



**L E S O T H O  
C O M M U N I C A T I O N S  
A U T H O R I T Y**

**REQUEST FOR PROPOSAL (RFP)**

**CONSTRUCTION OF BASE TRANSCEIVER STATIONS PROJECT**

**MARCH 2021**

## 1 INTRODUCTION

The Lesotho Communications Authority (LCA) is the regulatory body for the communications sector in Lesotho. Its primary mandate is to facilitate the development and provision of affordable and sustainable communications services while promoting free and fair competition and ensuring consumer protection.

Section 33 of the Communications Act, 2012 established the Universal Service Fund for the promotion of universal access to communications services especially in un-served and underserved areas. It is a mechanism that induces and enables a liberalised communications sector to extend infrastructure investment to rural and remote areas.

The objective of this project is to achieve the mandate of the LCA and the goals and objectives of the NSDP II by extending mobile telephony and mobile broadband services to communities and areas that are not currently covered by any of the existing networks.

The areas that are being targeted in this phase of the BTS project are grouped into clusters of communities.

## 2 TENDER SPECIFICATIONS

The purpose of this RFP is to solicit proposals from qualified, professional and credible service providers for the design and construction of BTS stations, access road and power systems to facilitate expansion of telecoms services (voice and broadband) in un-served and underserved areas and communities in the identified districts.

The proposed site location should provide the best possible coverage and be in line-of-sight with the existing operators networks. The coordinates in the table below are indicative of the possible site locations.

**Table 1: List of areas to be served**

District	Area	Coordinates
<b>Leribe</b>	Ha Makopela (including Sekhutlo-se-monate Valley)	Lat 29S 16' 33.11" Long 28E 36' 45.63"
	Matebeleng (Ha Mali), Ha Lelingoana, Phukheng, Taung Ha Seemane, Ha Palama, Ha Ramoji, Patuoe, Ha Relebese, Ntsirele, Ha Mpeako, Ha Majela, Ha Makopela	
<b>Berea</b>	Phororong and Menyameng Valleys	Lat 29S 04'00.35", Long 28E 04'46.76"
	Ha Seme, Ha Jobo, Borakapane, Ha Lehomo, Liphakoeng, Ha Sekhahlela, Lichecheng, Ha Ntima (letlapeng), Ha Mongoato, Ha Nkunyana, Ha Phatsoa, Ha Lesibe, Ha Belabesi, Vukazenzela, Bophephetsa, Matemeng, Ha `Molaoa, Ha Nonyana, Ha Saena, Moreneng, Maholong, Ha Chakatsa, Ha Makoanyane, Ha Matekane (Kota), Ha Taaso, Mafotholeng, Pokellong. Menyameng (there is a primary school) Ha Chale, Rorisang (there is primary school), Ha Mampitle, Ha `Mapoto, Lipetu (Ha Fako) Ha Teisi.	
<b>Quthing</b>	Sebapala	Lat 30S 19' 33.25" Long 27E 54' 20.45"
	Mabele a tlala, Ha Motsapi, Ha Mosenka, Sekhutlong, Ha Mofihla, Photha Phote, Likolobeng, Tosing	

*NB: The coordinates are indicative positions, they do not necessarily provide optimum coverage into the identified villages.*

### **3 SCOPE**

The scope of this tender includes the following four sections:

#### **3.1 Tower structure:**

Design and construction of a 40 meters ground-based tower (lattice structure).

#### **3.2 Power system**

Design and construction of solar power system shall consist of solar panel, solar charger and battery backup.

#### **3.3 Fencing**

Construct a galvanised palisade fence of 2.4m height and 14m x 14m.

#### **3.4 Access road**

Design and construct high difficulty access road up to the base station site.

### **4 TECHNICAL SPECIFICATIONS FOR THE TOWER STRUCTURE**

The civil works for tower structures shall be in conformity with international standards. The quality of all the below materials and workmanship should clearly be linked to a relevant international standard or equivalent as shown in Table 2 below.

