install and commission the project within the stipulated time the purchaser shall be entitled to recover 0.5% of the value of the purchase order for each week of delay or part thereof for a period upto 10 (TEN) weeks and thereafter @ 0.7% of the value of purchase order for each week of delay or part thereof for another 10 (TEN) weeks of delay. In cases, where the delay affects installation & commissioning of part of the project and part of the equipment is already in commercial use, then in such cases, LD shall be levied on the affected part of the project.

14.3 Quantum of liquidated damages assessed and levied by the purchaser shall be final and not challengeable by the supplier.

14.4 The total LD amount to be recovered in no case shall exceed 12% of the total value of the whole project.

15. **Insurance**

Insurance should cover Contractor's all risks valid up to issue of "Taking Over Certificate". It should cover Third Party Insurance for property & life, accident or injury to workmen and Transit Insurance for 110 % of value of goods.

The insurance shall be for an amount equal to 110 % of the CIF value of the goods from "warehouse to warehouse" on "all risks" basis including risks of TPND, SRCC and war clauses. All the items shall be fully insured by the Contractor up to the final destination.

Any item/part damage / lost shall be replaced by the Contractor free of charge at first and the insurance claim shall be made by the Contractor to recover the cost of damaged/ lost goods.

The insurance policy shall remain valid till the date of issuance of Taking Over Certificate.

Apart from the insurance of material as above, the contractor has to take full insurance for its workmen's compensation in case of injury/ death as per the prevailing labour laws and full insurance for the third party liability for material and persons' injury/ death. The contractor will be fully responsible for any mishappening due to his materials/ services and will be solely responsible to settle any issue legally or otherwise.

16 Force Majeure

16.1 If at anytime, during the continuance of this contract, the performance in whole or in part by either party of any obligations under this contract shall be prevented or delayed by reason of any war, or hostility, acts of the public enemy, sanction, Government Act, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restriction, strikes, lockouts or act of God (Hereinafter referred to as events) provided notice of happenings, of any such eventuality is given by the either party to the other within 21 days from the date of occurrence thereof, neither party shall by reason of such event be entitled to terminate this and contract shall be resumed as soon as practicable after such event may come to an end or cease to exist, and the decision of the Purchaser as to whether the deliveries have been so resumed or not shall be final and conclusive, provided further that if the performance in whole or part of any obligation under this contract is prevented or delayed by reason of any such event for a period exceeding 60 days either party may, at its option terminate the contract.

16.2 Provided also that if the contract is terminated under this clause, the Purchaser shall be at liberty to take over from the Contractor at a price to be fixed by the Purchaser, which shall be final, all unused, undamaged and acceptable materials, bought out components and stores in course of manufacturer in possession of the Contractor at the time of such termination of such portions thereof as the Purchaser may deem fit excepting such materials / bought out components and stores as the Contractor may with concurrence of the Purchaser elect to retain.

17. Termination for Default

17.1 The Purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default, sent to the Contractor, terminate this contract in whole or in part,

- a) if the Contractor fails to deliver any or all of the goods/services within the time period(s) specified in the Contract, or any extension thereof granted by the Purchaser pursuant to Clause 13.3.
- b) if the Contractor fails to perform any obligation(s) under the Contract; and
- c) if the Contractor, in either of the above circumstances, does not remedy his failure within a period of 30 days (or such longer period as the Purchaser may authorize in writing) after receipt of the default notice from the Purchaser.

17.2 In the event that the Purchaser terminates the contract in whole or in part, pursuant to clause 17.1, the Purchaser may procure, upon such terms and in such manner as it deems appropriate, goods similar to those undelivered and the Contractor shall be liable to the Purchaser for any excess cost for such similar goods. This liability shall be without prejudice to any other claim which the Purchaser shall be entitled to make against the Contractor. However, the Contractor shall continue performance of the contract to the extent not

terminated. The Purchaser may, without prejudice, on the happening of any of circumstances, to its other rights under law or the contract provided elsewhere, purchase the balance quantity of the goods at the risk and cost of the Contractor and look to him for the payments thereof and can also claim a set off of any dues payable under the contract to the Contractor against his any dues under the contract or any previous contract.

18. Termination for Insolvency

The Purchaser may at any time terminate the contract by giving written notice to the Contractor, without compensation, if the Contractor becomes unwilling, bankrupt or otherwise insolvent, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Purchaser.

19. Arbitration & Conciliation

Any dispute, which remains to be resolved through amicable and good faith discussions between the parties within 180 days of the beginning of such discussion, shall be resolved in accordance with the Rules of United Nations Commission for International Trade Law (UNCTRIAL). The venue of arbitration shall be Mauritius. The laws of the Republic of Mauritius shall be applicable in arbitration. The language used in arbitration proceedings shall be in English. Each party shall bear its own cost for making submission to the Arbitration. The Arbitrator shall be appointed by the common consent of both parties, failing which by the Judge in Chambers of the Supreme Court of Mauritius on the application of either or both parties.

20. Subject Laws and Jurisdiction

The contract shall be governed by Laws and the Courts at Mauritius will have jurisdiction to entertain any dispute or claim arising on the contract.

21. Site Cleanliness

The contractor shall keep the site and its neighbourhood clean and tidy. During the execution of the Works the Contractor shall keep the Site reasonably free from all unnecessary obstruction and shall store or dispose of any Contractor's Equipment and surplus materials and clear away and remove from the Site any wreckage, rubbish or Temporary Works no longer required. Any claim made by third parties owing to the responsibility of the Contractor shall be borne by the Contractor himself. The Contractor shall properly organize its works on site in consultation with the purchaser so as not to hinder the normal operation as well as normal works carried out by the purchaser where applicable. This however should not cause any delay in the completion of the works by the Contractor.

Upon completion of the Works, the Contractor shall clear away and remove from the Sites surplus material, rubbish and Temporary Works of any kind, and leave the Site and Works clean in a Workmanlike condition to the satisfaction of the purchaser.

22. SAFETIES, SECURITY AND PROTECTION OF ENVIRONMENT

The Contractor shall throughout the execution of Works and remedying of any defects therein:

- (a) Have full regard for the safety of all persons entitled to be upon the Site and keep the Site and the Works in an orderly state appropriate to the avoidance of danger to such persons.
- (b) Provide and maintain at his own cost all lights, guards, fencing, warning signs, watching and adequate sanitary accommodation, to a standard satisfactory to the Health and Sanitation Department and the Ministry of Labour for his work people, when and where necessary for the protection of the Works or for the safety and convenience of the public or others.
- (c) Take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation.

23. ACCIDENT OR INJURY TO WORKMEN

The purchaser shall not be liable for or in respect of any damages or compensation to any Workman or other person in the employment of the Contractor or any Subcontractor. The Contractor shall indemnify and keep indemnified the Purchaser against all wages and compensation and against all claims, proceedings, and damages, charges whatsoever in respect thereof.

24. COMPLIANCE WITH STATUTES AND REGULATIONS

The Contractor shall conform in all respects by the giving of all notices and the paying of all fees, with the provision of:

- (a) Any National Statute, Ordinance or other Law, or any regulation of any local or other duly constituted authority in relation to the execution and completion of the Works and the remedying of any defects therein, and
- (b) The rules and regulations of all public bodies and companies whose property or right are affected or may be affected in any way by the Works and the Contractor shall keep the Purchaser indemnified against all penalties of every kind for breach of any such provisions.

25. INTERFERENCE WITH TRAFFIC AND ADJOINING PROPERTIES

All operations necessary for the execution and completion of Works and the remedying of any defects therein shall be carried on so as not to interfere unnecessarily or improperly with:

- (a) the convenience of the public
- (b) the access to, use and occupation of public or private roads and footpaths.

26. TRANSPORT OF CONTRACTOR'S EQUIPMENT, MATERIALS, PLANT OR TEMPORARY WORKS

The Contractor shall be responsible for and shall pay the cost of altering or improving any road communicating with or on the routes to the Site to facilitate the movement of the Contractor's Equipment, Materials, Plant or Temporary Works and the Contractor shall indemnify and keep indemnified the Purchaser against all claims for damage to any such road caused by such movement. Any approval required by any government body in this regard needs to be taken by the contractor before the work.

27. Set Off

Any sum of money due and payable to the Supplier (including security deposit refundable to him) under this contract may be appropriated by the Purchaser or the Govt. or any other person or persons contracting through the Purchaser and set off the same against any claim of the Purchaser or Govt. or such other person or persons for payment of a sum of money arising out of this contract or under any other contract made by the Supplier with the Purchaser i.e. the Purchaser or Govt. or such other person or persons contracting through the Purchaser or Govt.

It is an agreed term of the contract that the sum of money so appropriated under this clause by the Purchaser or Government will be kept withheld as such by the Purchaser or Government till his claim arising out of the same contract or any other contract is either mutually settled or determined by the competent court and that the Supplier shall have no claim for interest or damages whatsoever on this account or on any other ground in respect of any sum of money withheld under this clause and duly notified as such to the Supplier.

28. Notices

28.1 Any notice given by one party to the other pursuant to the contract shall be sent in writing or by FAX or cable and confirmed in writing, by registered post. For the purposes of this Clause, the contact details of the Purchaser shall be as follows:

Mahanagar Telephone (Mauritius) Ltd
Attention of: Chief Executive Officer
63, Cyber City, Ebene, Mauritius.
Fax: (230)-52940606
Email : mtml@mtmltd.net

28.2 The Purchaser shall notify the Contractor in accordance with Clause above in case of any amendment of the contact details specified in the said Clause.

28.3 The Contractor shall similarly notify the Purchaser of its contact details and any subsequent amendment thereto in accordance with Clauses above.

28.4 A notice shall be effective when delivered or on the notice's effective date, whichever is later.

28. Confidentiality

The Contractor agrees that the terms of the contract shall remain confidential. The Contractor and its agents, employees and/or representatives may not disclose any term or condition of the agreement without the prior written authorisation of the Purchaser. All Documentation and information supplied by either Party to the other in whatever form shall be treated as confidential and shall not be disclosed or used otherwise than for the purpose of performing their obligations under the Contract save that either Party may disclose such information to its employees who need to know the same for the purpose of carrying out their duties in respect of the Contract.

