

Access Roads Upgrade to 132kV Transmission Towers in Navala and Koro areas

TENDER SPECIFICATION

The Fiji Electricity Authority (FEA) invites bids from reputable contractors for the upgrade of existing Access Roads to its Transmission Towers on the Wailoa – Nadarivatu - Vuda 132,000V Transmission Line. This document serves to define the extent of works to be carried out.

Compulsory Site Visit shall be organized by the FEA on **Wednesday 11th October 2017**. Interested Bidders are to report at **08:30hrs at FEA Navutu Depot**. Bidders shall bring their own 4x4 vehicles for transportation to the site. Trip to the site is about 2 – 3 hours from Navutu. Site Visits shall be conducted by the Technical Officer Transmission and **attendance shall be compulsory and recorded by FEA and signed by the interested bidders**.

SCOPE OF WORKS

The following is the scope of works for the restoration of 132kV Transmission Line Tower Access Roads:

1. **Grading**
 - a. The existing access roads have had a first cut being carried out during July 2017. Hence, the only scope of works shall be to carry out formation of these roads using bulldozers or graders in order to have an even surface of roads on which gravelling shall be carried out in the future.
 - b. Culvert installation is to be carried out on several locations that shall be shown during the site visit. Culverts shall be supplied by the FEA, delivered to the entrance of the access road jobsite. Contractor shall request the culverts from the FEA Project Manager in writing (including the desired size), at least 3 weeks prior to the utilization of the culverts.
 - c. Minor Diversions and re-routing of the existing access road may be required based on existing site conditions, and these works shall be executed at zero additional cost.
2. **Crowning & Coning of Carriageway:** Carry out crowning / coning along the entire length of the access road carriageway. Crowned / Coned access road carriageway shall be a minimum of 5000mm wide. The typical carriageway cross section shall have minimum 5% to 10% slopes (crowning / coning), from the center line to both the edges, for immediate water drainage to the side edge drains. For those sections of the carriageway where one edge is higher than the other, then the above mentioned slopes shall be applicable from one edge to another. The carriageway surface shall be free of any mud and loose soil.
3. **Side Edge Drains:** Side Edge drains shall be re - formed running along both sides of the access road carriageway, wherever possible and as and where required and shall be provided throughout the entire length of the access road carriageway to drain water away from the access road carriageway, to a low point and discharged into an existing river or creek. All drains shall be formed in a manner to keep the water table lower than the carriageway and its edge drains. Soil excavated to form the edge drains shall not be put on the access road carriageway. Excavated soil shall be placed in such a manner that it does not wash back into the drains and/or the access road carriageway. The side edge drains shall smoothly integrate with the access road carriageway, and should not be a sudden/steep vertical drain. This shall ensure that any vehicles which accidentally slip into the drain can be easily towed out. Side Edge drains shall not encroach into the 5000mm wide access road carriageway, and shall be formed outside the carriageway boundary. Drainage costs/prices quoted by the bidders shall include the construction of new drainage and soil batter cutting/forming as and where required. The bidders shall verify for themselves, the quantities of new drainage, existing drainage and side batter cutting/forming during the site visits. Separate rates shall not be provided for de-silting existing drainage and cutting/forming new drainage and side batter slopes.

4. **Side Parking & Pass Zones (OPTIONAL Item):** Along every 500m interval, or as deemed necessary and required by the FEA, Side Parking & Pass Zones shall be provided along the route of the access road. In such Side Parking & Pass Zones, the access road carriageway shall be 10m wide, such that, vehicles may park and/or cross and/or pass each other in a safe manner. The length of the 10,000mm wide Side Parking & Passing Zone shall be 20,000mm. Bidders shall provide a unit rate for the construction of the same.
5. **Side Vegetation Clearing (Optional Item):** Cut and clear any vegetation along the edges of the access-way, to the extent of 7500mm from the centerline of the access road carriageway. Vegetation clearing shall be carried out by trained and qualified persons, such as ministry of forestry trained and certified chainsaw operators. All trees and vegetation within falling distance of the access road, that may have the tendency to block the access-way after inclement weather events shall also be cleared, as required and deemed necessary and instructed by the FEA Project Manager to the contractor, at zero additional cost.

