ENERGY FIJI LIMITED
INVITATION TO TENDER

Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele.

Tender No: MR 423/2023

LETTER OF INVITATION

Reference: 423/2023

DATE: 16/12/2023

Dear Sir/Madam,

Subject:

1. You are kindly requested to submit a comprehensive proposal for the Upgrading Works as stipulated in the Scope of Works in this tender for **Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele.**

2. This proposal will cover the required upgrading works – refer Annex I, Annex II and Annex III.

3. To enable you to submit a proposal for the services, please find enclosed:

a.	Annex I:	Instruction to bidders
b.	Annex II:	Introduction and Background
c.	Annex III:	Schedule of Rates and Prices
		Conditions of Contract
		Drawings
d.	Annex IV:	Proposal Submission Form
e.	Annex V:	Technical Submission Form
f.	Annex VI:	Financial Submission Form
g.	Annex VII:	Proposal Security Form
h.	Annex VIII:	Health and Safety questionnaire
i.	Annex IX:	Schedule of Compliance and Departures
j.	Annex X:	Bidder's Insurance Statement
k.	Annex XI:	General Conditions: NZ3910: 2003
l.	Annex XII:	Scope of Works
m.	Annex XIII:	Monthly Report Template
n.	Annex XIV:	Site Photographs

This letter is not to be construed in any way as an offer to contract with your firm/company.

Site Visit

All interested bidders must attend a **compulsory site visit** as follows:

Location: EFL Vuda Power Station

Date: 09/01/2024 and 11/01/2024

Time: 9.00am

Contact Person: Vinaal Prakash 9929532 or Shivneel Singh 9999299

Failure to attend compulsory site visit will result in tender being disqualified.

All tenderers shall inspect and examine the site, its surroundings, and shall satisfy him before submitting his tender, as to the nature of the work and necessity for the carrying out the contract work.

All bidders must come in proper PPE for the site visit. Safety or closed shoes is encourage

ANNEX I
INSTRUCTIONS TO BIDDERS
Invitation to Tender no: MR 423/2023
Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele.

1. Introduction

Energy Fiji Limited ("EFL") is a limited liability company that was established under the Companies Act (2015), Laws of Fiji. It is supervised by a Board of Directors comprising a Chairman and representatives from its shareholders.

The Executive Management team of EFL consists of the Chief Executive Officer, Chief Finance Officer, General Manager Human Resources, General Manager Generation, General Manager Network, General Manager Customer Services, General Manager System Planning and Control, General Manager Special Projects and Chief Information Officer.

EFL is primarily responsible for generation, transmission and distribution of electricity in Viti Levu, Vanua Levu, Ovalau and Tavueni in Fiji. It owns over twenty (20) power stations and twenty (20) substations and switching stations on the islands of Viti Levu, Vanua Levu, Taveuni and Ovalau. EFL owns, operates and maintains a network of 147km of 132kV transmission lines, 534.86km of 33kV lines and over 9,900km of 11kV and 415V distribution lines.

Energy Fiji Limited (EFL) is hereby inviting Proposals for **Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele** Upgrading Works, at Viti Levu.

2. Instruction to Bidders

This Invitation to Bid is open to bidders who have sound financial background and have previous experience in handling such civil projects. Bidders shall provide such evidence of their continued eligibility satisfactory to the Employer as the Employer shall reasonably request. Bidders shall not be under a declaration of ineligibility for corrupt or fraudulent.

a. One bid per Bidder

Each bidder shall submit only one bid. A bidder who submits or participates in more than one bid will cause all bids to be rejected.

b. Cost of Bidding

The bidder shall bear all costs associated with the preparation and submission of its bid and EFL will in no case be responsible or liable for those costs.

c. Eligible Materials, Equipment and Services

Any materials, equipment, and services to be supplied in the process of completing the Works and Contract shall have their origin from reputable companies from various countries and all expenditures made under the Contract will be limited to such Works. At the Employer's request, tenderers may be required to provide evidence of the origin of materials, equipment, and services.

Asbestos materials, materials or insulants containing PCB's, or other materials prohibited by the laws of Fiji shall not be used in the Works.

Amendment of Bidding Document

At any time prior to the deadline for submission of bids, EFL may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the bidding documents by issuing addenda.

Language of Bid

The bid, and all correspondence and documents related to the bid, exchanged between the bidder and the EFL shall be written in the English language.

Insurance

The Contractor is required to obtain contractors all risk insurance to cover at least public liability and damage to property and persons. The Contractor shall be required to prove that he as such insurance and that the sums insured are sufficient for the works in hand prior to commencement of the works. The Contractor shall ensure that the insurance remains valid throughout the period of the works and that any premiums due are paid. The Engineer may request proof of insurance at any time during the works.

Bid Currencies

Prices shall be quoted in a single currency only **(FJD).**

Site Visit

The bidder is advised to visit and examine the Site of Works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and entering into a contract for the completion of the Works. The costs of visiting the Site shall be at the bidder's own expense. A **mandatory site meeting** is scheduled on **9th to 11th January, 2024 at EFL Vuda Power Station at 9.00am.**

Contact Person: Vinaal Prakash 9929532 or Shivneel Singh 9999299

"Failure to attend the site Visit will result in the bidders bid being rejected".

Evaluation and Comparison of Tenders

The Employer will carry out a detailed evaluation and scoring of the Tenders in order to reach such a determination leading to the award of the Contract, the Employer will examine the information supplied by the Tenderers and other requirements in the bidding documents, taking into account the following factors and scoring methodology. Noting that the Tender will only be considered in final combined scoring if it meets (is affirmative to) the Qualifications and receives at least **50 points out of 70** in the Technical Score.

