



ALFRED NZO
DISCTRICT MUNICIPALITY

TERMS OF REFERENCE

**NETWORK LINK (NTABANKULU AND KWABHACA WATER TREATMENT WORKS)
2021/22 FINANCIAL YEAR**

Issued and Prepared by:

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BACKGROUND AND OVERVIEW OF THE PROJECT

1.1 INTRODUCTION

Alfred Nzo District Municipality is hereby inviting suitably qualified and accredited Service Providers to submit their quotation to acquire services of the suitable Service Provider for the **Network Link of Ntabankulu and KwaBhaca**.

1.2 OVERALL AND SPECIFIC OBJECTIVES OF THE PROJECT

1.2.1 Overall objective

The aim of the project is to link Ntabankulu and Kwabhaca Water Treatment Works to our existing network infrastructure i.e. to link Ntabankulu Water Treatment Work to ANDM main office through Ntabankulu Disaster Management Centre and KwaBhaca Water Treatment Works to ANDM main offices through KwaBhaca Disaster Management Centre.

A) SPECIFICATION

ITEM NO.	DESCRIPTION	QTY	UNIT PRICE	AMOUNT
1.	<p>ePMP Force 300-25</p> <ul style="list-style-type: none">• SPECTRUM<ul style="list-style-type: none">✓ Channel Spacing Configurable in 5 MHz increments✓ Frequency Range: Wide Band Operation 4910 - 5970 MHz (Note: Allowable frequencies and bands are dictated by individual country regulations.)✓ Channel Width 20 40 80 MHz• INTERFACE<ul style="list-style-type: none">✓ MAC (Media Access Control) Layer: Cambium✓ Proprietary Physical Layer: 2x2	4		

	<p>MIMO/OFDM</p> <ul style="list-style-type: none"> ✓ Ethernet Interface: 10/100/1000 BaseT, Compatible with Cambium PoE & Standard PoE pinouts ✓ Protocols Used: IPv4/IPv6 (Dual Stack), UDP, TCP, ICMP, SNMPv2c, NTP, STP, IGMP, SSH ✓ Network Management: IPv4/IPv6, HTTPs, SNMPv2c, SSH, Cambium Networks CnMaestro™ ✓ VLAN: 802.1Q with 802.1p priority <ul style="list-style-type: none"> • PERFORMANCE <ul style="list-style-type: none"> ✓ ARQ: Yes ✓ Nominal Receive Sensitivity (w/FEC) @20 MHz Channel: MCS0 = -87 dBm to MCS8 (256 QAM-3/4) = -63 dBm (per chain) ✓ Nominal Receive Sensitivity (w/FEC) @40 MHz Channel: MCS0 = -85 dBm to MCS9 (256QAM-5/6) = -59 dBm (per chain) ✓ Nominal Receive Sensitivity (w/FEC) @80 MHz Channel: MCS0 = -82 dBm to MCS9 (256QAM-5/6) = -56 dBm (per chain) ✓ Modulation Levels (Adaptive) MCS0(BPSK)to MCS9 (256QAM5/6) ✓ Transmit Power Range 0 to +27 dBm (combined, to regional EIRP limit) (1 dB interval) • PHYSICAL <ul style="list-style-type: none"> ✓ Surge Suppression: 1 Joule Integrated (C000000L065A - 30V Gigabit surge suppressor is recommended for optimum protection) 			
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	<ul style="list-style-type: none"> ✓ Environmental: IP55 ✓ Temperature: -30°C to +60°C (-22°F to +140°F) ✓ Weight: 2.4 kg (5.3 lbs) ✓ Wind Survival: 180 km/hour (112 mi/hour) ✓ Dimensions (Dia x Depth): 47 cm x 31 cm (18.5 in x 12.2 in) ✓ Pole Diameter Range: 6.4 cm – 7.6 cm (2.5 in – 3 in) ✓ Power Consumption: 12 Watts ✓ Input Voltage 30 Volts Nominal: (14V to 30V range) ✓ Power Method Supported: 30V Cambium PoE Injector (included) • SECURITY <ul style="list-style-type: none"> ✓ Encryption 128-bit AES (CCMP mode) 			
2.	24-Port 2960 Catalyst POE switch	2		
Total exclusive VAT				
VAT @ 15 %				
Total inclusive VAT				

SCOPE & EXTENT OF WORK

- The Service Provider (SP) is required to connect and configure these four (4) Radio Access Points i.e. one Radio Access Point from Ntabankulu Water Treatment Work that will connect to the other Radio Access Point that will be at Ntabankulu Disaster Management Centre and also one that will connect from KwaBhaca Revenue to KwaBhaca Water Treatment Work.