**Table 2: Technical Specifications**

ITEMS	DESCRIPTION
<b>Galvanising</b>	<b>EN ISO 1461: 2009</b> - A guide to hot dip galvanizing standard
<b>Welding qualification</b>	EN/ISO 2564 2004-2008 - Carbon fibre laminates
<b>Steel fabrication</b>	<b>EN 1090-1</b> - Requirements for conformity assessment for structural components, <b>EN 1090-2</b> - Technical requirements for the execution of steel structures
<b>Welding coordination and Welding quality</b>	<b>ISO 14731 : 2019</b> - Welding coordination
<b>Design Criteria</b>	<b>BS 5950 Part 1-2000</b> - Steelwork design guide
<b>Wind loading calculations</b>	<b>CP3 CHAPTER V Part 2 Wind Loads 1972</b> - Code of basic data for the design of buildings. <b>Loading:</b> Wind loads
<b>Concrete</b>	<b>BS 8110: 1997 Parts 1, 2 and 3</b> - Structural use of concrete. Code of practice for design and construction
<b>Bolts and nuts</b>	<b>BS 8110</b> - Structural use of concrete. Code of practice for design and construction
<b>Code for tower masts</b>	<b>BS8100</b> - Structural use of concrete. Code of practice for design and construction
<b>Steel section and plates</b>	<b>EN 10025-1</b> - General technical delivery conditions
<b>Structural hollow steel sections</b>	<b>EN 10210-1</b> - Hollow Sections - Seamless Steel Pipe, <b>EN 10219-1</b> - Cold formed welded structural hollow sections of non-alloy and fine grain steels. Technical delivery requirements
<b>Guidelines for the selection of protective system for steel</b>	<b>EN ISO 12944 Parts 1 to 8</b> - Paints and varnishes – Corrosion protection of steel structures by protective paint systems
<b>Protection against corrosion</b>	<b>EN 14713</b> - Zinc coatings – Guidelines and recommendations for the protection against corrosion of iron and steel in structures – Part 1: General principles of design and corrosion resistance

## 5 GENERAL SPECIFICATIONS

### 5.1 Tower structure

The design of the tower structure shall consider the location, adverse weather conditions and optimum coverage to the identified areas. The minimum requirements for the towers are as follows:

- 5.1.1 Structural design
- 5.1.2 Galvanizing
- 5.1.3 Antenna mountings
- 5.1.4 Feeder racks and cable trays
- 5.1.5 Paintings
- 5.1.6 Foundations
- 5.1.7 Access staircase and ladders
- 5.1.8 Earthing system and lightening protection
- 5.1.9 Signage and aviation light
- 5.1.10 Equipment slabs

### 5.2 Power systems

The base stations shall use the solar power system that will provide battery autonomy of 5 days and shall comprise of the following:

- 5.2.1 Solar arrays
- 5.2.2 Battery banks
- 5.2.3 Charging system
- 5.2.4 Output voltages of - 48volts DC and 220volts AC

### 5.3 Site fencing

The site fencing shall comprise of the following:

- 5.3.1 Entrance gates of 2 metres wide
- 5.3.2 Galvanised palisade of 14 x 14 metres wide
- 5.3.3 Barbed wire above the palisade fencing
- 5.3.4 Warning signage

### 5.4 Access road

The construction of access road shall be responsive to the terrain per site/area. The road shall be a gravel with:

- 5.4.1 A ground crowned driving surface
- 5.4.2 A shoulder area that slopes directly away from the edge of the driving surface
- 5.4.3 A ditch

## 6 SPECIFIC TERMS AND CONDITIONS

Bidders shall meet the following terms and conditions:

- 6.1 The proposal shall indicate the full details of what shall be supplied.
- 6.2 The proposal shall include two (2) references where similar assignments were undertaken, and should specify the contact person(s), telephone numbers, physical address and other salient details pertaining to the delivery.
- 6.3 The bidder must submit business profile and the following relevant certificates:
  - 6.3.1 Valid Tax Clearance Certificate.
  - 6.3.2 Certified copy of valid Traders Licence certified at source and
  - 6.3.3 Certified copy of VAT registration certificate certified at source (*where applicable*).
- 6.4 The bidder shall submit full personal details and profiles or curriculum vitae of 3 key personnel that have relevant experience and knowledge of the service required.
- 6.5 The bidder shall pay a bid security of 2% of the proposed contract value, issued by a local bank.
- 6.6 For the site location:
  - 6.6.1 Geographical coordinates for the proposed sites shall provide optimum coverage to the identified villages
  - 6.6.2 The detailed coverage prediction maps shall be provided
  - 6.6.3 Microwave link design to the existing mobile network operator infrastructure shall be provided.
- 6.7 Project plan-