Qualification (Affirmative or Not-Affirmative)

The determination will take into account the information provided in the Schedules on Qualifications of the Tenderer and Schedule of Key Personnel, and any annexed information to the Schedules. To include the (i) Tenderer's experience with similar projects, (ii) financial status, (iii) plans for financing the Works – without indicating price, (iv) experience of key personnel, and (v) the proposed Plant and/or Permanent Works meeting minimum functional guarantees; it will be based upon an examination of the documentary evidence submitted by the Tenderer, as well as such other information as the Employer deems necessary and appropriate; and an affirmative determination will be a prerequisite for the Employer to continue with the evaluation of the Tender; a negative determination will result in rejection of Tender.

Technical Score (maximum score of 70 points)

The determination will take into account the information provided in the Schedule of Description of the Proposed Works (and any preliminary drawings), the Schedule of Proposed Major Items of Equipment, the Schedule of Tenderers Proposed Times of Milestones and Completion, and the Schedule of Contractor Health, Safety, and Environmental Management Plan, the Schedule of Deviations from Employer's Requirements, and any annexed information to the Schedules.

TTS = Total Technical Score

TTS = A + B + C + D

Commercial Score (maximum score of 30 points)

Only the substantially responsive, qualified, and technically complete (e.g. scoring at a minimum 50 points) Tenders will be considered in the commercial score.

The total Tender amount as offered in the Letter of Tender for the required capacities as defined in the Employer's Requirements, or as corrected by the Employers in accordance with Point 28, shall be used.

The commercial score methodology is as follows:

LTT = Lowest total Tender amount of all the Tenders

TTT = the Tenderers total Tender amount

FCS = Final Commercial Score

FCS = 30 x (LTT / TTT)

Final Score (FS | maximum score of 100 points) is determined as follows:

FS = TTS + FCS

Clarification of Bidding Documents

A prospective bidder requiring any clarification of the bidding documents may notify EFL in writing by fax (hereinafter the term “fax" is deemed to include electronic transmission such as facsimile, cable and telex), or email addressed to:

Jitendra Reddy

Unit Leader Strategic Procurement, Inventories

2 Marlow Street,

Suva, Fiji

Phone: +679 9992400

Email: JReddy@efl.com.fj

EFL will respond to any request for clarification which it receives earlier than 5 days prior to the deadline for submission of bids.

Bid Validity

Bids shall remain valid for a period of **180 days** from the date of Deadline for Submission of Bids.

Format and Signing of Bids

The bidder shall prepare one original and two (2) copies of the technical and financial proposals, clearly marking each one as: "ORIGINAL-TECHNICAL & PRICE PROPOSAL", "COPY NO. I – TECHNICAL PRICE PROPOSAL", etc. as appropriate. In the event of discrepancy between the original and any copy, the original shall prevail.

The original and all copies of the bid shall be typed or written in indelible ink (in the case of copies,

Photostats are also acceptable) and shall be signed by a person or persons duly authorized to sign on behalf of the bidder. All pages of the bid where entries or amendments have been made shall be initialed by the person or persons signing the bid.

The bid shall contain no alterations, omissions or additions, except those to comply with instructions issued by EFL, or as necessary to correct errors made by the bidder, in which case such corrections shall be initialed by the person or persons signing the bid.

Tender Submission

It is mandatory for Bidders to upload a copy of their bid in the TENDER LINK Electronic Tender Box no later than 1600hrs, Wednesday, 21st February, 2024.

To register your interest and tender a response, view 'Current Tenders' at: https://www.tenderlink.com/efl

For further information contact The Unit Leader Strategic Procurement, Inventory & Properties at tenders@efl.com.fj

Bidders are requested to upload electronic copies via Tender Link by registering their interest at: https://www.tenderlink.com/efl

This tender closes at 4.00pm (1600hrs) on Wednesday 21st February, 2024.

Deadline for Submission of Bids

Bids must be received by EFL at the address specified above no later than **1600 hours (Fiji Time) 21/02/2024.**

The Employer may, at its discretion, extend the deadline for submission of bids by issuing an addendum, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will thereafter be subject to the deadlines extended.

Late Bids

Any bid received by EFL after the deadline for submission of bids prescribed above will be rejected and returned unopened to the bidder.

Modification and Withdrawal of Bids

The bidder may modify or withdraw its bid after bid submission, provided that written notice of the modification or withdrawal is received by the Employer prior to the deadline for submission of bids through email on tenders@efl.com.fj

No bid may be modified by the bidder after the deadline for submission of bids.

ANNEX II
A. INTRODUCTION & BACKGROUND
Invitation to Tender no: MR 423/2023
Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele

A. INTRODUCTION & BACKGROUND

The road access to the 132kV Towers in the western region is very limited. There is little to no access. Transmission team have to do hiking in order to reach the towers to carry out any maintenance or inspection works on these towers.