- The Service Provider is required to connect a cable from the Switch to the Access Point to enable it to connect.
- It will be the responsibility of the Service Provider (SP) to ensure that these sites can see one another as they supposed to, using the correct tools.
- The Service Provider (SP) is required to ensure that the two (2) sites can connect to our network.

NB: Site coordinates

Ntabankulu WTW	30°58'02.8"S 29°18'05.2"E
Ntabankulu DMC	30°57'40.3"S 29°18'09.8"E

KwaBhaca Revenue Office	30°54'10.0"S 28°59'31.7"E
KwaBhaca WTW	30°54'39.8"S 28°58'48.6"E

2. PROJECT TIME FRAME

The project time frame will be 30 days from the date of appointment of the service provider. Provide a proper work plan on turnaround time.

3. KEY OUTPUTS/PROJECT MILESTONES/DELIVERABLES

- Project closeout report
- Completion Certificate

4. PROJECT MANAGEMENT

In cases where the appointed service provider appoints the services of other consultants or sub-contractors, the appointed service provider will take responsibility of the work of the sub-contractors. The client will deal with the contracted service provider and not with sub-contracted consultants. The project

is to be coordinated and managed by an operational team led by Alfred Nzo District Municipality.

5. REPORTING MECHANISM

It is expected that regular progress reports will be submitted to ANDM and further presented to the Project Manager on a weekly basis. The Project Manager has the right to change the frequency of reporting as and when necessary.

6. SUBMISSION OF BIDS

Proposals must be placed in a sealed envelope and clearly marked: "Project proposal – NETWORK LINK (NTABANKULU AND KWABHACA WATER TREATMENT WORKS)

" and placed in the tender box in the Alfred Nzo District Municipality not later than 10H00 on the _____.

EVALUATION CRITERIA

Evaluation criteria of the quotations;

The bids will be evaluated in two stages, namely:

- Stage 1- Functionality
- Stage 2- Price and BBBEE Points

Only Bidders who score 70% or more on stage 1 would be evaluated further and therefore eligible for the award.

Item	Weight
STAGE 1 OF EVALUATION – FUNCTIONALITY	100

• Previous Experience	60
• Capacity and Expertise	40
STAGE 2 OF EVALUATION – PRICE & PREFERENTIAL POINTS	100
BBBEE POINTS	20
Price	80

Previous Company Experience in Wireless Networking	Weighting
Note: The scoring in this section is not cumulative	
Traceable record for successful completion of a minimum of 03 or more Wireless Networking to the value of R50 000.00 each.	60
Traceable record for successful completion of a minimum of 02 Wireless Networking to the value of R50 000.00 each.	50
Traceable record for successful completion of a minimum of 01 Wireless Networking to the value of R50 000.00 each.	40
Total scoring	60
Note COMPULSORY attachments for verifying work done:	
<ol style="list-style-type: none"> 1. The ANDM Assessment Bidder Form must be completed, stamped and signed by previous employer as a means of verifying references for each project undertaken. If 3 Projects were done, 3 Assessment bidder forms must be completed. 2. In ADDITION to the above, a traceable record will be evaluated on the basis of: <ul style="list-style-type: none"> - Official purchase order / Appointment letter 	

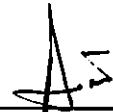
Capacity and Expertise to Undertake the Project	Weighting
Note: The scoring in this section is preferably cumulative, unless justifiable to the Specification Committee	[40]
A Project Team with the following areas of expertise:	[40]

One or more personnel must be registered to Networking certification { Cisco Certified Network Associate (CCNA) certification or Interconnecting Cisco Networking Devices certification(ICND)}	20
One or more personnel must be registered to Wireless Networking certification (Cisco Wireless Certification)	10
One or more personnel must be registered to cabling certification. (Krone Certification)	10
Total scoring NB: Attach CV and certified copies not older than 3 months for all qualifications	40

For any queries regarding this tender, please contact Mr. Z. Ntlangula for project related queries; on (039) 254 5078 or;
Supply Chain Management contact for SCM related queries at telephone number 039-254-5134 during office hours.

Alfred Nzo district Municipality
Erf 1400 Ntsizwa Street
Mount Ayliff
4735s

Yours in municipal administration,



MR. NR XOLO

SENIOR MANAGER: CORPORATE SERVICES

Approved/Not Approved



Mr. L. Mdutyana

Comments by Chairperson:
