



**MR 82/2015**

**Tender Name: Access Road for 33kV Transmission  
Line**

## 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-Cunningham 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 Tuesday May 19<sup>th</sup> 2015.** Interested Bidders are to report at 13:00hrs (1pm) at entrance to Heaven's Door on Queens Highway, near Cocomo Beach (Sovi Bay). This site is about 109km from Lami Town towards along Queen Road towards Sigatoka and 11km from Sigatoka Town along Queen Road towards Suva.

**Bidders shall bring their own 4x4 vehicles for transportation to the site. Trip to the site is about 2 – 3 hours from Kinoya. Site Visits shall be conducted by the Technical Officer Transmission and attendance shall be taken.**

## SCOPE OF WORKS

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

1. **First-Cut:**
  - a. Bulldoze and clear a minimum 5000mm wide access road carriageway on along the existing route, as shown during the site visit, removing and disposing all vegetation and excess soil.
  - b. Install culverts where required. 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 sizes), 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 formed running along both sides of the access road carriageway, wherever possible and 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.
4. **Steep & Slippery Sections Treatment (OPTIONAL):** Occasionally, along the access road, extremely Steep and Slipper Sections spots may be encountered and it may not be practical or possible to divert or re-route the access road around these Steep & Slippery areas. To improve vehicular traction and to provide driving safety, the following Steep & Slippery Sections Treatment shall be carried out:

- a. Spread and compact a 150mm layer deep of AP-75 crushed rock / crushed metal or FEA Project Manager / Engineer approved river gravel. The width of the soft spot treatment area shall be 4000mm wide (fully compacted 150mm deep layer of AP-75 crushed rock).
- b. Based on site conditions the FEA may or may not mandate the contractor to install 5000mm wide layer of geotextile (Bidim A39 or equivalent) prior to the spreading and compaction of AP-75 crushed rock/metal or river gravel. Bidders shall provide unit rates for the same.
- c. Compaction shall be carried out in 150mm deep layers. Compaction may be carried out utilizing multiple passes of Bulldozer Track and Bulldozer towed roller, provided the bulldozer and roller weight meets or exceeds 20,000 kilograms minimum weight requirement. Proof rolling and Vibrational Roller-Compactors may be mandated and required if deemed necessary by the FEA. Bidders shall provide a unit rate for vibrational roller compactors. Compaction shall be subject to testing and approval by the FEA. Independent third party testing by a mutually recognized independent third party may be carried out at the cost of the contractor if required, due to differences in FEA and contractor opinion. Relevant industry standard testing shall be carried out as per ASTM and AASHTO standards. Other internationally recognized applicable testing standards may be utilized, if deemed necessary.
- d. **FEA Shall provide Geotextile Fabric and AP75 Crushed Rock, delivered to Access Road Entrance i.e. Stockpile Site. Bidders are to exclude the cost of these materials.**

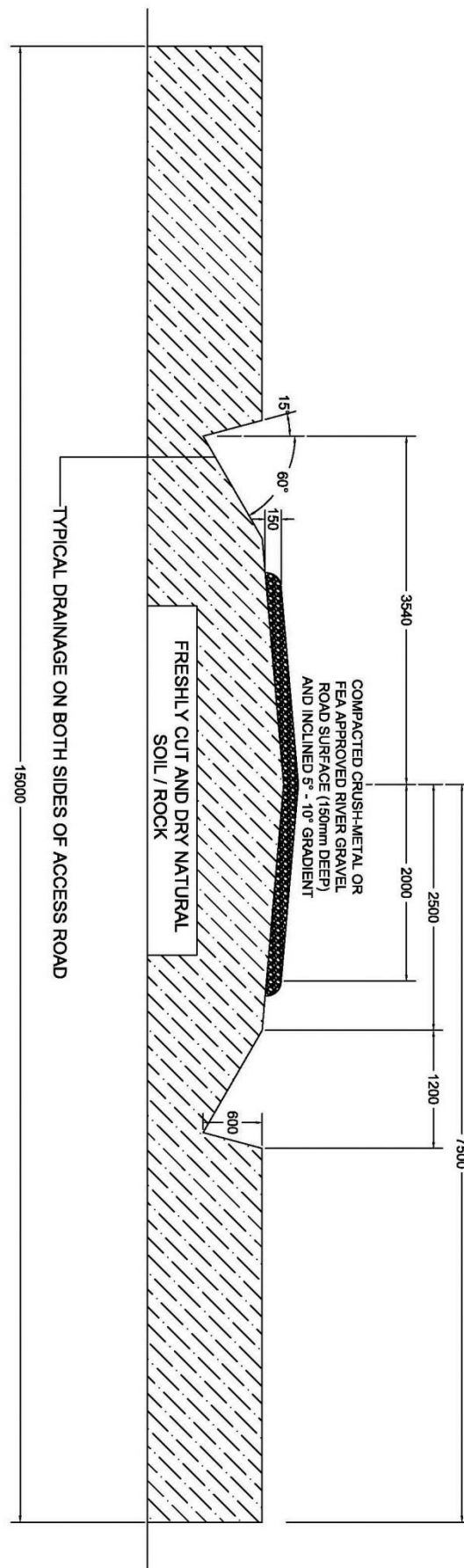
*Modus Operandi: The optional Steep & Slipper Sections treatment areas shall be identified by the contractor during the First-Cut stage of the project. The contractor shall notify the FEA Project Manager, when such Steep & Slipper Sections areas are identified. The FEA Project Manager / Engineer shall inspect and clearly peg and measure and indicated the route and length of the access road where the optional Steep & Slipper Sections treatment is required. A separate purchase order shall be issued by the FEA for the execution of these works. The contractor shall not commence the optional Steep & Slipper Sections treatment, without FEA's consent and approval and issuance of a purchase order for the same. Unit rates for Steep & Slipper Section Treatment shall apply on purchase orders and contractor's deliverables on a per Square Meter Road Surface Area basis.*

### 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 or Grader 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

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.
6. This Access Road site is through a Tourism / Vacation property named Heaven's Door and exact time-frames for the execution of works shall be decided in conjunction with property owner, taking into consideration guest arrival and departure schedule. All three (3) parties, namely, the FEA, Heaven's Door, and Contractor shall mutually agree and sign-off on the programme for the execution of works.



### 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.

<b>TOTAL ANTICIPATED SCOPE OF WORKS and Bidder's Lump Sum Prices</b>		
<b>Access Road to Pole #39 and Pole #40 through Heavens Door</b>		
<b>S.N.</b>	<b>Item Description</b>	<b>Bidder's Lump Sum Price FJD &amp; VIP</b>
1.	<b>FIRST CUT:</b> Total Anticipated Access Road Carriageway Length REQUIRING First Cut = 1.5km <ul style="list-style-type: none"> <li>Total existing Graveled Road Length = 600m</li> <li>Total existing Bulldozed track length without gravel = 900m</li> </ul>	
2.	<b>CROWNING / CONING:</b> Total Anticipated Access Road Carriageway Length REQUIRING Crowning & Coning = 1.5km	
3.	<b>DRAINAGE (EXISTING):</b> Total Anticipated Existing Drainage De-Silting Works = 600m	
4.	<b>DRAINAGE (NEW):</b> Total new drainage formation works = 500m approximate	
5.	<b>CULVERT REQUIREMENTS:</b> 5 places, where 3 x 300m dia x 2.44m length culverts are required to be installed. Note: Culverts to be provided by FEA to Access Road Site	
6.	<b>Steep &amp; Slippery Sections Treatment (OPTIONAL):</b> 600m in length. Which requires spreading and compaction of approximately 400m <sup>3</sup> AP75 Crushed Rock to a compacted thickness of 150mm. Note: AP75 Crushed rock to be supplied by FEA to access road site.	
	<b>TOTAL:</b>	

<b>Bidder's Unit Rates (Per Kilometer) – For processing Variations if any Access Road to Pole #39 and Pole #40 through Heavens Door</b>		
<b>S.N.</b>	<b>Item Description</b>	<b>Bidder's Lump Sum Price FJD &amp; VIP</b>
7.	<b>FIRST CUT:</b>	
8.	<b>CROWNING / CONING:</b>	
9.	<b>DRAINAGE (EXISTING DRAINAGE DE-SILTING WORKS)</b>	
10.	<b>DRAINAGE (NEW DRAINAGE FORMATION WORKS)</b>	
11.	<b>CULVERT: Install:</b> 3 x 300m dia x 2.44m length culverts (one location)	
12.	<b>CULVERT: Install:</b> 3 x 600m dia x 2.44m length culverts (one location)	
13.	<b>STEEP &amp; SLIPPERY SECTIONS TREATMENT:</b> Which requires spreading and compaction of approximately 670m <sup>3</sup> AP75 Crushed Rock to a compacted thickness of 150mm. Note: AP75 Crushed rock to be supplied by FEA to access road site.	
	<b>TOTAL:</b>	

## **Submission of Tender**

**Two (2) hard copies** of the tender bids in sealed envelope shall be deposited in the tender box located at the Supply Chain Office at the FEA Head Office, 2 Marlow Street, Suva, Fiji.

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

**This tender closes at 4:00pm, on Wednesday 27<sup>th</sup> of May, 2015.**

Each tender shall be sealed in an envelope with:

The envelope bearing only the following marking:

**Tender- MR 82/2015 – Access Road for 33kV Transmission Line.**

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 will be returned to the Tenderers.**

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