A high-level project plan indicating deliverables and duration for the four items mentioned in the scope of work (in section 3) should be provided.
- 6.8 Tower structure drawings
- 6.9 Antenna mounting structure
- 6.10 Foundations drawings
  - 6.10.1 Connection details
  - 6.10.2 Architectural and structural drawings for equipment slab
  - 6.10.3 Architectural and drawings for the site fencing works with gate
  - 6.10.4 Site plan

- 6.10.5 Stress analysis by the professional engineer
- 6.10.6 Building structure suitability and validation analysis report
- 6.10.7 Soil investigation report and any other tests required for the purpose of the design of tower/foundation

## 7 GENERAL TERMS & CONDITIONS

7.1 A mandatory site visit will take place at the identified sites on the following dates:

DISTRICT	AREA	MEETING POINT	DATE	TIME
Leribe	Ha Makopela (including Sekhutlo-se-Monate Valley)	Ha Seshote Business Area	12 April 2021	1000 hrs
Berea	Phororong and Menyameng Valleys	Kolojane Clinic	14 April 2021	1000 hrs
Quthing	Sebapala	Tosing/Mt. Moorosi Junction	16 April 2021	1000 hrs

7.2 Bidders should have registered on site by 11h45, late attendants shall not be accepted.

7.3 Any requests for clarification on the RFP must be addressed in writing to Chief Executive Officer at [lca@lca.org.ls](mailto:lca@lca.org.ls) at least five days prior to the deadline. The Authority will respond to written inquiries or queries only.

7.4 The bids must be submitted at LCA Offices on or before **29 April 2021 by 12h00** and addressed to:

The Chief Executive Officer  
 Lesotho Communications Authority  
 30 Princess Margaret Road  
 Old Europa  
 P.O. Box 15896  
 Maseru 100  
 Lesotho

7.5 All bids shall be physically delivered, neither electronic nor late submissions will be accepted.

7.6 The bidder must submit the original and four copies of bid proposals with bid envelopes clearly marked as follows:

**ORIGINAL and COPIES and "Construction of base transceiver stations projects-network expansion".**

7.7 The bid envelope should not bear any identification of the bidder.



7.8 Opening of bid documents will be on the **29 April 2021 at 14h30** at LCA premises.

7.8.1 Interested bidders are invited for the bid opening and only one representative from a bidder may attend.

7.8.2 The proposal shall be valid for 90 working days from the submission date.

7.9 Upon the award of the contract, the preferred bidder shall be expected to obtain building permit, environmental permit, and civil aviation permit from relevant authorities.

## **8 DISCLAIMER**

8.1 Lesotho Tax Laws shall be applicable.

8.2 The financial proposal shall clearly state the total bid price in Lesotho Loti (LSL) and all prices shall include VAT where applicable.

8.3 All bidders must note that the LCA shall make payments by milestones.

8.3.1 A retention of 10% of the total project cost shall apply, which will be payable after expiry of the standard defect liability period of one year.

8.3.2 All proposals shall specify terms and conditions of payment, which will be considered as part of the bid award.

8.4 LCA shall not be bound to accept the lowest bidder.

8.5 This RFP does not commit LCA to pay any expenses incurred by the bidder in the preparation of responses to this invitation or for attending meetings, if any at all.

8.6 LCA reserves the right to cancel or withdraw this request for proposals as a whole or in part without furnishing any reasons and without attracting any liability.

## **9 OTHER DETAILS**

9.1 The selected bidder will be notified in writing and invited for contract negotiations.

## **10 PREPARATION GUIDELINES**

The bidder shall submit both technical and financial proposals separately.

## **11 THE FINANCIAL PROPOSAL**

The financial proposal shall include the costs of the following;

- 11.1 Tower structure
- 11.2 Power system
- 11.3 Fencing
- 11.4 Access road