SECTION –IV (A)

SPECIAL CONDITIONS OF CONTRACT

1. The special conditions of the contract shall supplement the 'Instructions to the Bidders' as contained in Section II & "General Conditions of the Contract" as contained in Section III and wherever there is a conflict, the provisions under special conditions of contract shall prevail over those in any other section of this RFP. The bidder is required to take note of all points in this section which are to be complied with and bid submitted accordingly, even if there is no mention of any item in any other place in the RFP or it is contradictory.
2. If the date fixed for opening of bids is subsequently declared as holiday by the Government of Mauritius, the revised schedule will be notified. However, in absence of such notification, the bids will be opened on the next working day, time and venue remaining unaltered.
3. A soft copy of the techno-commercial bid shall be supplied duly sealed. In case of any discrepancies between the hard and soft copies of the bid, the former shall prevail.
4. (a) The bank guarantee for bid security shall be submitted along with the bids in a separate cover. The bank guarantee so submitted shall be as per format given in Section -VIII on prescribed judicial paper with stamps of proper value and should contain full address of the issuing branch of the bank with its Telephone number and FAX number. This cover should be superscribed as "BID SECURITY FOR TENDER NO. MTML/GSM/Tower/RFP/2019/1."

(b) In case where the documents of bid security are not submitted in the manner prescribed under clause 4(a) above, cover containing the commercial, technical and financial offers SHALL BE REJECTED AND RETURNED TO THE BIDDER UNOPENED.
5. (i) The supply of equipment /stores will strictly adhere to the schedule as described in the Purchase Order.

(ii) For all materials supplied, the test certificate for proper specification and quality check of the factory where the items were manufactured and also by third party accredited labs in Mauritius is required for acceptance by the purchaser. The certification is to be submitted along with the equipment.
6. Purchaser reserves the right to disqualify such bidders who have a record of not meeting contractual obligations against earlier contracts entered into with the purchaser.
7. Any clarification issued by the purchaser in response to query raised by prospective bidders shall form an integral part of bid documents and it will amount to amendment of relevant clauses of the bid documents.

8. Purchaser reserves the right to blacklist a bidder in case he fails to honour his bid without sufficient grounds.

9. AWARD CRITERIA:

MTML reserves the right to award the contract to one or more bidder(s) for each structure type whose bid has been determined to be substantially responsive, technically and commercially acceptable and has been determined as the lowest evaluated price bid, provided further that bidder is determined by the purchaser to be fully qualified to perform the contract satisfactorily. The purchaser reserves the right to distribute the work among not more than 2 bidders for each structure type, if they agree to match the negotiated lowest offer price.

(a) The purchaser reserves the rights to counter offer price(s) against the price(s) quoted by any bidder.

(b) Purchaser requires that bidder shall quote for complete bill of material for complete scope of work, meeting fully and completely the tendered technical specification for total demand as given in Section-V and Section-VII. Any deficiency in bill of material will be provided by the bidder free of cost for successful implementation of the project.

In case bidder has not quoted for some of the items which are essential for turnkey solution, it will be presumed that cost of such items is covered and is part of some other subsystem and no extra amount is payable by purchaser. In the evaluation of bids, cost of such item shall be taken as 'nil' while the same shall be made available to purchaser as per requirement without any additional cost. The successful bidder will be required to supply all material/goods required to make the equipment operative, after integrating with the existing network (even if it is not shown in the Bill of Material).

10. The bidder should confirm that all its supplied equipments are compliant to international standards.
11. The bidder shall ensure that the bid is complete and comprehensive as regards detailed BoM. The bidders shall provide unpriced Bill of Materials (BoM) for each of the elements with complete details together with their quantity required to meet the performance requirement sought for in the tender in the Techno-Commercial bid.
12. The bidders shall furnish detailed project implementation schedule by means of PERT chart in the bid detailing the various activities involved, their time frame for completion and the dependency on other activities. The bidder shall be responsible for arranging all the clearances such as BLUP for sites, CEB clearance etc., for installation of towers/ BTSs.
13. The tower structures planned to be installed would be different types, depending on the site conditions, RF requirement and permits obtained, as given below:
 - i) Ground Based Palm Tree Type Tower (PTT) of 35 meter and 40 meter high above ground level
 - ii) Ground Based Lattice structure Type Tower (GBT) of 35 meter and 45 meter high above ground level

- iii) Roof Top Tower – Lattice Structure (RTT) of 10 meter and 15 meter high above roof top level
 - iv) Roof Top Pole (RTP) of 3 meter, 4 meter, 6 meter with three pole structure
 - v) Roof Top Single Pole (RTP) of 6 meter, 8 meter or 10 meter with or without camouflaging
14. The camouflage structure to be provided by the bidder could be of Chimney, Lamp Shade or Palm Tree of appropriate design and colour, gelling well with the ambience for better aesthetics. The bidder may suggest various options available for this alongwith costs as optional items in the bid.
 15. The camouflage structure should cover all the antennas and should not add to the RF loss of more than 1 dB for each sector.
 16. All the GBTs should be designed to take the load of atleast 12 GSM, 3G, 4G or 5G panel antenna, RRUs & lightning protection units and atleast 8 microwave antennas 1.2 meter dia and 2 microwave antenna of 1.8 meter dia.
 17. All the RTTs should be designed to take the load of atleast 12 GSM, 3G, 4G or 5G panel antenna, RRUs & lightning protection units and atleast 6 microwave antennas 1.2 meter dia.
 18. The Palm Trees are to be designed for taking load of atleast 6 GSM, 3G, 4G or 5G panel antenna & RRUs and atleast 4 microwave antenna of 0.6 meter dia and and 2 microwave antenna of 1.2 meter dia.
 19. All single pole structures are to be designed for atleast 6 GSM, 3G, 4G or 5G antenna and atleast 2 microwave antenna of 0.6 meter dia.
 20. All 3 pole sites will have 3 separate poles each designed for taking load of atleast 2 GSM, 3G, 4G or 5G antenna and one microwave antenna of 1.2 meter dia.
 21. All tower/ pole structures will need to have antenna mounting structure which is to be installed by the vender in accordance with the specifications given by purchaser. The power/ data cable tray from tower to equipment needs to be installed by the vender. The CEB meter box also needs to be installed by the vender.
 22. All the tower/ pole structures, including all associated structures should be designed to take the sustained wind load speed of atleast 280 Kmph and wind gust speed of atleast 320 Kmph for shorter durations/ bursts.
 23. Proper Lightning arrester and protective mechanism needs to be installed at all tower/ pole structures.
 24. On all structures upto 20 meter high, one aviation light (double lamp, preferably LED) at the top is to be provided.
 25. On structures above 20 meter high, there would be one aviation lamp (double lamp, preferably LED) on the top and 2 avaition lamps at the middle of the structure in different directions in accordance with the specifications given by purchaser
 26. Two separate earthing pits are to be constructed one for tower earthing and the other for equipment earthing. The maximum earth resistance of the tower earthing should not be more than 2 ohms and that for equipment earthing should not be more than 1 ohm.
 27. At all ground based sites, concrete flooring is to be done to keep the site clean and avoid plantations growing up. The area for concrete flooring would be around 10 m X 10 m with a minimum thickness of 125mm on compacted crusherun. For RTT sites, where no staircase is available for accessing the rooftop by maintenance personnels, a separate staircase/ proper ladder needs to be provided.

28. The complete area under possession of MTML at ground based sites needs to be fenced with barbed wires and an iron gate of atleast 4 meter width with locking arrangement needs to be provided.
29. The construction work at the site has to be carried out keeping in view all the legal requirements and it is to be ensured that minimum disturbance in caused to the neighbours in the area because of this work. It would be the responsibility of of the vendor to obtain all clearance from government bodies, owner and neighbours for its work.
30. For the ground based sites, the Contractor is required to carry soil test to determine the soil bearing capacity (characteristic) at the particular location as per technical specifications. A report shall be submitted as per BS 5930.
31. Design of palm tree tower and the concrete base as per BS 8100 and BS 8110. The diameter of at the base and at the top of the tower shall be greater than 1100mm and 900mm respectively.
32. The design and placement of the artificial leaf branches shall be in such a way, that they do not hinder the antenna movement for antenna azimuth and tilt modifications. The antennae supports shall be camouflaged with the palm tree tower leaves.
33. Contractor is required to design and install platforms with handrail at the antenna support for each tower together with steps so as to facilitate antenna installation.
34. All palm tree towers should ne provisioned with a vertical life line wire of 10mm diameter galvanised steel cable from the antenna supports to the bottom. The lifeline cable shall have a minimum breaking strength of 5,000 pounds (22.2 kN). It shall comply to the relevant British standards (BS 8437:2005 ; BS EN 353)
35. The vendor has to take full insurance coverage for the equipment, material, personnel working on the project, the site building and the neighbouring buildings and third party liability for any damage caused by the structure while it is under installation and till it is taken over by MTML. The vendor will be fully responsible for any damage caused by it and will be solely responsible for making it good and offering suitable compensation as required by the affected part or as directed by court. The vendor has to deploy fully trained and professional persons on the construction activities and they have to be in proper protective gears for their safety. The vendor has to strictly adhere to the labour laws of Mauritius in this respect.

37. ACCEPTANCE TESTING

(i) Purchaser reserves the right to appoint any testing authority for carrying out acceptance testing of the installations. The acceptance test schedule generally covers the following, among others:

- (a) Physical alignment and aesthetics check
- (b) Tower verticality check
- (c) Structural design drawings test and verification
- (d) Test of earth resistance
- (e) Galvanization test and check of paint thickness & quality

(ii) The successful bidder shall submit a comprehensive and complete test schedule together with test set-up and procedure for conducting Acceptance Testing on each of the elements to be supplied under this project. The successful bidder, after incorporating modifications and / or additions as per MTML requirements, if any, shall finalize Acceptance Test schedule at least one month in advance of scheduled date of A/T as per the PERT chart. The Acceptance Test Schedule shall clearly indicate the specifications / clause(s) of tender verified by each test.