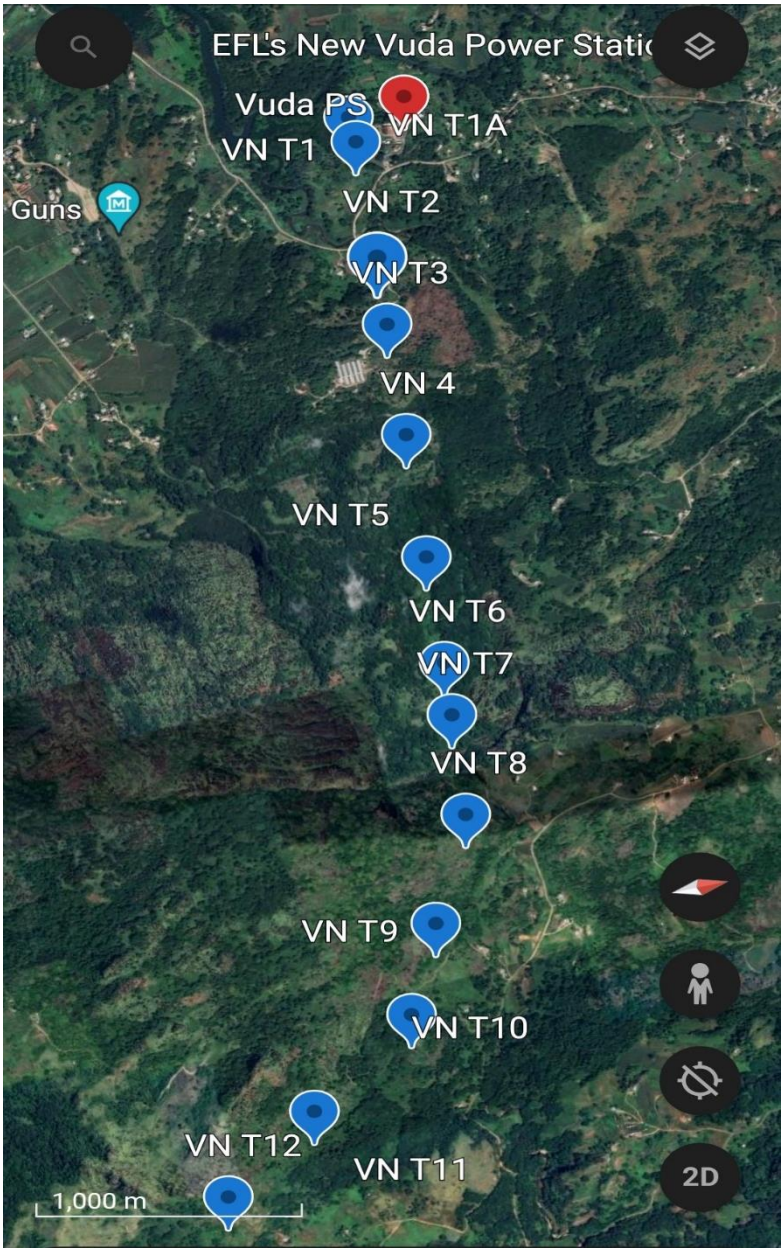
There are sections where there is river crossing and most of the towers are in mountain regions.

The expected key result for our co-sitters to have access again without any complaint and also to be free maintenance for another 5 to 7 years.

The targeted areas for this project is to upgrade the Tower Access Road from Vuda to Naqele of 26km.

Locality Plan

Below is a snip of the tower locations which require the access road upgrade works under this tender. The towers stretch between Vuda and Naqele (T1A to T42).




VN T11
VN T12
VN T13
VN T14
VN T14A
VN T15
VN T16
VN T15A
VN T17
VN T18
VN T19
Sabeto Hot Spring
Mud Pool and Tours
1,000 m
2D
VN T20


VN T15A
VN T17
Sabeto Hot Spring
Mud Pool and Tours
VN T18
VN T19
VN T20
VN T21
n Adventist
sity College
VN T22
VN T23
VN T24
VN T25
VN T26
VN T27
VN T28
2D
1,000 m


VN T28
pping Giant
Orchid Falls &...
VN T30
VN T31
VN T32
VN T33
VN T34
VN T35
VN T36
VN T37
VN T38
VN T39
2D
1,000 m


VN T33
VN T34
VN T35
VN T36
VN T37
VN T38
VN T39
VN T41
VN T40
VN T42
2D
1,000 m

Site Description

Total length of road to be constructed is 26km. These access roads fall in areas from Vuda to Naqele. There is minimum to no access at these towers. The towers are located across mountain ranges from Vuda to Naqele hence, some access roads will be going through slightly steep areas. There are also river crossings and small creeks along the route to the towers on some locations.

ANNEX III
B. SCHEDULE RATES AND PRICES
C. CONDITIONS OF CONTRACT
D. DRAWINGS
Invitation to Tender no: MR 423/2023
Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele

B. SCHEDULE OF RATES AND PRICES

1.1 Basis of Tender

The Tenderer shall provide details of its Tender Price by completing the Schedule of Rates below.

The Tender Price shall be the Tenderer's comprehensive offer of the Contract Price, in consideration of tenderer meeting all obligations, conditions and liabilities under the Contract Agreement and other documents referenced therein, inclusive of the cost of supplying all labor, materials, plant and supervision required to carry out the Contract Works, overheads and profit, subject only to such measurement, evaluation and adjustment as is provided for in the Contract.

1.2 Basis of Schedules

Descriptions of various items contained in the Schedule of Rates are not intended to be a complete definition for the scope of the Contract Works, for which reference shall be made to the Specifications, Drawings, Basis of Tender and other Contract documents. The item description in the Schedule of Rates shall be used only for the purposes of calculating progress payments and valuing variations.

Abbreviations used in the Schedule of Rates are as per the following table, or otherwise using SI units:

Abbreviation	Description
LS	Lump Sum
PS	Provisional Sum
PI	Provisional Item
day	Working Day
h	Hour
m	Meter
m^2	Square meter
m^3	Cubic meter (Solid measure)
ea	Each

meas. Measurable Item

1.3 Units and Pricing

Definitions of units and their abbreviations used in the Schedule of Rates shall be consistent with SI units as defined in NZS 6501. When the price for an item is left blank, the figure zero (0) shall be inferred and the cost of the item shall be deemed to be covered elsewhere in the Schedule of Rates.

1.4 Basis of Payment

Payment shall be based on the total measured quantity of each measurable item in the Schedule of Prices completed in accordance with the contract specification.

Item A6.0 Rock Excavation – Payment of Rock Excavation executed for formation of the side drains as per 2.7 of the specifications shall be measured and paid in linear meters for the side drains completed (Similar to item B1.1 and B1.2 of BOQ).

Payment for lump sum items shall be as follows: -

Item 1.4.1 Site Establishment and Disestablishment – Payment of 50% of the lump sum rate upon successful establishment on the first site plus delivery of bonds, insurances, contract quality plan, safety plan, traffic management plans and environmental plans to the Engineer. Thereinafter payment shall be on a monthly pro-rata basis for the remainder of the contract period.

Item 1.4.2 Prepare and Implement Traffic Management Plan – Payment of 20% of the Lump sum rate upon submission and approval of traffic management plans for all sites. Thereinafter payment shall be on a monthly pro-rata basis for the remainder of the contract period subject to implementation of traffic management in accordance with the contract specification.

Note: Item 1.4.1 & 1.4.2 are not applicable for this tender, the lump sum payments will be based on progressive payments.

Item: Reinforced Concrete Culvert Twin Cell

Milestone	Price	Payment Schedule
Methodology, QA and Works Programme	N/A	80% upon submission and the remaining after approval
Manufacture and supply of precast units		100% upon arrival to site
Construct base slab, apron and cut-off wall. This includes any footing treatment.		On completion
Install Precast Units		On completion

Backfill and construct concrete slab across waterway	On completion
Approach slab	On completion

1.5 Currency of Payment

All prices shall be in Fiji Dollars (FJD-VIP).

1.6 Bill of Quantities

Refer to the table below for the summary of the Bill of Quantities for **Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele**

Stage A: Access Road to Tower 1A to 8 (Vuda)

Estimate for: Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele					
Length: 3300m					
Item	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
A1.0	Preliminary and General				
A1.1	Establishment and Disestablishment	Ls	1		
B1.0	**Drainage**				
B1.1	Clean Existing water channels	m	0		
B1.2	Construct new water channels	m	6600		
B1.3	Rock fill and lining of water channels	m	0		
B1.4	Supply and construct new 450 dia. RCRRJ Culvert	ea	12		
B1.5	Supply and construct new 600 dia. RCRRJ Culvert	ea	12		
B1.6	Supply and construct new 600 dia. Culvert Headwall	ea	8		
B1.7	Supply and construct new 450 dia. Culvert Headwall	ea	8		

C1.0	**Pavement Construction**				
C1.1	Grade and shape existing surface	m	3300m		
C1.2	Supply and construct 50-75mm aggregate for Pavement aggregate, 150mm thick (Solid Measure) (4m wide)	m^3	2376		
C1.3	Unit Price of Cartage of Aggregate (VIP)	$/m^3/km	2376		
E1.0	**Earthworks**				
E1.1	Remove landslide soil	m^3	0		
F1.0	**Structural Repairs**				
F1.1	Structural Repairs	m^2	0		
H1.0	Contingencies	PS	1		
TOTAL (VIP)					
I1.0	**Day Works Rates (All sites)**				
I1.1	Laborer	hr.			
I1.2	Supervisor	hr.			
I1.3	Utility/light truck <3.5m^3	hr.			
I1.4	Truck 3.5 – 9.0m^3	hr.			
I1.5	Excavator 6 – 16tonne	hr.			
I1.6	Loader 0.5 – 1.5m^3	hr.			
I1.7	Roller 1.5 -4.5tonne (static or vib)	hr.			
I1.8	Grader	hr.			
I1.9	D6 Dozer	hr.			
I1.10	Rock Breaker >16tonne	hr.			

Stage B: Access Road to Tower 9 to 12 (Vaivai)

Estimate for: Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele					
Length: 2400m					
Item	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
A1.0	Preliminary and General				
A1.1	Establishment and Disestablishment	Ls	1		
B1.0	**Drainage**				
B1.1	Clean Existing water channels	m	0		
B1.2	Construct new water channels	m	4800		
B1.3	Rock fill and lining of water channels	m	0		
B1.4	Supply and construct new 600 dia. RCRRJ Culvert	ea	35		
B1.5	Supply and construct new 600 dia. Culvert Headwall	ea	22		
B1.6	Supply and construct new 450 dia. RCRRJ Culvert	ea	9		
B1.7	Supply and construct new 450 dia. Culvert Headwall	ea	6		
C1.0	**Pavement Construction**				
C1.1	Grade and shape existing surface	m	2400		
C1.2	Supply and construct 50-75mm aggregate for Pavement aggregate, 150mm thick (Solid Measure)	m^3	1728		

C1.3	Unit Price of Cartage of Aggregate (VIP)	$/m^3/km	1728		
E1.0	**Earthworks**				
E1.1	Remove landslide soil	m^3	0		
F1.0	**Structural Repairs**				
F1.1	Structural Repairs	m^2	0		
H1.0	Contingencies	PS	1		
TOTAL (VIP)					
I1.0	**Day Works Rates (All sites)**				
I1.1	Laborer	hr.			
I1.2	Supervisor	hr.			
I1.3	Utility/light truck <3.5m^3	hr.			
I1.4	Truck 3.5 – 9.0m^3	hr.			
I1.5	Excavator 6 – 16tonne	hr.			
I1.6	Loader 0.5 – 1.5m^3	hr.			
I1.7	Roller 1.5 -4.5tonne (static or vib)	hr.			
I1.8	Grader	hr.			
I1.9	D6 Dozer	hr.			
I1.10	Rock Breaker >16tonne	hr.			

Stage C: Access Road to Tower 13 to 20 (Wailoko)

Estimate for: Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele					
Length: 3450m					
Item	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
A1.0	Preliminary and General				
A1.1	Establishment and Disestablishment	Ls	1		
B1.0	**Drainage**				
B1.1	Clean Existing water channels	m	0		
B1.2	Construct new water channels	m	6900		
B1.3	Rock fill and lining of water channels	m	0		
B1.4	Supply and construct new 600 dia. RCRRJ Culvert	ea	29		
B1.5	Supply and construct new 600 dia. Culvert Headwall	ea	18		
B1.6	Supply and construct new 450 dia. RCRRJ Culvert	ea	18		
B1.7	Supply and construct new 450 dia. Culvert Headwall	ea	12		
B1.8	Supply and construct new 900 dia. RCRRJ Culvert	ea	3		
B1.9	Supply and construct new 900 dia. Culvert Headwall	ea	1		
C1.0	**Pavement Construction**				
C1.1	Grade and shape existing surface	m	3450		
C1.2	Supply and construct 50-75mm	m^3	2484		

	aggregate for Pavement aggregate, 150mm thick (Solid Measure)				
C1.3	Unit Price of Cartage of Aggregate (VIP)	$/m^3/km	2484		
E1.0	**Earthworks**				
E1.1	Remove landslide soil	m^3	0		
F1.0	**Structural Repairs**				
F1.1	Structural Repairs	m^2	0		
H1.0	Contingencies	PS	1		
TOTAL (VIP)					
I1.0	**Day Works Rates (All sites)**				
I1.1	Laborer	hr.			
I1.2	Supervisor	hr.			
I1.3	Utility/light truck <3.5m^3	hr.			
I1.4	Truck 3.5 – 9.0m^3	hr.			
I1.5	Excavator 6 – 16tonne	hr.			
I1.6	Loader 0.5 – 1.5m^3	hr.			
I1.7	Roller 1.5 -4.5tonne (static or vib)	hr.			
I1.8	Grader	hr.			
I1.9	D6 Dozer	hr.			
I1.10	Rock Breaker >16tonne	hr.			

Stage D: Access Road to Tower 21 to 35 (Sabeto)

Estimate for: Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele					
Length: 8600m					
Item	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
A1.0	Preliminary and General				
A1.1	Establishment and Disestablishment	Ls	1		
B1.0	**Drainage**				
B1.1	Clean Existing water channels	m	0		
B1.2	Construct new water channels	m	17200		
B1.3	Rock fill and lining of water channels	m	0		
B1.4	Supply and construct new 600 dia. RCRRJ Culvert	ea	36		
B1.5	Supply and construct new 600 dia. Culvert Headwall	ea	24		
B1.6	Supply and construct new 450 dia. RCRRJ Culvert	ea	21		
B1.7	Supply and construct new 450 dia. Culvert Headwall	ea	14		
B 1.8	Supply and construct new 900 dia. RCRRJ Culvert	ea	8		
B 1.9	Supply and construct new 900 dia. Culvert Headwall	ea	4		
C1.0	**Pavement Construction**				
C1.1	Grade and shape existing surface	m	8600		
C1.2	Supply and construct 50-75mm aggregate for Pavement aggregate, 150mm thick (Solid Measure)	m^3	6192		

C1.3	Unit Price of Cartage of Aggregate (VIP)	$/m^3/km	6192		
E1.0	**Earthworks**				
E1.1	Remove landslide soil	m^3	0		
F1.0	**Structural Repairs**				
F1.1	Structural Repairs	m^2	0		
H1.0	Contingencies	PS	1		
TOTAL (VIP)					
I1.0	**Day Works Rates (All sites)**				
I1.1	Laborer	hr.			
I1.2	Supervisor	hr.			
I1.3	Utility/light truck <3.5m^3	hr.			
I1.4	Truck 3.5 – 9.0m^3	hr.			
I1.5	Excavator 6 – 16tonne	hr.			
I1.6	Loader 0.5 – 1.5m^3	hr.			
I1.7	Roller 1.5 -4.5tonne (static or vib)	hr.			
I1.8	Grader	hr.			
I1.9	D6 Dozer	hr.			
I1.10	Rock Breaker >16tonne	hr.			

Stage E: Access Road to Tower 36 to 42 (Naqele)

Estimate for: Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele					
Length: 6000m					
Item	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
A1.0	Preliminary and General				
A1.1	Establishment and Disestablishment	Ls	1		
B1.0	**Drainage**				
B1.1	Clean Existing water channels	m	0		
B1.2	Construct new water channels	m	12000		
B1.3	Rock fill and lining of water channels	m	0		
B1.4	Supply and construct new 600 dia. RCRRJ Culvert	ea	21		
B1.5	Supply and construct new 600 dia. Culvert Headwall	ea	14		
B1.6	Supply and construct new 450 dia. RCRRJ Culvert	ea	15		
B1.7	Supply and construct new 450 dia. Culvert Headwall	ea	10		
B 1.8	Supply and construct new 900 dia. RCRRJ Culvert	ea	8		
B 1.9	Supply and construct new 900 dia. Culvert Headwall	ea	4		
C1.0	**Pavement Construction**				
C1.1	Grade and shape existing surface	m	6000		
C1.2	Supply and construct 50-75mm aggregate for Pavement aggregate, 150mm	m^3	4320		

	thick (Solid Measure)				
C1.3	Unit Price of Cartage of Aggregate (VIP)	$/m^3/km	4320		
E1.0	**Earthworks**				
E1.1	Remove landslide soil	m^3	0		
F1.0	**Structural Repairs**				
F1.1	Structural Repairs	m^2	0		
H1.0	Contingencies	PS	1		
TOTAL (VIP)					
I1.0	**Day Works Rates (All sites)**				
I1.1	Laborer	hr.			
I1.2	Supervisor	hr.			
I1.3	Utility/light truck <3.5m^3	hr.			
I1.4	Truck 3.5 – 9.0m^3	hr.			
I1.5	Excavator 6 – 16tonne	hr.			
I1.6	Loader 0.5 – 1.5m^3	hr.			
I1.7	Roller 1.5 -4.5tonne (static or vib)	hr.			
I1.8	Grader	hr.			
I1.9	D6 Dozer	hr.			
I1.10	Rock Breaker >16tonne	hr.			

C. CONTRACT AGREEMENT

C1 CONDITIONS OF CONTRACT

1.1 PARTICULAR CONDITIONS

The General Conditions of Contract are the NZS 3910:2003 Conditions of Contract for Building and Civil Engineering Construction), modified as set out in these Particular Conditions. Clause numbers refer to the General Conditions, or are additional clauses.

3 PERFORMANCE BOND

3.1 Contractors Bond

Delete sub clause 3.1.2 and replace the following new paragraph

The Contractor to shall submit a performance guarantee which shall be equivalent to 10% of the value of the contract prior to signing the Letter of Acceptance (This Section Clause Is omitted)

NOTE: This is only applicable if contractor is requesting for advance payment.

5 GENERAL OBLIGATIONS

5.10 Programme

Delete sub clause 5.10.1 and replace with the following new paragraph

The Contractor shall submit a detailed time programme to the Engineer within 10 Working days after the date of Letter of Acceptance and thereafter submit a revised programme on a monthly basis.

Add new sub clause 5.19 after sub clause 5.18

5.19 Priority of Documents

The documents forming the contract are to be taken as mutually explanatory of one another. For the purpose of interpretation, the priority of the documents shall be in accordance with the following sequence:

a) The Contract Agreement (if any)
b) The Letter of Acceptance
c) The Letter of Tender
d) The Particular Conditions
e) These General Conditions
f) The Specification
g) The Drawings, and
h) The Schedules and any other documents forming part of Contract.

If an ambiguity or discrepancy is found in the documents, the Engineer shall issue any necessary clarification or instruction.

10 TIME FOR COMPLETION

10.3 Extension of Time for Completion

Add a new subparagraph (g) after clause 10.3 (f) as follows:

g) Weather sufficiently inclement to interfere with the progress of the works over and above an allowance of 5 wet days per month (The Contractor shall provide sufficient site records and/or Meterological Service Head Office data to substantiate the claim for an extension of time and shall provide this evidence to the Engineer within 20 days of the weather event occurring).

NZS Clause	Item	Entry
NA	Employer's name and address:	ENERGY FIJI LIMITED 2 Marlow Street Suva
	Contractor's name and address:	*[insert following award of Contract]* Email Telephone number Facsimile number
6	Engineers name and address:	To be appointed by EFL

10	Time for Completion of the Works:	The time for completion shall be **2 months**
11	Defects Notification Period	One (1) year for structures (Culverts, headwalls, rock lining, energy dissipation, low level crossing, ford crossing, concrete pavement, concrete strips etc.)
NA	Sections	No Sections are defined for this Contract
	Governing Law:	Laws of Fiji
	Ruling Language:	English
	Language for Communications:	English
10.1	Commencement Date	The Contractor shall commence the Contract Works within 5 working days after receiving the LPO from EFL, unless agreed by both parties.
3.1	Amount of Contractors Bond	N/A
10.5	Liquidated damages for the Works	$ 300 per day
10.5	Maximum amount of delay damages	10% of the Contract Sum
12.3	Percentage of Retention	10%
12.3	Limit of Retention Money	No limit
12.2	Minimum amount of Progress Payment Schedule	$ 30,000
1.4.2	Currency of payment	Fiji Dollars only
	a) Period of submission of evidence of insurance	Within 10 working days after Letter of Acceptance
	Maximum amount of deductibles for insurance of the Employers risks	$ 10,000
8.3	Minimum amount of Public Liability Insurance	$ 0.5 million per occurrence, with no limit on number of occurrences
8.5	Insuring Party of Contractor's Personnel:	Contractor
8.5	Minimum amount of insurance for Contractor's Personnel	$ 100,000 per occurrence, subject also to Fiji Law

The place of arbitration shall be	Suva, Fiji

Legal Registered Tenderer's Name:		Signed:	

1.2 GENERAL CONDITIONS OF CONTRACT

The General Conditions of Contract shall be the NZS 3910 Conditions of Contract for Building and Civil Engineering Construction, 2003.

A copy of the NZS 3910 (2003) will be available for inspection at the office of the Engineer while originals can be downloaded online from the NZS website.

C2 SPECIFICATIONS

2.1 General

2.1.1 Scope of Works

The Scope of Works for the individual Roads is appended in Annex XII and includes

Earthworks

- Clear and Grub of existing surfaces
- Cut and fill
- Cut to Waste

Drainage (Side Drains)

- Cleaning existing water channels construct new drains, construct new water channels
- Supply and construct water flow dissipaters

Structural Repairs

- Parts of roads that have been badly damaged will undergo Structural Repair.

Pavement (Road Formation)

- Grade and shape of existing Road Base
- Construction of running course
- Re-sheeting / Re-Gravelling
- Shaping and Compacting

Culvert Crossing

- Relaying of Existing Culverts
- Replacing Existing Damaged Culverts
- Placing Proposed New Culvert Crossing
- Construction of Headwalls for all Culvert works above

Concrete Strips

- Constructed in steep sections

Note: All of the Works mentioned above are to achieve standards of design requirements.

2.1.2 Location and Extent of Works

Actual start and end of the site will be confirmed on site by the EFL Engineer on site.

2.1.3 Standards and Specifications

The works including the materials and workmanship shall comply with the FRA Standard Specifications for Road Works and Bridge Works unless amended within this specification.

The FRA Specifications shall be available from the Engineers Office for inspection while the originals and be downloaded online from the Fiji Roads Authority (FRA) website.

2.1.4 Stockpiles and Disposal Areas

All excavated waste material shall be removed from the work site and legally disposed off on the day of excavation. Stockpiling or dumping of excavated material within the road reserve is not acceptable without prior approval of the Engineer.

Stockpile locations for pavement aggregate within road reserves shall be approved with the Engineer prior to use.

2.1.5 Land Entry Agreement

The Contractor, under the supervision of the Engineer shall be responsible for arranging land entry agreements to fulfill the Contractual requirements and must comply with all the conditions of access on to the land.

2.1.6 Publicity and Public Relations

Best possible public relations are to be maintained at work sites where the general public or any individuals are affected prior to, during, and after works are completed. The Contractor's staff shall be courteous to the public at all times, and shall not offer an opinion to any member of the public on work being carried out.

No public communication or announcement at any time to any third party, including any section of the media, about the Contract or the project shall be made by the Contractor without gaining written approval from the Employer beforehand.

All reasonable steps shall be taken to ensure that all affected property owners and occupiers, public transport operators, and any other identifiable groups or individuals are notified to the effect that the Works will have on them, the proposal timeframe and the contact person and day and night telephone number(s), should they have any problems. This notification shall be carried out a minimum of two days prior to the relevant work commencing.

The Contractor is to supply a draft letter to the Engineer for approval.

The letter must include;

- Explanation of work
- Date of disruption
- Contract number
- Contractor's name
- Information pertaining to site specific controls
- Access restrictions

2.1.7 Environmental Management

The Contractor shall comply with the Environmental Management Laws of Fiji. Prior to the commencement of works an Environmental Management and Monitoring Plan (EMMP) shall be prepared and submitted to the Engineer for review. The plan shall be finalized to incorporate any changes required by the Engineer and complied with for the duration of the Contract.

All works are to be programmed, constructed and maintained so as to minimize the impacts on the surrounding environment.

The EMMP shall as a minimum address:

- Stockpiles and disposal
- Dust Control
- Drainage and water crossing
- Sediment and storm water control
- Spill response and contamination

Before beginning works on any site, the Contractor shall ensure that the environmental safety measures are constructed and operational. Further, the Contractor shall have in place all contingency plans and emergency plans and procedures before starting work.

All incidents with possible significant environmental affects or outcomes shall be reported immediately to the Engineer.

The Following Conditions should be strictly followed by the Contractor.

- Earth works and construction works must cease during periods of heavy rain and adverse weather conditions.
- Works hours must be confine to daylight hours only from 7am-6pm. Works is prohibited at night. (unless written approval from Engineer)
- Refueling of vehicles and machineries must be undertaken 100m away from any waterways, in a bunded area to contain potential spills. Proper spill kits and spill procedures must be in place for any fuel or chemical spill.
- Contractor is strictly prohibited from washing his vehicles and machines in the water ways. If machinery is working adjacent or in the water, the machinery to be free from oil and fuel leaks.

2.1.8 Health and Safety at Work

The Contractor's responsibilities under this clause shall include but not limited to its obligations under the Health and Safety at Work Act 1996 (HSWA).

2.1.9 Safety Fines

The below listed SAFETY FINES shall be assessed against the offending Contractor for violations of the Project Safety Programme and standards by the Contractor and his sub-contractor's personnel as follows:

VIOLATION	FINE	REMARK
Working on site without Safety Orientation	FJD 500	Person will be removed from site until Safety Orientation carried out
Working on site without health and safety training Card	FJD 500	Person will be removed from site with immediate effect
Not wearing a safety helmet (hard hat) where required.	FJD 150	Second offence FJD500. Person to be removed from site for the third offence
Not wearing safety work boots	FJD 150	Second offence FJD500. Person to be removed from site for the third offence

Not wearing proper safety eyewear for working task	FJD 150	Second offence FJD500. Person to be removed from site for the third offence
Not wearing proper hearing protection for working task	FJD 150	Second offence FJD500. Person to be removed from site for the third offence
Not wearing reflective vests	FJD 150	Second offence FJD500. Person to be removed from site for the third offence
Not wearing proper fall prevention equipment if required	FJD 1000	Person will be removed from site with immediate effect
Not wearing appropriate PPE for specific tasks being undertaken	FJD 150 -1000	Dependent upon task being carried out
Urinating in areas other than proper temporary toilet facilities	FJD 500	Person will be removed from site with immediate effect
Defecating in areas other than proper temporary toilet facilities	FJD 500	Person will be removed from site with immediate effect
Remove guardrail or barricade protection	FJD 1000	Person removed from site immediately
Smoking in the site (other than designated areas permitted)	FJD 300	Violator to be immediately removed from Project site
Use of mobile phones when in operation of plant, machinery and/or tools	FJD 300	Person will be removed from site with immediate effect
Material not secured in open	FJD 500	Second offence FJD1500. Person to be removed from site for the third offence
Operate Plant and/or Equipment without relevant Certification	FJD 300	Second offence FJD900. Person to be removed from site for the third offence
Riding in/on operational/moving Plant and Equipment as a passenger	FJD 300	Second offence FJD900. Person to be removed from site for the third offence
Plant and/or Equipment traveling over designated speed limits	FJD 300	Second offence FJD900. Person to be removed from site for the third offence
Working on electrical equipment or cables without correct certification for task	FJD 300	Second offence FJD900. Person to be removed from site for the third offence
Possession of alcohol at site and/or being under the influence of alcohol	FJD 1000	Person will be removed from site with immediate effect
Possession and/or use of non-prescription Drugs at site	FJD 1000	Person will be removed from site with immediate effect