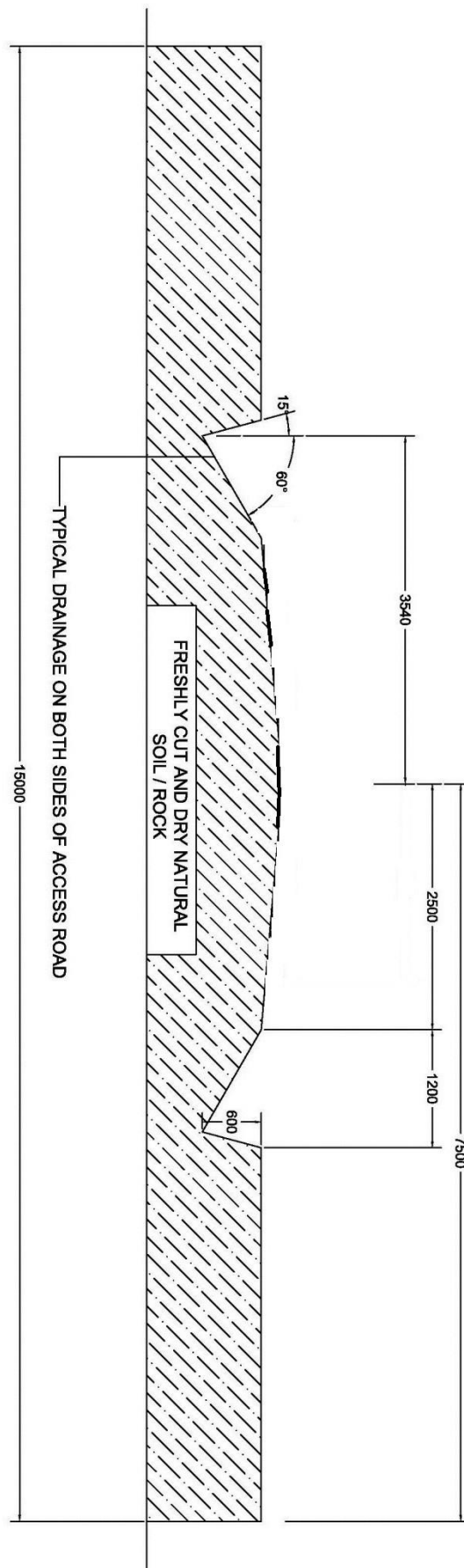
NOTE: Anticipated Quantities of Side Edge Drains and number of locations at which culverts are to be installed have been provided in table A.1 below.

NOTES:

1. Schematic drawings for scope of works to be carried out shall be provided on the day of the site visit.
2. Bidders are to provide proof of ownership of machinery and equipment, such as LTA registration and third-party documents, and photographs of each machinery and equipment intended to be used on the project. If bidders intend to hire machinery and equipment from other parties, then bidders are to submit quotations for the same, together with LTA registration and third-party documents, and photographs of each hired machinery and equipment intended to be used on the project.
3. FEA desires the contractor to execute the works in an efficient and optimized manner to complete the works in the minimum possible timeframe. Multiple Works can be and shall be executed simultaneously. For example, One bulldozer can be carrying out the First-Cut, second bulldozer can be following the first and carrying out the Crowning & Coning, and one or more excavator(s) can be following behind carrying out the drainage and culvert installation works. The FEA desires the contractor to work 7 days a week if possible, and 6 days a week minimum in the worst case, and fully utilizing the entire day's daylight, if possible. Works shall be responsibly carried out by the contractor with minimal FEA supervision. For the purpose of this contract, **the FEA mandates supervision when the contractor is working within 50m proximity of the FEA's Transmission Towers.**
4. Liquidated Damages (LD) for delays in completion of works shall apply across each item defined in the scope of works. LD shall be applicable at the rate of 1% per day up to a maximum of 15%. The FEA shall consider loss of productive days due to inclement weather and other force majeure events, as defined by FIDIC Guidelines. The following time-frame shall be utilized for each item defined in the scope of works:

Workscope Item	Quantity	Contractual Timeframe for completion
First Cut of Access Road Carriageway	Per 1km	4 Calendar Days
Crowning & Coning of Access Road Carriageway	Per 1km	2 Calendar Days
Side Edge Drains (both sides of access road carriageway)	Per 1km	2 Calendar Days
Steep & Slippery Section Treatment	Per 1km	7 Calendar Days
Side Parking and Pass Zones	Per Place	1 Calendar Day
Side Vegetation Clearing (both sides of access road)	Per 1 km	3 Calendar Days

5. Landowners Consents and Sevusevu: The FEA shall liaise with the Landowners as and where required, and the contractor must seek and follow FEA guidance and accompaniment to observe the required traditional protocols of the land, as and where required. The cost of Yaqona for Sevusevu shall be borne by the contractor.