(iii) The bidder shall make available the tools and testers required for carrying out the acceptance tests as per the schedule.

(iv) Any component(s) or module(s) failing during the acceptance tests shall be replaced free of cost at site by the bidder. These will be delivered within one month of the initial reports.

38. PACKAGE DISCIPLINE:

The bidders as part of their bid, shall indicate the sequence of supply of various items to appropriately take care the different lead times required for commissioning of the individual network elements. The successful bidder shall schedule his supplies to ensure completion of installation, testing, validation and commissioning as per schedule.

39. Operation and Maintenance: The successful bidder shall carry out all the functions of operation and maintenance during the warranty period.

40. Technical audit of system Performance

MTML reserves the right to carry out technical audit through any designated agency from time to time and bidder shall take necessary corrective measures to conform to the performance parameters stipulated in the tender document within the period of performance guarantee.

41. Annual Maintenance Contract

- a) The bidders shall quote for a year wise comprehensive Annual Maintenance contract for 3 years. MTML will have the discretion whether to sign the AMC contract or not, at any point of time, for each year separately. The cost shall be quoted as a lump sum including visit of the engineers as and when required. The terms and conditions for AMC are given in Annexure.
- b) During the warranty period, the successful bidder shall perform all the functions as enunciated under the AMC, free of cost. All the penalty clauses shall be applicable during the period of warranty in case of failure on part of supplier.
- c) The bidder shall, at the time of submitting the bid, also submit the proposal specifying the Fault Control Center Location and how the bidder proposes for carrying out repair under AMC. The bidder shall also indicate what spare will be kept in different locations. The infrastructure planned to be created by the bidder to meet his obligations under AMC and his action plan to deal with the various situations arising out of hardware and software faults shall be clearly indicated.

42. General Points:

- (a) The advantage of reduction of taxes/ duties during evaluation of tender / execution of contract shall be passed on to the purchaser i.e. MTML and no benefit of increase will be permitted to the supplier.
- (b) The purchaser reserves the right to commercially exploit the installed equipments after the delivery linked payment are made as indicated in payment terms or after the prescribed period stipulated for the initial roll out to commence whichever is earlier. Such commercial utilization of the network after the completion of the prescribed delivery schedule and before commissioning of the network shall not entail the successful bidder to claim deemed completion or otherwise incomplete obligations under the terms and conditions of this tender and shall not relieve bidder of the liability under the relevant clauses arising out of such non-completion.

SECTION –IV (B)

DETAILED TECHNICAL REQUIREMENTS

1. INTRODUCTION

Mahanagar Telephone (Mauritius) Limited (MTML) is planning to expand its BTS towers across Mauritius. All new Sites shall be outdoor BTS provisioned with pole/ roof top/ Ground Based Tower structure along with associated civil works.

The civil works for installation of BTS/Roof top/Ground based Towers etc. along with associated civil works at all sites shall be executed by the bidder and in conformity with guidelines in vogue in MTML/ local authorities. It will be the responsibility of the successful bidder to obtain the structural safety certificates from the agencies nominated by the local authorities which includes standard seismic, wind load considerations. All statutory permissions, “No Objection Certificate”, clearance & approvals from local agencies like Municipal bodies, ICTA, Civil Aviation etc. and site owners shall be responsibility of the successful bidder.

The quality of all materials and workmanship used in the execution of the contract shall comply with the requirements of the latest code of practice or British Standard references as listed in Table 1.

Table 1

Work description	Applicable standards, codes and norms
Galvanising	EN ISO 1461 or equivalent.
Welding qualification	BS EN/ISO 2564 2004-2008
Steel fabrication	BS EN 1090-1, BS EN 1090-2
Welding quality	BS EN ISO 2834-3
Welding Coordination	BS EN ISO 14731
Design Criteria	BS 5950 Part 1-2000 , ANSI/TIA-222-H last version
Wind Loading calculations	CP3 CHAPTER V Part 2 Wind Loads 1972 or BS8100
Concrete	BS 8110: 1997 Parts 1, 2 and 3 , ANSI/TIA-222-H last version

Bolts, nuts	BS 4190 or equivalent. Threads BS 3643 Parts 1 & 2 tolerance class 6g Materials & Manufacture BS EN ISO 898-1 Property Classes 8.8 Mechanical Properties BS EN ISO 898-1 Property Classes 8.8 Dimensions & Tolerances DIN 933 (Setscrews) & DIN 931 (Bolts) Self-Colour / Black BS 4190 - as processed Hot Dip Galvanized BS 729 & BS 7371 Part 6
Design Criteria	BS 5950 Part 1-2000
Wind Loading calculations	CP3 CHAPTER V Part 2 Wind Loads 1972 or BS8100
Concrete	BS 8110: 1997 Parts 1, 2 and 3
Code for Tower Masts,Poles	BS8100
Steel sections and plates	BS EN 10025-1
Structural hollow Steel Sections	BS EN 10210-1, BS EN 10219-1
Welding Recommendations for welding	BS EN 1011:2001
Guidelines for the Selection of	EN ISO 12944 Parts 1 to 8
Protection against Corrosion and Steel Structures-MetalCoatings Guidelines	EN 14713

2. General Specification of Towers/RTT/Poles/PalmTrees

Design

- 2.1. The vendor shall quote for towers/RTT/pole/Palm tree for GSM and Microwave Transmission Systems (MTS) required at BTS/MTS sites. The vendor shall be

responsible for the design of towers including foundation, supply of materials, transportation, storage where necessary, construction for foundation, erection of tower and installation of related facilities such as Earthing and detailed design of the towers would be submitted by the vendor. A certificate regarding the design of the tower meets the technical requirements of the RFP. Along with that for the Roof top based tower, the building structural suitability/validation certificate to be provided from Govt body/certified agency is to be produced by the vendor.

- 2.2. The contractor shall design & erect the tower in accordance with the appropriate British Standard or equivalent and more specifically as listed in Table 1 under this section
- 2.3. The Tower heights & number of towers shall be decided by MTML based of the detailed survey & engineering.
- 2.4. The towers/RTT/Poles/Palm trees together with all the antenna, as specified in the present document, and for future antenna requirements as communicated to the vendor by the Purchaser at the time of offer, shall be designed to resist the sustained winds of up to 280 Km/hr and survive wind gusts of up to 320 Km/hr. Allowance shall also be made for the effective wind area of feeder runway, feeder, platforms guardrails, ladder and ladder guard.
- 2.5. For the Roof top based tower, the building on which the tower shall rest shall be checked structurally to ensure suitability for the loadings inherent to the roof top tower /pole/deminimis under 280Km/hr wind conditions and gust of 320 Km/h.
- 2.6. Vendors shall have the tower design and Building Checks certified by authorized agency/Govt. Body to meet the technical specifications of the RFP.

Galvanizing

- 2.7. All steel work and fitting used in the assembly of the tower shall be hot dip galvanized after fabrication. The thickness of galvanization shall be more than 85 microns. The zinc coating shall be uniform, clean smooth and as free from spangle as possible. The preparation for galvanizing and the galvanising itself shall not distort or adversely affect the mechanical properties of the material. After galvanizing holes shall be free from nodules and spectre. Any galvanized part found defective or distorted shall be replaced. The whole of the expense involved in the replacement of the imperfect part shall be borne by the Contractor at no additional cost.
- 2.8. Bolts shall be galvanized after threading unless otherwise specified. Bolts, which are to be fitted with nuts, shall be threaded to the tolerance laid down in the appropriate British Standards. Nuts and head of bolts shall be of hexagonal type with 8.8 grade. All bolts shall be fitted with spring washers or retaining nuts. Spring washers or retaining nuts shall be galvanized by the hot dip process

Antenna mountings and other appurtenances

- 2.9. The bidder/contractor shall supply and install antenna mounting brackets on the

erected tower. Position and azimuth shall be specified in course of undertaking installations. The antenna mounting steelwork to which the BTS antenna may be rigidly attached by means of mounting hardware shall be supplied as part of antenna system.

- 2.10. The towers should be designed to take the antenna & RRU loads as mentioned in the Section 4(A). The minimum height of the BTS panel antenna support shall be 2.5m unless otherwise specified. In addition to that the bidder shall be required to state the maximum number of antennae to be accommodated for different sizes and loading positions especially sector and microwave antennas that the tower can accommodate in future.
- 2.11. Spaces for installation of 9 No. Remote Radio Units (RRU) shall be provided at the top of the Tower including the Palm Trees. The supports shall be fixed, and not cause any disturbance to the climbers and people working in the Palm Tree and not cause any obstruction to the panel antennas or the microwave dishes.
- 2.12. Platforms covering sufficient area as specified to provide safe working conditions shall be provided at each antenna level and including future antennae positions. The platform shall have the following specification
 - (a) A Working platform of sufficient area shall be provided , to provide safe working conditions, at antenna level.
 - (b) Working platform decking shall be of an expanded metal, fabricated grid or similar materials, adequately supported.
 - (c) Platforms shall be provided with handrails at 1 meter above the deck, intermediate rails 0.5 meter and kiosk-rails at deck level. The handrails shall be continuous around the perimeter of the platform but so arranged that free access to the ladder can be gained from the platform. The rails shall be suitable for a uniformly distributed load of 50 kg/m². Handrails on working platform shall not be structural members and shall be removable. The platform deck should be extended up to the vertical Antenna Support
- 2.13. The contractor shall construct rest platform at every 10 m intervals of the tower and a working platform at the top of the tower. The platforms shall be equipped with safety handrails and shall ensure that any person working is safe from any hazard. The handrail shall be of a minimum height of 0.9 m with two intermediate rails.

Feeder Rack

- 2.14. A feeder runway shall be provided on the tower. Each feeder runway shall be located about the center of tower and extending vertically from ground level or roof top level to the top of the tower. Vendor shall provide a ladder type feeder runway to support and protect the feeder cable between the vertical runway and to the equipment foundation or equipment location. The installation of supporting gantry shall provide satisfactory strength to resist against the mechanical stress/wind-load/structural failure. Adequate protection shall be provided against falling objects.

- 2.15. The feeder rack and Cable ladder should be atleast 300mm wide and the length shall vary on site to site basis.
- 2.16. Vertical feeder supports shall be provided adjacent to the climbing ladder capable of supporting the maximum number of feeders required for the ultimate system.
- 2.17. The vertical feeder supports shall be provided adjacent to the climbing ladder capable. The spacing between feeder support bars shall not exceed half meter.

Paint system for the Lattice Towers, poles and rooftop towers

- 2.18. Three coats of paint shall be applied as follows.
 - a) One primary coat of Etching primer together with one coat of Zinc Chromate Primer
 - b) One intermediate coat of high quality exterior undercoat
 - c) One coat of Chlorinated finish paint

The total coated thickness of the painting system shall be not less than 150 microns.

Paint system for Palm tree towers and camouflaged structures

- 2.19. Three coats of paint shall be applied as follows.
 - b) One primary coat of Etching primer together with one coat of Epoxy Zinc Chromate Primer
 - d) Two coat of Acrylic finish paint

The total coated thickness of the painting system shall be not less than 225 microns.

- 2.20. Aircraft Warning Painting shall be provided for all the self-supporting towers.
- 2.21. Contractor shall installed spacer at the base of the tower for water evacuation.
- 2.22. The Contractor shall carry out a geotechnical survey at each site by engaging an independent Soil Mechanics Laboratory with recognized competence. The results of this survey will be submitted to MTML in the original presentation format used by the issuing Laboratory. The results should be used in the designing of the tower foundation. The Geotechnical Report should clearly state the safe soil bearing capacity available for the foundation design, the type of foundation to be adopted for the site and state any conditions that may arise and that may cause damage to the Purchaser's towers and equipment. The cost of geotechnical testing should be included in the Contractor's proposal.

Foundations and Anchors

- 2.23. Foundations for the towers/RTT/Poles/Palm trees structures designed as per codes set in Table 1 shall be done so to withstand the full expected dynamic loads, namely; antennas, feeders, wind loading, etc. The Contractor's design shall take cognisance of

the geo-technical investigations on soil and wind conditions at the installation site. This is required for the purposes of determining safe bearing pressures (vertical and horizontal), other sub-surface conditions, suitable foundation types (reinforced concrete blocks, standard pad and column, raft, preset rock anchors or piles/ micro piles) for the foundation system, construction materials and installation methods as decided by the Contractor

- 2.24. The weight of the tower structure, appurtenances, and all associated steel work shall be calculated and added to the effect of wind loads on the total tower surface area. Consequently the worst loadcase load design conditions shall be used to determine the factor of safety against overturning for complete foundations
- 2.25. The contractor shall produce standard typical foundation designs for various types of soils. This will allow the fast implementation of foundation type as per the exact site condition. The responsibility for the the type of foundation to be chosen shall be determined as per the site conditions. Isolated pad foundation, combined pad foundation, raft foundation piled foundation, drilled foundation, rock anchor foundation or other suitable types of foundation will rest on the Contractor, provided that such choice is vetted by the certified by authorized agency/Government Body
- 2.26. Anchors must be dimensioned to provide sufficient safety against overturning.
- 2.27. All Standard foundations, anchors, or drilled pile shall be designed to resist uplift forces by their own weight in addition to the weight of earth enclosed and mobilized by the foundation system.
- 2.28. The density of compacted soil shall be assumed to be 1.6tons/m^3 and that of concrete to be 2.4tons/m^3 .
- 2.29. The minimum factor of against overturning for an individual or combined or mat foundation for a self-supporting structure shall be 1.5.
- 2.30. In case of the presence of groundwater in the foundations these shall be taken into account shall be taken into account in the design of non-standard foundations. The corresponding reduction in the weight of materials due to floatation and the effect of submerged conditions on soil properties also must be considered in the foundation design.
- 2.31. The projection of the stub column shall be at least 200 mm above the finished ground level of site.

Access Roads

- 2.32. As and when required, the Contractor shall provide access roads and ramps to the site. Ramps are to be located at the gate for easy vehicular access to the site. The slope of the ramp shall be limited to a maximum of 35° to the horizontal.
- 2.33. Access roads shall start from the gate and shall extend to the closest accessible road at each site. The final length of the access road shall be determined at the time of

survey. The access roads shall comprise of kerbs on each side (where applicable). The access road shall consist of granular sub base consisting of crusher run and compacted to 95% B.S Heavy.

Access staircase and ladders

2.34. Access staircases/ladders shall be installed on the site on an as and where required basis. Staircases and ladders shall be made in hot dipped galvanized mild steel. All ladders installed on site are to be equipped with safety cages for the climbers' safety. Staircase steps shall be made using expanded metal sheets and angle frames and shall be anti-slippery.

For staircases, the following standard shall apply and dimensions shall be as follows:

Table 2 Dimensions of Staircase to BS 5935

Optimum dimensions for stairs (BS 5935)			
Usage	Riser (mm)	Going (mm)	Minimum width (mm)
Public	150	300	1000

Waterproofing of rooftops

2.35. The roof where a roof top pole or tower or palm tree is placed shall be waterproofed. The whole of the waterproofing works shall be carried out by a specialist firm approved by the Engineer. The work shall be executed strictly in accordance with the manufacturer's instructions and shall carry an irrevocable **ten year warranty** with the guarantee conditions approved by the Engineer.

2.36. The waterproofing treatment shall be applied over all joints, upstand beams, flashings including wall bases and columns or beams where drilling have been executed to secure the tower structure or spreader beam system into existing slabs .

2.37. All surfaces to be waterproofed shall be inspected by the waterproofing specialist who must satisfy himself that the surfaces are in a perfect state to accept waterproofing. All surfaces shall be cleaned and prepared as required by the Contractor prior to placing of the waterproofing material

2.38. The minimum slopes of the roof to allow water drainage shall be 2% in any direction. The Contractor shall ensure that roof slopes towards one or two sides shall be done by screeding prior to placing of the waterproofing so that there will be no accumulation of water on the roof. The roof drainage shall be designed for a maximum rainfall intensity of 75mm per hour. The water drainage outlets shall be shown in the Contractor's design and drawings.

3. Aircraft Warning Lighting (Aviation Lamp)

- 3.1. The vendor shall provide Aircraft Warning Lighting for the towers.
- 3.2. At the top of the structure, double lights shall be mounted 35 cm above the top part of the structure but below the lightning arrestor.
- 3.3. For all towers and poles higher than 20 meters, two lights shall be fitted at the intermediate level, so that the light is visible from every angle of azimuth. The intermediate lights shall be fitted at a height of approximately half that of structure.
- 3.4. The lighting unit shall be of low power consumption type and Low Maintenance interval types, preferably LED type.
- 3.5. Obstruction Light should be conform to ICAO international Standards and recommended practices: Aerodromes-Annex 14 Vol 1, 3rd Edition, July 1999, Chap 6: Low Intensity, Type A Fixed Obstacle Light . FAA Advisory Circular 150/5345-43E 10/19/95 L810 Light Unit
- 3.6. Beacon lamp should be equipped with photocell day and night switch, as well as timer. The photocell switch and timer should work in parallel, i.e either the photocell or timer activates the beacon lamp, depending on light intensity or time set on the timer.
- 3.7. A junction box to be located 2 meters above ground level to control the complete warning lighting system.
- 3.8. At the intermediate level, the lighting unit shall be installed in such a position as to be readily accessible from a platform.
- 3.9. Two independent lightning circuits shall be provided between the junction box and the lights.
- 3.10. The cable shall be installed within galvanized screwed conduit, which shall be attached to tower.
- 3.11. The lighting units shall be DC operated (-48V) and have photo-sensor control to switch it off during day time.
- 3.12. The DC power necessary for the lighting units shall be incorporated in power system of BTSs.

4. Earthing System & Lightning Protection.

- 4.1. Lightning protection and Earthing system is to be provided by the vendor for each site. The earthing strip should of GI and (not copper cable) of appropriate dimension to avoid theft. If vendor feels that GI strip is not likely to provide proper earthing, insulated copper strip should be provided, but not the cable.The earthing shall be installed in PVC pipe and painted identical to the each self supporting tower.

- 4.2. An Adequate Earthing system shall be provided at each site as per the requirements of system operations. All equipments shall be connected to the earthing system.
- 4.3. Earth resistance shall be less than 1 ohm for switching and transmission system. Suitable lightning protection shall be provided at equipment side. The tower must be properly earthed.
- 4.4. Contractor shall provide suitable earth protection system using pure copper materials
- 4.5. All towers shall be fitted with a lightning protection rod above the main structure.
- 4.6. All towers shall be fitted with a lightning protection finial that creates the Faraday's Cage above the top most part of the structure.
- 4.7. All towers should be provided with down conductors (GI strip) from the rod to the tower leg

5. Fencing & Gate

- 5.1. The contractor shall supply, Installation and painting of hot dipped galvanized double leaf main entrance gate for each site with chain link fencing of a height of 3000mm, complete with all locking devices and pad locks. Position of gates for each site shall be decided during site visit.
- 5.2. Chain link mesh shall be woven from galvanised wire complying with BS 1722. Use of plastic coated chain link fencing is preferred. Three rows of galvanized barded wires shall be placed all round the fencing and the main gate as per technical specifications.
- 5.3. The contractor shall supply, laying and commissioning with concrete within the fenced compound of each site
- 5.4. Site leveling and laying with appropriate soil and crusher run prior to concreting.
- 5.5. A concrete hump of 75mm height from the ground level shall be supplied and laid at the entrance of the main gate of each site.
- 5.6. The Ground need to be leveled by laying concrete from the main gate to the equipment room for lorry access
- 5.7. The concrete floor should be slope to the water outlets to prevent water retention as per site requirement.
- 5.8. Gates shall be provided with drop bolts and latches for padlocking

Retaining Walls

- 5.9 The Contractor's hereby informed that at some tower sites retaining walls may need to be constructed. The requirement for retaining walls at any particular site shall be

included in the Contractor's proposal or site design once such requirement is found. All designs for same shall be confirmed by the authorized agency/Govt. Body in accordance with the site topography.

- 5.10 If a retaining wall are required at a particular, the Contractor shall submit full details and drawings of his designs for same to the Purchaser, after having caused such designs to be vetted by the. This will include drawings, design parameters used, calculations, soil conditions, bearing capacities, dealing with storm water drainage etc.

6 Equipment Foundation

- 6.1. The Contractor shall supply a reinforced concrete equipment base of approximately 2.5m x 1.2m for supporting the equipment. The height of the equipment platform shall be high enough, which should be at least 300mm from the roadlevel, to protect the equipment from water accumulation in case of heavy rainfall.

7 Site Acquisition and Permits

- 7.1. The bidder shall perform the site survey as per the MTML radio network coverage requirement in the given locations. For each BTS site, the bidders shall provide at least three alternate candidate sites so that the purchaser may take action for its acquisition. In case three such suitable sites are not available, MTML would consider lesser number also after due verifications. The successful bidder shall arrange to get electricity connection of suitable capacity for BTSs proposed to be located on these sites in the name of MTML from the concerned authorities. Any coordination with the agencies in this regard shall be the responsibility of the bidder.
- 7.2. The responsibility of obtaining clearance from various authorities for construction of towers (RTT or GBT) on behalf of the purchaser shall entirely rest with the bidder. The purchaser shall furnish the necessary data to the extent available.
- 7.3. The bidder will be responsible for doing the necessary formalities for getting ICTA permit, BLUP, CEB clearance after doing necessary consultation in the region. Coordination with municipalities and other government bodies for getting the permit will be the full responsibility of the bidder. However the charges payable to government bodies shall be borne by MTML on production of proof of payment by the successful bidder.
- 7.4. Installation of CEB Meter boxes is also part of the subcontractor. The payment to CEB shall be reimbursed by MTML and prior approval of expenditure shall be taken from MTML for such payments.
- 7.5. Where required, service poles shall be supplied and installed by the Contractor. The location of the poles shall be based on the actual survey.
- 7.6. The bidders shall furnish detailed project implementation schedule by means of PERT chart in the bid detailing the various activities involved, their time frame for completion and the dependency on other activities. The contractor shall be responsible for

arranging all the clearances for commercial launch of service.

8 SUBMISSION OF DESIGN AND DRAWINGS

8.1. The design for the towers shall cater for worse case and adverse conditions

8.2. The contractor is requested to submit the following documents for all sites-

(a) Methodology for the extension of the towers.

The following detailed design results and appropriate drawings submissions are to be provided both soft and hard copies after having been fully vetted by the authorized agency/Govt. Body :

- (i) Bolts detailed calculations
- (ii) Key elevation
- (iii) Tower structure Drawings
- (iv) Base plate
- (v) Stub anchor
- (vi) Anchoring details
- (vii) Stub dimension/ Stub anchor
- (viii) Setting plate
- (ix) Tower framing
- (x) Antenna mounting structure
- (xi) Earthing (ground)
- (xii) Earthing (top)
- (xiii) Foundation drawings
- (xiv) Re-bar schedule
- (xv) Feeder racks details
- (xvi) Platforms details
- (xvii) Connection details
- (xviii) Column, bracing and all other members detail.
- (xix) Architectural and structural drawings for equipment slab
- (xx) Architectural and structural drawings for each site fencing works with gate and barb wire.
- (xxi) Site Plan
- (xxii) Location Plan

(b) Stress analysis, certified by a licensed Engineering Office qualified under the laws of Mauritius (or any other recognized professional institution) for the proposed tower and the tower foundation shall include, but is not limited to the determination of unit stresses for the following:

1. Axial tension on net section
2. Axial compression on cross section for member with L/R not greater than 120 and greater than 120.
3. Maximum L/R for other compression members having a calculated stress.
4. Maximum L/R for main leg members.

5. Maximum L/R for members with no calculated stress.
6. Bending on stress fibre.
7. Single shear on bolts.
8. Double shear on bolts.
9. Bearing on bolts (single shear).
10. Tension on bolts on the nominal area at root of thread.
11. Bearing on bolts (double shear).
12. Sum of ratio to be calculated to allowable unit axial and unit bending stresses.
13. Unit stresses for concrete foundation.
14. Calculation data showing measurements of twist and sway of the proposed tower.

L: being the unbraced length of member

R: being the corresponding radius of gyration

- (c) Building structural suitability & validation analysis report for the Roof Top sites, certified by a licensed Engineering Office qualified under the laws of Mauritius (or any other recognized professional institution) for the proposed tower and equipment loading.
 - (d) Before start of the deployment of each site, the contractor should submit the compliance certificate for the material being used and any related test certificates from Mauritius Standard Bureau or any other recognized professional institution.
 - (e) Soil Investigation report, Galvanisation, Cube Test results (7& 28 days) and any other reports which are relevant with the structure shall be submitted.
 - (f) All the test shall be certified by Mauritius Standard Bureau or any other recognized professional institution and copies of the test certificates shall be submitted to the Client.
 - (g) Any other tests required for the purpose of the design of tower/foundation.
- 8.3. All other detailed calculations shall be submitted in the design report within two copies. Two sets of hard copies of workshop drawings and softcopies in AutoCAD.
- 8.4. After verification, MTML will issue a written instruction for the start of the implementation of the tower works.

- 8.5. Any other information that the Client or Local Authority may require for assessing and evaluating the designs of the towers and associated works shall also be submitted.
- 8.6. Contractor may be request to attend any meeting on site or respond to queries to the Local Authority or any other concern party.

9 STRUCTURAL STEEL SPECIFICATION

9.1. QUALITY OF MATERIALS AND WORKMANSHIP

The quantity of all materials and workmanship used in the execution of this Contract shall comply with the requirements of most recent issues of the following British Standards and Codes of Practice, including all amendments to date of calling for Tenders

9.2. FABRICATION

(a) CUTTING AND BENDING

All members, plates, brackets, etc, shall be neatly and accurately sheared, sawn, or profiled to the required shape. Where steel is oxy-cut to shape, care shall be taken to preserve the full finished sizes required.

If members or plates are bent or set, the bends or sets shall be correctly made to the radii or angles specified without leaving hammer marks. The material may be heated to permit this. Material that has been heated shall be annealed to approval.

(b) PUNCHING & DRILLING

Holes for black bolts shall be drilled or punched 1/14" larger in diameter than the bolt used. Holes for high tensile friction grip bolts shall be drilled or sub-punched and reamed to 1/16" larger in diameter than the specified bolts sizes.

All drilled holes shall be parallel sided and shall be drilled with the axis of the holes perpendicular to the surface. Badly drills holes shall either be reamed out if approved and larger bolts fitted or otherwise as directed. All rough arises shall be ground off. Holes for bolts in material thicker than 5/8" must be drilled. When holes are drilled in one operation through two or more thickness of material, the parts shall be separated after drilling and all burrs removed before assembly. Holes for bolts shall not be formed by a gas cutting process.

9.3. FASTENINGS

(a) BOLTING

All bolts used shall be of such length that at least one full thread is exposed beyond the nut after the nut has been tightened. Where a nut or bolt head would bear on an inclined surface, a bevelled washer of the correct shape shall be interposed between the two surfaces. Bevelled washers shall not be allowed to get out of position during fabrication and erection and for this purpose may be spot-welded to the steel surface. Bevelled washers for use with high tensile bolts may be welded.

(b) **BLACK BOLTS, NUTS & WASHERS**

All Black Bolts, Nuts and Washers, shall comply with requirements of BS 4190.

(c) **HIGH TENSIBLE BOLTS, NUTS & WASHERS, FRICTION GRIP BOLTS**

All High Tensile steel Bolts, Nuts and Washers used in friction grip joints shall comply with the requirements of BS 3139 and shall be used in accordance with BS 3294.

9.4. ELECTRIC WELDING

All welding shall be carried out in strict accordance with the requirements of BS 5135 and electrodes shall comply with BS 639.

Fusion faces shall be free from irregularities such as tears, fins, etc, which would interfere with the deposition of weld metal.

Fusion faces shall be smooth and uniform and shall be free from loose scale, slag, rust, grease, paint and/or other deleterious material.

All welds shall be of acceptable types and shall be carried out in such sequence that minimum distortion of the parts welded results.

Preparation of edges for welding shall be carried out by planning or machine flame cutting. Manual flame cutting may be permitted in certain circumstances.

Parts to be welded shall be maintained in their correct relative positions during welding, preferably by jigs.

Multiple run welds shall be carried out with each run closely following the previous run but allowing sufficient time for the proper removal of slag.

Welds in material one inch or greater in thickness shall be made by the Argon arc or similar approved process, and special precautions shall be taken to prevent weld cracking.

On completion, welds shall present a smooth and regular finish. Weld metal shall be solid throughout with complete fusion between weld metal and parent metal and between successive runs throughout the joint.

Defects shall be cut out and made good to approval in sound weld metal.

9.5. TESTING

MECHANICAL AND CHEMICAL TESTING

Contractor shall submit the following testing certificates approve by a reconise body or intuition as the technical specifications,

- (a) Tensile test as per B.S 4360 for steel member, bolts and nuts.
- (b) Impact test as per B.S 4360 for steel member, bolts and nuts.
- (c) Shear test comply with BS 4190 for bolts and nuts.
- (d) Quality Grading of steel as per B.S 5400 Part 6 or BS 5950 Part 2 for steel member, bolts and nuts.

In case the certificate do not satisfy the client or consultant, the contractor shall carried the above mention tests and bare all the cost

CONCRETE CUBE COMPRESSION TEST

Contractor shall remove 6 shall of concrete cubes. Concrete cube shall be sent to MSB for concrete cube compression test on 7 days and 28 days. It shall comply with BS 1881: Part 1 and BS 8110. All cost shall be bare by the contractor

10 CONCRETE WORK

10..1. CODE OF PRACTICE

All workmanship, materials, tests and performance in connection with the reinforced concrete work shall be in strict compliance with the latest edition of British Standard Code of Practice BS 8110 for "The Structural Use of Concrete".

- (a) All Structural Concrete shall be or grade 25 of nominal mix 1:2:4
- (b) Ready mix concrete may be used subject to the approval of the Engineer of the Employer.

10..2. MATERIALS FOR CONCRETE

All materials shall be of good quality and comply with the relevant British Standard. Any material which has been damaged contaminated or which does not comply with the specification shall not be stored or stacked without the Employer's prior approval.

(a) CEMENT

Cement for use in the Works shall, unless otherwise specified be Ordinary Portland Cement to BS 12. It shall be fresh and free from lumps or partly set particles. Cement which, in the opinion of the Employer is sub-standard, shall be rejected and removed from site.

Cement shall be stored in watertight shed, the floor of which shall be raised clear of the ground. Consignments shall be used in the order in which they are delivered.

(b) WATER

Water used for mixing concrete shall be from an approved source, clean fresh, free from acid, oil, pollution from industrial or farmyard waste or other organic or inorganic matter in solution or suspension in such amounts as to impair the strength or durability of the concrete.

(c) AGGREGATES

Aggregates shall conform with the requirements of BS 882.

10.3. COMPACTION OF CONCRETE

At all times during which concrete is being placed, the contractor shall provide adequate trained and experienced labour to ensure that the concrete is compacted in the forms to the satisfaction of the client.

Concrete shall be placed neither at a rate greater than will permit satisfactory compaction nor to a depth greater than 750 mm before it is completed.

10.4. VIBRATION OF CONCRETE

During and immediately after placing, the concrete shall be thoroughly compacted by means of continuous tamping, spading, slicing, rodding, forking and vibration. Vibration is required for all concrete of grades with 28 days strength greater than 15N/mm².

Care shall be taken to fill every part of the forms, to work the concrete under and around the reinforcement without displacing it and to avoid disturbing recently placed concrete, which has begun to set. Any water accumulating on the surface of newly placed concrete shall be removed and no further shall be placed thereon until such water is removed.

10.5. DEFECTS ON CONCRETE

Any honeycombing, cavities or other defects in concrete shall on no account be patched or repaired but shall be brought to the attention of the Employer who will give instruction for the action to be taken. All remedial works shall be at the contractor's expense.

10.6. FORMWORK

All formwork and shuttering shall be of sound timber or other approved material and of adequate sizes, strength and construction to withstand the loading from the placing and consolidation of concrete without distortion, stringing or other movement. All joints cement grout and to avoid the formation of fins or other blemishes.

- (a) The following minimum intervals of time shall be allowed between placing concrete and removal of shuttering:

	Days
Beam sides wall and columns	2
Slabs with props left in place	7
Removal of props to slabs	14
Beam soffits with props left in	10
Removal of props to beam	14
Cantilever beam and slabs with props left in	14
Removal of props to cantilever beams and slab	21

10..7. CURING AND PROTECTION

Within four hours of the surface being finished, it shall be protected against too rapid drying by means of damp hessian or other approved means placed carefully on the surface and kept damp and in position for 7 days. The most critical period is the first 48 hours old. Care shall be taken that in their removal no damage is done to the concrete, but should any damage occur the Contractor shall be responsible for making it good.

10..8. PRECAST CONCRETE

Precast concrete shall be cast in properly made strong moulds true to the shapes required. For work described as "fair face" the moulds shall be lined with hardboard, sheet metal, or other approved material. The concrete shall be thoroughly vibrated into the moulds and shall not be removed from them until seven days after placing the concrete, but the sides may be removed after two days providing the concrete is not damaged by so doing.

The precast work shall be cast under cover and shall remain under same for seven days in the moulds and a further seven days after removal of the moulds. During the whole of this period the concrete shall be protected by hessian or other approved material kept wet. It shall then be removed from the cover and stacked in the open for at least seven days to season.

10..9. STEEL REINFORCEMENT

The steel reinforcement shall comply with the latest requirements of the following British Standards:

Round Mild, Medium Tensile
and High Tensile Steel Bars to MS 10

Hot rolled deformed bars for
the reinforcement of concrete to MS 10

Cold twisted steel bars

to MS 10

Fabric Reinforcement

to BS 4482 & BS 4483

(a) All reinforcement shall be free from oil, grease, dirt, paint and loose rust scales etc., and the Contractor must allow for cleaning, wire brushing, etc as necessary to achieve this. All steel bars must be cut and bent cold in accordance with BS 4466 and to the dimensions shown on the drawings.

(b) Position of correctness of reinforcement.

No concrete casting shall be commenced until the Engineer of client has inspected the reinforcement in position and until he has approved the same. The Contractor shall give two clear days notice of his intention to concrete. The minimum period between two inspections shall be 24 hours.

Irrespective of whether any inspection and/or approval of the fixing of the reinforcement has been carried out as above, it shall be the Contractor's sole responsibility to ensure that the reinforcement complies with the details on the drawings and is fixed exactly in positions shown therein and in position to give the prescribed cover.

The Contractor will be held entirely responsible for any failing or defect in any portion of the reinforced concrete structure.

Unless otherwise permitted by the client, reinforcement shall not be bent after being embedded in hardened concrete.

Unless otherwise instructed concrete cover to reinforcement bars in any face shall be:

Foundations against earth face	75 mm
Foundations against blinding	50 mm
Walls below ground or against water face	35 mm
Columns	30 mm
Ground Beams	25 mm
Beams and walls	20 mm
Slab and handcore	20 mm
Slabs suspended	13 mm

The above cover shall be increased by 5 mm for fairface concrete.

The above cover shall be increased by 25 mm for underground work likely to be effected by seawater.

11 EXCAVATION WORKS

11..1. DEALING WITH WATER

The Contractor's attention is drawn to the depths below ground level of the foundations and the consequent possibility of having to deal with water. Unless otherwise specified, the Contractor will be required by pumping or other means to keep the excavation dry during construction.

11..2. SHORING

The Contractor shall provide for upholding sides of excavation with timber shoring or other methods approved by the Engineer.

11..3. EXCAVATION DIMENSIONS

If the contractor excavates to any widths or depths greater than those shown on the drawings, or as instructed by the Engineer he shall, at his own expense, fill in such widths or depths beyond the instructed or shown with concrete Grade "D" to the satisfaction of the Engineer.

11..4. BOTTOMS OF EXCAVATIONS TO RECEIVE FOUNDATIONS

The Contractor shall inform the employer when secure bottoms to the excavations have been obtained and approval be thereby sought before any concreting is done. Any concreting work executed prior to inspection, shall if so directed, be removed and new work substituted after the excavations have been approved, all at the Contractor's expense.

11..5. MATERIALS FOUND IN EXCAVATION

No material found in excavations is to be used in the works without the written permission of the client.

11..6. HARDCORE FILLING

Hardcore under floors, etc shall be good hard stone ballast to the approval of the client broken to pass not greater than a 150 mm ring or to be 75% of the finished thickness of the layers being compacted whichever is the lesser and graded so that it can be easily and thoroughly compacted by rolling.

The hardcore is to be laid in layers each of a consolidated thickness not exceeding 225mm and well watered and rolled with a vibrating roller (minimum 1 1/4 tons) or a ten ton roller. Where rolling is impossible, compaction shall be by hand or mechanical tampers. The top surface of the hardcore shall be leveled or graded to falls as required and blinded with similar material broken to 25 mm gauge and surfaced with a 15 mm layer of rock sand, well watered and rolled to receive concrete as described.

A compaction test comply with BS 1377: Part 4 may be request to be done in case of settlement found.

Section V

SCHEDULE OF REQUIREMENTS

Part A: Tower Material Supply

SI No.	Description	Unit	Total Quantity	Remarks
1	Ground Based Palm Tree Type Tower (PTT)			These quantities are for evaluation purposes. Ordering of this item shall be as per actual site requirement of MTML
1.1	35 meter	Per Site	3	
1.2	40 meter	Per Site	1	
2	Ground Based lattice Type Tower (GBT)			These quantities are for evaluation purposes. Ordering of this item shall be as per actual site requirement of MTML
2.1	35 meter	Per Site	3	
2.2	45 meter	Per Site	1	

3	Roof Top Tower (RTT)– Lattice structure			These quantities are for evaluation purposes. Ordering of this item shall be as per actual site requirement of MTML
3.1	10 meter	Per Site	3	
3.2	15 meter	Per Site	2	
4	Roof Top Pole (RTP)			These quantities are for evaluation purposes. Ordering of this item shall be as per actual site requirement of MTML
4.1	3 poles of 4 meter each	Per Site	3	
4.2	3 poles of 6 meter each	Per Site	3	
4.3	3 poles of 4 meter each + elevated column of 3 meter height	Per Site	1	
4.4	3 poles of 6 meter each + elevated column of 3 meter height	Per Site	1	
4.4	Single Pole of 8 meters + elevated column of 4 meter height	Per Site	1	
5	RTP with Camouflaging structure			These quantities are for evaluation purposes. Ordering of this item shall be as per actual site requirement of MTML
5.1	Single pole camouflaged 4 meter (chimney or lamp shade type)	Per site	1	
5.2	Single pole camouflaged 6 meter (chimney or lamp shade type)	Per site	1	
5.3	Single pole 10 meter camouflaged as Palm tree	Per site	1	

6	Accessories			
6.1	Provisioning of Lightning protection and Earthing system for tower and BTS equipments	Per unit		For all tower type structures
6.2	Aviation lamp provisioning	Per unit		For all tower type structures
6.3	Concrete flooring of ground based sites (10 m X 10 m)	Per site		For lattice & palm tree structures
6.4	Fencing and provision of iron gate ground based sites	Per site		For lattice & palm tree structures
6.5	Provisioning of Equipment Foundation & cable tray	Per Site		For all tower type structures
6.6	Provisioning of access Ladder	Per Site		For Roof Top structures
7	Spares for warranty & AMC			
8	Any Other Item not mentioned in RFP, but is required for completion of project as per RFP			
9	Any Other Item not mentioned in RFP and not required for project but which bidder feels would help MTML in providing better services, including various option for camouflaging			These would be optional items and will not be included for evaluation but may be considered for ordering.

Note: - The quantities indicated in above Bill of Materials are minimum except for those items where specifically it has been mentioned in remarks column that "These quantities are for evaluation purposes. Ordering of this item shall be as per actual site requirement of MTML". Bidders shall quote for the actual B.O.M required to meet the tender obligations for successful completion of project.

MTML reserves the right to amend the number of sites and/or split the number of sites to more than one contractor prior to allocation.

Part B: Tower Installation & Services

SI No.	Description	Unit	Total Quantity	Remarks
1	Ground Based Palm Tree Type Tower (PTT)			These quantities are for evaluation purposes. Ordering of this item shall be as per actual site requirement of MTML
1.1	35 meter	Per Site	3	
1.2	40 meter	Per Site	1	
2	Ground Based lattice Type Tower (GBT)			These quantities are for evaluation purposes. Ordering of this item shall be as per actual site requirement of MTML
2.1	35 meter	Per Site	3	
2.2	45 meter	Per Site	1	

3	Roof Top Tower (RTT)– Lattice structure			These quantities are for evaluation purposes. Ordering of this item shall be as per actual site requirement of MTML
3.1	10 meter	Per Site	3	
3.2	15 meter	Per Site	2	
4	Roof Top Pole (RTP)			These quantities are for evaluation purposes. Ordering of this item shall be as per actual site requirement of MTML
4.1	3 poles of 4 meter each	Per Site	3	
4.2	3 poles of 6 meter each	Per Site	3	
4.3	3 poles of 4 meter each + elevated column of 3 meter height	Per Site	1	
4.4	3 poles of 6 meter each + elevated column of 3 meter height	Per Site	1	
4.4	Single Pole of 8 meters + elevated column of 4 meter height	Per Site	1	
5	RTP with Camouflaging structure			These quantities are for evaluation purposes. Ordering of this item shall be as per actual site requirement of MTML
5.1	Single pole camouflaged 4 meter (chimney or lamp shade type)	Per site	1	
5.2	Single pole camouflaged 6 meter (chimney or lamp shade type)	Per site	1	
5.3	Single pole 10 meter camouflaged as Palm tree	Per site	1	

6	Accessories			
6.1	Provisioning of Lightning protection and Earthing system for tower and BTS equipments	Per unit		For all tower type structures
6.2	Aviation lamp provisioning	Per unit		For all tower type structures
6.3	Concrete flooring of ground based sites (10 m X 10 m)	Per site		For lattice & palm tree structures
6.4	Fencing and provision of iron gate ground based sites	Per site		For lattice & palm tree structures
6.5	Provisioning of Equipment Foundation & cable tray	Per Site		For all tower type structures
6.6	Provisioning of access Ladder	Per Site		For Roof Top structures
7	Site survey & acquisition of permits	Per site		For all tower type structures
8	Design of towers and structural suitability of the building/ installations	Per Site		For all tower type structures
9	Spares for warranty & AMC			
10	Any Other Item not mentioned in RFP, but is required for completion of project as per RFP			
11	Any Other Item not mentioned in RFP and not required for project but which bidder feels would help MTML in providing better services, including various option for camouflaging			These would be optional items and will not be included for evaluation but may be considered for ordering.
12	Annual Maintenance Contract			
12.1	Year 1			
12.2	Year 2			
12.3	Year 3			
13	Any other item/Services to meet the tender requirement. (Details to be given)			

Note: - The quantities indicated in above Bill of Materials are minimum except for those items where specifically it has been mentioned in remarks column that "These quantities are for evaluation purposes. Ordering of this item shall be as per actual site requirement of MTML". Bidders shall quote for the actual B.O.M required to meet the tender obligations for successful completion of project.

MTML reserves the right to amend the number of sites and/or split the number of sites to more than one contractor prior to allocation.

Section VI

Delivery Schedule

A	Completion of Site Survey for suitable candidates	Within 3 months from the date of PO
B	Application for BLUP to municipalities for each site	Within 3 weeks of handing over the site agreement by MTML, of each site
C	Completion of installation and Commissioning of Towers/ Poles and other civil works	After the date of receipt of BLUP & handover, for each site: <ol style="list-style-type: none">1. For GBT/Palm tree – 8 weeks2. For RTT – 5 weeks3. For Poles – 2 weeks4. For camouflaged Structure – 4 weeks

SECTION-VII A – Ground Based Palm Tree Type Tower (PTT)

**BID FORM & PRICE SCHEDULE
(For Tower supply and installation)**

**TABLE-I
(EQUIPMENT & MATERIAL)**

Figures in USD

S.No.	Item Description (As per Schedule of Requirement)	Quantity	Basic Unit Price	Taxes & Duties (Out side Mauritius)	Freight, Forwarding, Packaging	Insurance	Any Other Charges	Basic all inclusive Price {(4)+(5)+(6)+(7)+(8)}	Discounts	Total Price {(9)-(10)}x(3)
1	2	3	4	5	6	7	8	9	10	11

**TABLE-II
(SERVICE CHARGES)**

Figures in USD

S.No.	Item description	
1.	Installation, Testing, & Commissioning	

Note:

The vendor shall give break up of the Installation, Testing & Commissioning costs for various systems & sub systems, separately for each tower. This may facilitate the purchaser, at its sole discretion, to consider payment to the Contractor for different services at different times as per completion of the same.

**TABLE-III
COMPREHENSIVE AMC FOR 3 YEARS AFTER WARRANTY PERIOD**

S.No.	Item Description	Year wise AMC Charges		
		Year 1	Year 2	Year 3

**TABLE-IV
Cost of Spare**

Figures in USD

S.No.	Item Description	Quantity	Basic Unit Price	Taxes & Duties (Out side Mauritius)	Freight, Forwarding, Packaging	Insurance	Any Other Charges	Basic all inclusive Price {(4)+(5)+(6)+(7)+(8)}	Discounts	Total Price {(9)-(10)}x(3)
1	2	3	4	5	6	7	8	9	10	11

SECTION-VII B – Ground Based lattice Type Tower (GBT)

**BID FORM & PRICE SCHEDULE
(For Tower supply and installation)**

**TABLE-I
(EQUIPMENT & MATERIAL)**

Figures in USD

S.No.	Item Description (As per Schedule of Requirement)	Quantity	Basic Unit Price	Taxes & Duties (Out side Mauritius)	Freight, Forwarding, Packaging	Insurance	Any Other Charges	Basic all inclusive Price {(4)+(5)+(6)+(7)+(8)}	Discounts	Total Price {(9)-(10)}x(3)
1	2	3	4	5	6	7	8	9	10	11

**TABLE-II
(SERVICE CHARGES)**

Figures in USD

S.No.	Item description	
1.	Installation, Testing, & Commissioning	

Note:

The vendor shall give break up of the Installation, Testing & Commissioning costs for various systems & sub systems, separately for each tower. This may facilitate the purchaser, at its sole discretion, to consider payment to the Contractor for different services at different times as per completion of the same.

**TABLE-III
COMPREHENSIVE AMC FOR 3 YEARS AFTER WARRANTY PERIOD**

S.No.	Item Description	Year wise AMC Charges		
		Year 1	Year 2	Year 3

**TABLE-IV
Cost of Spare**

Figures in USD

S.No.	Item Description	Quantity	Basic Unit Price	Taxes & Duties (Out side Mauritius)	Freight, Forwarding, Packaging	Insurance	Any Other Charges	Basic all inclusive Price {(4)+(5)+(6)+(7)+(8)}	Discounts	Total Price {(9)-(10)}x(3)
1	2	3	4	5	6	7	8	9	10	11

SECTION-VII C – Roof Top Tower (RTT)– Lattice structure

**BID FORM & PRICE SCHEDULE
(For Tower supply and installation)**

**TABLE-I
(EQUIPMENT & MATERIAL)**

Figures in USD

S.No.	Item Description (As per Schedule of Requirement)	Quantity	Basic Unit Price	Taxes & Duties (Out side Mauritius)	Freight, Forwarding, Packaging	Insurance	Any Other Charges	Basic all inclusive Price {(4)+(5)+(6)+(7)+(8)}	Discounts	Total Price {(9)-(10)}x(3)
1	2	3	4	5	6	7	8	9	10	11

**TABLE-II
(SERVICE CHARGES)**

Figures in USD

S.No.	Item description	
1.	Installation, Testing, & Commissioning	

Note:

The vendor shall give break up of the Installation, Testing & Commissioning costs for various systems & sub systems, separately for each tower. This may facilitate the purchaser, at its sole discretion, to consider payment to the Contractor for different services at different times as per completion of the same.

**TABLE-III
COMPREHENSIVE AMC FOR 3 YEARS AFTER WARRANTY PERIOD**

S.No.	Item Description	Year wise AMC Charges		
		Year 1	Year 2	Year 3

**TABLE-IV
Cost of Spare**

Figures in USD

S.No.	Item Description	Quantity	Basic Unit Price	Taxes & Duties (Out side Mauritius)	Freight, Forwarding, Packaging	Insurance	Any Other Charges	Basic all inclusive Price {(4)+(5)+(6)+(7)+(8)}	Discounts	Total Price {(9)-(10)}x(3)
1	2	3	4	5	6	7	8	9	10	11

SECTION-VII D – Roof Top Pole (RTP)

**BID FORM & PRICE SCHEDULE
(For Tower supply and installation)**

**TABLE-I
(EQUIPMENT & MATERIAL)**

Figures in USD

S.No.	Item Description (As per Schedule of Requirement)	Quantity	Basic Unit Price	Taxes & Duties (Out side Mauritius)	Freight, Forwarding, Packaging	Insurance	Any Other Charges	Basic all inclusive Price {(4)+(5)+(6)+(7)+(8)}	Discounts	Total Price {(9)-(10)}x(3)
1	2	3	4	5	6	7	8	9	10	11

**TABLE-II
(SERVICE CHARGES)**

Figures in USD

S.No.	Item description	
1.	Installation, Testing, & Commissioning	

Note:

The vendor shall give break up of the Installation, Testing & Commissioning costs for various systems & sub systems, separately for each tower. This may facilitate the purchaser, at its sole discretion, to consider payment to the Contractor for different services at different times as per completion of the same.

**TABLE-III
COMPREHENSIVE AMC FOR 3 YEARS AFTER WARRANTY PERIOD**

S.No.	Item Description	Year wise AMC Charges		
		Year 1	Year 2	Year 3

**TABLE-IV
Cost of Spare**

Figures in USD

S.No.	Item Description	Quantity	Basic Unit Price	Taxes & Duties (Out side Mauritius)	Freight, Forwarding, Packaging	Insurance	Any Other Charges	Basic all inclusive Price {(4)+(5)+(6)+(7)+(8)}	Discounts	Total Price {(9)-(10)}x(3)
1	2	3	4	5	6	7	8	9	10	11

SECTION-VII E – RTP with camouflaging structure

**BID FORM & PRICE SCHEDULE
(For Tower supply and installation)**

**TABLE-I
(EQUIPMENT & MATERIAL)**

Figures in USD

S.No.	Item Description (As per Schedule of Requirement)	Quantity	Basic Unit Price	Taxes & Duties (Out side Mauritius)	Freight, Forwarding, Packaging	Insurance	Any Other Charges	Basic all inclusive Price {(4)+(5)+(6)+(7)+(8)}	Discounts	Total Price {(9)-(10)}x(3)
1	2	3	4	5	6	7	8	9	10	11

**TABLE-II
(SERVICE CHARGES)**

Figures in USD

S.No.	Item description	
1.	Installation, Testing, & Commissioning	

Note:

The vendor shall give break up of the Installation, Testing & Commissioning costs for various systems & sub systems, separately for each tower. This may facilitate the purchaser, at its sole discretion, to consider payment to the Contractor for different services at different times as per completion of the same.

**TABLE-III
COMPREHENSIVE AMC FOR 3 YEARS AFTER WARRANTY PERIOD**

S.No.	Item Description	Year wise AMC Charges		
		Year 1	Year 2	Year 3

**TABLE-IV
Cost of Spare**

Figures in USD

S.No.	Item Description	Quantity	Basic Unit Price	Taxes & Duties (Out side Mauritius)	Freight, Forwarding, Packaging	Insurance	Any Other Charges	Basic all inclusive Price {(4)+(5)+(6)+(7)+(8)}	Discounts	Total Price {(9)-(10)}x(3)
1	2	3	4	5	6	7	8	9	10	11

Bid Security Form

RFP No.

Dated

Ref No. :.....

Date :.....

To
Mahanagar Telephone (Mauritius) Limited
63, Cyber City, Ebene
Mauritius.

Whereas [Name of Vendor] hereinafter called “The VENDOR” has submitted its Offer dated [date of submission] for the project as per the above RFP in Republic of Mauritius” hereinafter called “The Equipment”.

KNOW ALL PEOPLE that we [name of bank] of [name of country] having our registered office at [Address of Bank] hereinafter called “The BANK” are bound unto Mahanagar Telephone (Mauritius) Limited, hereinafter called “The MTML” by the amount of US \$ (mention amount as per RFP) willingly and truly to be paid out to the said MTML upon entering any of the conditions specified below. The BANK, binds itself, its successors and assigns by these presents sealed with the common seal of the said bank this day of 20....

The conditions of this obligation are:

- a) If the VENDOR withdraws its Offer during the period of Offer validity specified by the VENDOR in its offer submitted to MTML;
- or
- b) If the VENDOR is selected for the second stage of the bidding process by the MTML, and is notified accordingly during the period of Offer validity if selected for award of contract fails to sign the contract within one month from the date of acknowledgement of Letter of Intent (LoI) and furnish the Performance Security in accordance Clause 28.2 of Section II and Clause 4 of Section III, General Condition of Contract.

We, the BANK , undertake to pay to the MTML up to the above mentioned amount upon receipt of its first written demand without the MTML having to substantiate its demand, provided that in its demand the MTML will note the amount claimed by it is due to the occurrence of one or both of the two conditions indicated above, specifying the occurred condition or conditions.

This guarantee will remain valid for days from the date of submission and any demand in respect thereof should reach the bank not later than date.

Signature of Bank

Seal of Bank

Performance Guarantee Form

RFP No.

Dated

Ref No. :.....

Date :.....

To

Mahanagar Telephone (Mauritius) Limited
63, Cyber City, Ebene
Mauritius.

Whereas [Name of Vendor] hereinafter called "The VENDOR" has agreed for the executing the project as per the above RFP in Republic of Mauritius hereinafter called "The Equipment". as per the conditions of Letter of Intent (LoI) issued to the VENDOR by Mahanagar Telephone (Mauritius) Limited, hereinafter called "The MTML"

AND WHEREAS it has been stipulated by you in the said Letter of Intent that the VENDOR shall furnish you with a bank guarantee by a reputed first class commercial bank located in Mauritius specified therein as security for compliance with the VENDOR's performance obligations.

AND WHEREAS we have agreed to give the appointed VENDOR a guarantee:

THEREFORE, we hereby affirm that we are guarantors and responsible to you on behalf of the VENDOR up to a total of US DOLLAR..... {Amount of the Guarantee in Words}. We undertake to pay you, upon your first written demand declaring the VENDOR to be in default of its obligations and without cavil or argument, any sum or sums within the limits of [Amount of Guarantee] as aforesaid, without your needing to provide or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the day of 20..

Signature of Bank

Seal of Bank

LETTER OF AUTHORISATION FOR ATTENDING OPENING OF OFFERS
(to reach CEO MTML before date/ time of opening of offers)

Sub: Authorization for attending opening offers on _____ against RFP
RFP No. Dated

Following persons are hereby authorized to attend the opening of offers for the
RFP _____ mentioned above on _____ behalf of
_____ (Name of Vendor) in
order of preference given below:

1. Name _____

Specimen Signatures _____

2. Name _____

Specimen Signatures _____

Signature of vendor
or
Officer authorized to sign the offer
on behalf of the Vendor
(Attested copy of Attorney must be attached)

Note:

Maximum of two representatives may be permitted to attend opening of offers. In case where it is restricted to one, first preference will be allowed.

Permission for entry to the hall where offers are opened, may be refused in case, authorization as prescribed above is not received.

Annexure-IV

ANNUAL MAINTENANCE CONTRACT (AMC)

SCOPE OF CONTRACT

1. Annual Maintenance Contract shall start immediately after expiry of the warranty period of three years after the take over of a site. The comprehensive Annual Maintenance Contract (Herein after called AMC) shall be for three years.
2. During the period of AMC the successful vendor (herein after called contractor) shall :
 - i) Diagnose the faults/ defects
 - ii) Rectify the faults/ defects detected
 - iii) Repair / replace the faulty parts of the installations
 - iv) Check for the damaged paint and re-paint the affected area
 - v) Painting of the complete tower if major portion of paint is damaged and tower portions rusted
 - vi) Check for rusting in installations and cure/ replace the affected parts
 - vii) Check the earthing system periodically and ensure the earth resistance within the limit
 - viii) Carry out the periodic preventive maintenance to ensure installations in good condition
 - ix) Upkeep the site through proper cleaning

TERMS AND CONDITIONS

1. The vendor shall at the time of submitting the offer submit the proposal specifying the fault control centre location and how vendor proposes for carrying out repair under AMC. He shall also indicate what spare will be kept in different locations. The infrastructure planned to be created by the vendor to his obligations under AMC and his action plan to deal with the various situations arising out of faults shall be clearly indicated.
2. The AMC charges shall be paid by the purchaser to the contractor on quarterly basis at the beginning of the respective quarter. The contractor shall submit performance bank guarantee for the amount of AMC at the time of signing of the AMC agreement.
3. The contractor shall maintain spare / stock of various items as required for the purpose of rectifying the fault and shall keep an up to date records. The entire process of repair/ replacement of defective components have to be completed within 15 days after it has been reported. In case of delay beyond 15 days the vendor shall be charged penalty at the rate of USD 80 per day for 30 days and beyond that @ USD200 per day.

4. After the expiry of warranty/ annual maintenance contract, it shall be optional for MTML not to enter the AMC contract further with the contractor.
5. The contractor shall prepare the schedule of preventive maintenance for each quarter and shall submit the same to MTML in advance. The preventive maintenance shall not affect the normal functioning of the system.
6. The contractor shall maintain a consolidated log book at its central location and also at each site (to be kept with MTML) wherein the corrective / preventive maintenance undertaken by the contractor shall be entered and same shall be countersigned by the system in-charge.
7. Replacement of any part should be done with the approval of MTML personnel and a record is to be maintained with the system in charge.

8. FORCE MEJEURE

Neither the MTML nor the system maintenance firm shall be liable to the other for any delay in or failure of performance of their respective obligation under the agreement caused by occurrences beyond the control of MTML or the system maintenance firm (as the case may be) including but not limited to fire (including failure or reductions), acts of God, acts to the public enemy, war, insurrections, riots, strikes, lockouts, sabotage, any law, status or ordinance, thereof any other local authority, or any compliance therewith or any other causes, contingencies of circumstances similar to the above. Either party shall promptly but not later than twenty days thereafter notify the commencement and cessation of such contingencies and if such contingencies continues beyond three month. Both parties agree upon the equitable solution for termination of these agreement or otherwise decide the course of action to be adapted.

9. The successful vendor will be solely responsible for the maintenance and repair of the installations and parts, and MTML shall not be liable to interact with any of the partners / collaborators or the sub contractors of the contractor.
10. **Termination Clause:** If the purchaser is not satisfied with the performance of the vendor during AMC he should be able to terminate the AMC during its currency, after giving three months notice to the vendor and in such an event will hand over all the spares as indicated in clause 6.