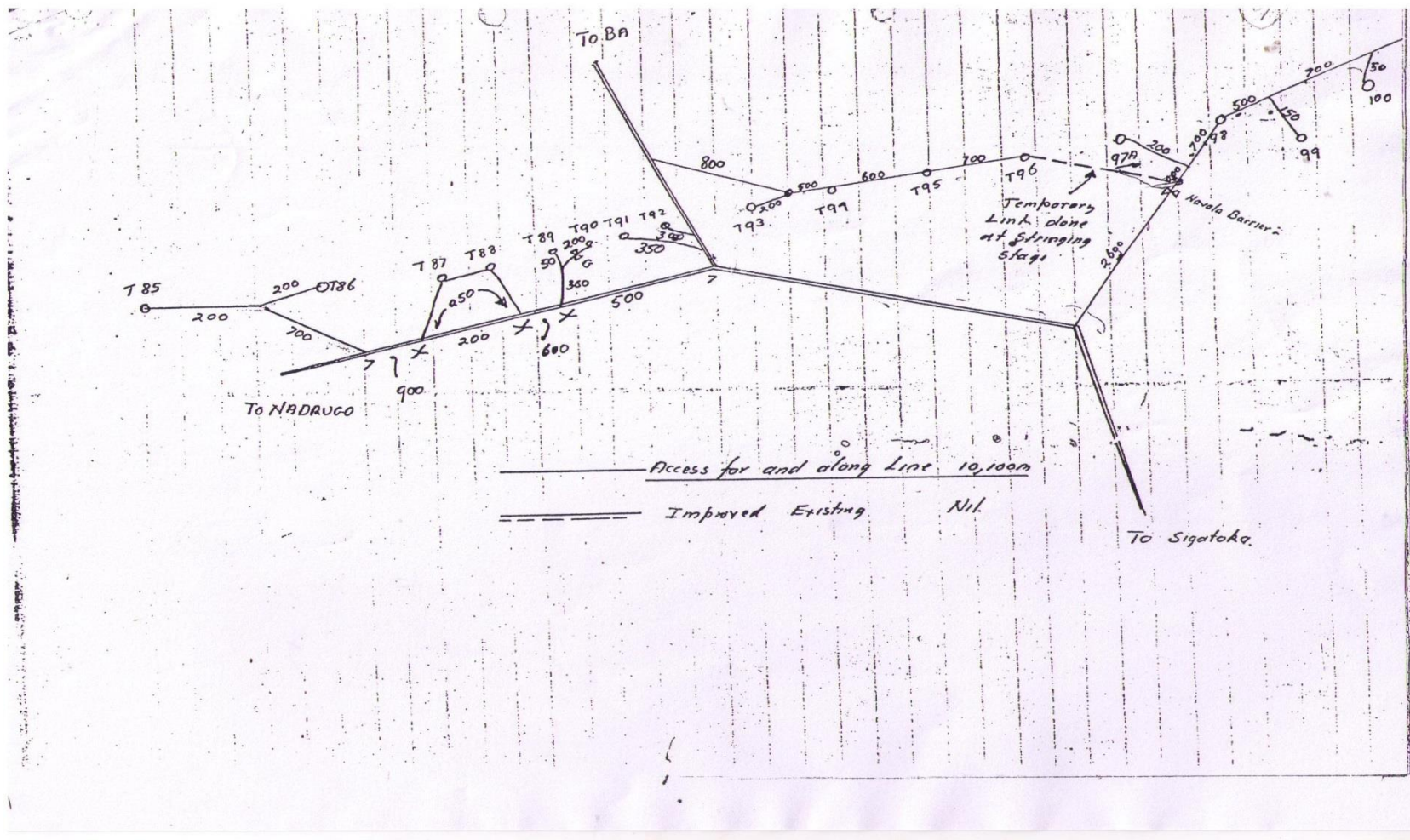


AREA AND EXTENT OF WORKS:

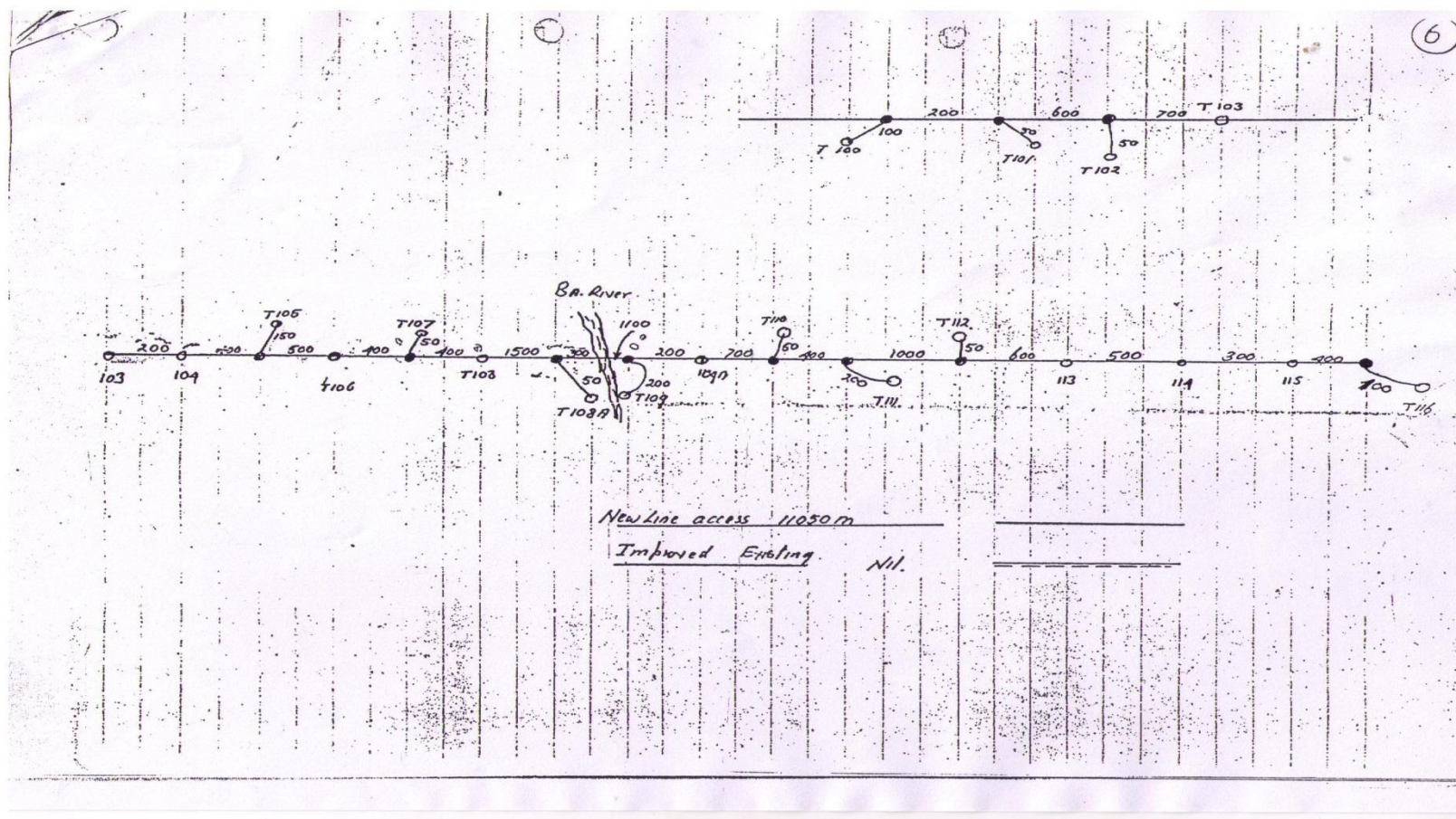
1. STAGE A: T93 TO T131

- a. Track 1: T92
- b. Track 2: T93 – T96
- c. Track 3: 97A – T117A
- d. Track 4: T118 – T120
- e. Track 5: T121 – T124
- f. Track 6: T125 – T131

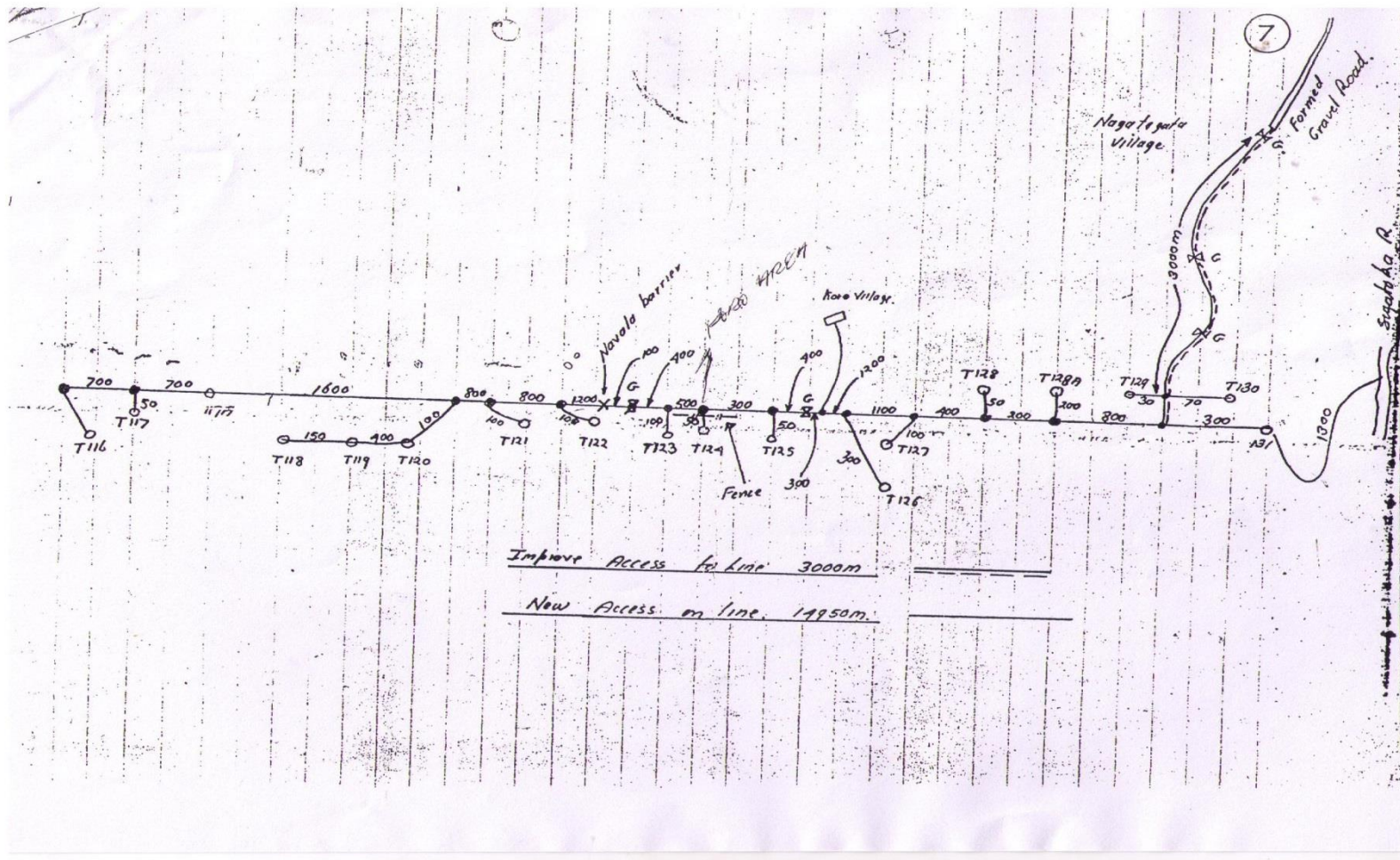
TOWER LOCALITY DRAWINGS



TOWER LOCALITY DRAWINGS



TOWER LOCALITY DRAWINGS



Stage A: Access Road to Towers 93 – 131

S.N.	Tower Numbers	Approximate Quantity of Works	Area Name
1.	93	<p>1.Total Anticipated Access Road Carriageway Length = 28.3km 2.Total Anticipated Drainage = 28.3 X 2 (both sides of access road) 3. Culvert requirements are provided in the table below.</p> <p>NOTE: APPROXIMATE QUANTITIES OF WORKS TO BE CARRIED OUT ARE PROVIDED IN THE TABLE BELOW.</p>	Navala & Koro
2.	94		
3.	95		
4.	96		
5.	97A		
6.	98		
7.	99		
8.	100		
9.	101		
10.	102		
11.	103		
12.	104		
13.	105		
14.	106		
15.	107		
16.	108		
17.	108A		
18.	109		
19.	109A		
20.	110		
21.	111		
22.	112		
23.	113		
24.	114		
25.	115		
26.	116		
27.	117		
28.	117A		
29.	118		
30.	119		
31.	120		
32.	121		
33.	122		
34.	123		
35.	124		
36.	126		
37.	127		
38.	128		
39.	128A		
40.	129		
41.	130		
42.	131		

ANTICIPATED QUANTITIES

Table A.1

Total Side Edge Drains on One side of the Access Road	19km
Total Side Edge Drains on Both sides of the Access Road	10.0km
Widening of roads to the standard width of 5000mm	1.0km
Rock Breaker usage in soft stone areas for formation of Side Edge Drains	1.5km
CULVERT INSTALLATION	
450mm x 2.44m	9 Locations
600mm x 2.44m	12 Locations

BIDDER'S PRICE SCHEDULES

- (i) Bidders are to compulsorily complete and submit the following price breakdown schedule for each stage, as per the following tables.
- (ii) Bidders shall submit any and all additional costs anticipated to be associated with the execution of the project.

Table # A: STAGE-1 PROJECT COST SUMMARY

Stage-A : Access Road to Towers 93 - 131					
Approximate Access Road Route Length:					28.3km
S.N.:	Scope of Work as defined in Tender Specification	Unit of Measurement	Bidder's Unit Rate FJD \$ (VEP)	Anticipated Quantity	Lump Sum Price FJD \$ (VEP)
1.	Crowning & Coning of Carriageway as per tender specification	meters		28,300m	
2.	Side Edge Drains as per tender specification (One side of access road carriageway)	meters		19,000m	
3.	Side Edge Drains as per tender specification (Both sides of access road carriageway)	meters		10,000m	
4.	Side Edge Drains – USAGE OF ROCK BREAKER as per tender specification	meters		1,500m	
5.	Widening of Access Roads to standard width of 5,000m as per tender specification	meters		1,000m	
Installation of Culverts					
6.	450mm x 2.44m	Each Instance		9 Locations	
7.	600mm x 2.44m	Each Instance		12 Locations	
8.	900mm x 2.44m	Each Instance		12 Locations	
9.	Side Parking & Pass Zones (Optional Item)	Each Instance			
10.	Side Vegetation Clearing (Optional)	meters			
11.	Soft – Spots Section Treatment (Optional)	meters			
STAGE A TOTAL:					FJD \$ (VEP)

BID DOCUMENTS SUBMISSIONS

This tender closes at 4.00pm (16:00hrs Fiji Time) on Wednesday 18th October, 2017.

It is mandatory for bidders to submit **two (2) hard copies** of tenders in sealed envelopes.

Courier charges for delivery of Tender Document must be paid by the bidders.

The envelope bearing only the following marking:

Tender – MR 270/2017 – Access Roads Upgrade to 132kV Transmission Towers in Navala and Koro areas

The Secretary, Tender Committee
Fiji Electricity Authority
Supply Chain Office
Private Mail Bag, Suva

It must also indicate the name and address of the tenderer on the reverse of the envelope.

All late tenders, unmarked Envelopes and envelopes without bidder's name and address on the reverse of the envelope will be returned to the Tenderers.

The lowest bid will not necessarily be accepted as the successful bid.

For further information or clarification please contact our Supply Chain Office on phone **(+679) 3224360 or (+679) 9991587.**