Possession of firearms and/or weapons	FJD 1000	Person will be removed from site with immediate effect
Possession of Fireworks and/or illegal Explosives at Site	FJD 1000	Person will be removed from site with immediate effect
Fighting/Assault	FJD 1000	Person will be removed from site with immediate effect
Dangerous and/or unsafe behavior on Site	FJD 500	Person will be removed from site with immediate effect
Commencing works with no (agreed) Method Statement	FJD 500	Works shall be put on hold until Method Statement submitted and approved
Executing works not in compliance with approved Method Statement	FJD 500	Second offence FJD1500. Person to be removed from site for the third offence
Not complying in accordance with General Requirement specification	FJD 100 - 1000	At the Employers, and/or Contract Administrators discretion
Not carrying out works in compliance with Temporary Works Traffic Management Planning Guidelines	FJD 1000	Works shall cease until Contract Administrator approved otherwise and Person will be removed from site period
Non installation of each approved traffic and notification signages	FJD 3000	Works shall cease until Contract Administrator approved otherwise

No Contractor shall pass on a violation cost to any employee. All violation fines shall be withheld by the Contract Administrator from the monthly valuation payments. On the occurrence of the first violation, the Contractor shall be instructed in writing by the Contract Administrator to remedy the violation within a specified time. Where the Contractor fails to remedy the safety violation within the time stipulated, the Contractor shall be prohibited from carrying out any further work within the affected area until the specific exposure has been corrected.

On the occurrence of further violations, the severity of each violation shall be considered by the Contract Administrator and the Contractor will be instructed accordingly. Where the Contractor unreasonably ignores the Contract Administrator's instructions, then the foreman and/or operatives responsible for operations in the area where the safety violations are occurring shall be dismissed from the Project.

a) Health and Safety Plan

Pursuant to the HSWA and in accordance with the Specification, the Contractor shall establish and maintain a Health and Safety Management Plan appropriate to the works. The plan shall take cognizance of any hazards identified by the Contractor and shall be submitted to the Engineer within twenty-one (21) days of the Letter of Acceptance.

The Contractor shall take all necessary precautions for the safety of the public, traffic and workers employed on or near the works and shall comply in all respects with the HSWA including the latest revisions and amendments.

The Contractor's health and safety plan shall include but is not limited to:

i. Contractor's safety policy
ii. Contractor's safety training procedures
iii. Site Safety management organization
iv. Site safety personal
v. Schedule of known hazards on Site
vi. Procedure for identifying and assessing hazards
vii. Procedure for recording of accidents
viii. Procedure for dealing with emergencies that may arise while employees are at work
ix. Procedure for evacuation of injured person to an appropriate medical facility
x. Procedure for evacuation of the Site
xi. Procedure for monitoring health and safety performance
xii. Procedure for monitoring the health of employees where they are exposed to hazard
xiii. A copy of the Health and Safety Plan shall be maintained on site at all times, updated as necessary and made available to the Engineer upon request.

b) Induction and Training

It is the Contractor's responsibility to ensure that all personnel and visitors to the site are familiar with the requirements of the Health and Safety Plan. The Contractor shall provide, maintain and enforce the appropriate use of compliant personal protective clothing and other safety equipment, for all personnel and visitors.

Meeting these requirements shall not relieve the Contractor of any of its responsibilities to comply with the conditions of Contract or the Health and Safety at Work Act 1996.

2.1.9 Construction Programme

The Contractor shall submit a detailed programme to the Engineer within ten (10) days from the date of the Letter of Acceptance. The programme shall clearly demonstrate the Contractor's ability to undertake the works as per the Contract requirements together with the Due Completion Dates.

The programme shall show the critical path and baseline details.

The programme shall be in a detailed bar chart divided into two (2) weeks. It shall indicate clearly which parts of the works are to be under construction at any given time and the total planned duration of each part. The total planned duration shall be inclusive of all reinstatement.

The Contractor is required to submit a Revised Works Programme on a monthly basis.

2.1.10 Contract Meetings

Regular meetings shall be held to discuss matters including progress measured against the approved programme, claims, qualify compliance, variations and any other matter of concern. The meetings shall be held at either the work site or at the Engineers office as agreed by the both parties. A detailed record of these meetings shall be prepared by the Contractor and circulated to attendees within 48 hours of the meeting.

2.1.11 Quality Plan

A Contract Quality Plan (CQP) shall be prepared and submitted by the Contractor for the Engineers approval prior to commencement of work and shall demonstrate the Contractor's ability to meet all Contractual technical and testing requirements using suitable work practices, in association with providing adequate quality, health and safety and environmental systems. The Engineer shall review the CQP and provide feedback to the Contractor sufficient to allow finalizations and approval of the CQP.

The CQP shall include as a minimum of the following:

a) Contractor's key personnel and responsibilities
b) Material Sources
c) Hold Points – Points beyond which work shall not proceed until the Contractor can demonstrate that all work up to that point meets the requirements of the contract. This will demonstrate that the Contractor fully understands the methodology for completing the works.
d) Schedule of Tests/Checks – a schedule of all testing/checking to be undertaken to verify the quality of Plant, materials and workmanship.

2.1.12 Traffic Management

The FRA Interim Manual for Signage and Pavement Marking, Section E, Road Works Signage and Management shall apply subject to the following changes:

a) Replace all references to Department or FRA in the Manual with 'Contractor'.
b) The Contractor shall organize and carry out works in such a manner as to eliminate or at least minimize inconvenience or delay to road users while still providing safe conditions for both workers and the public.
c) The Contractor shall take full responsibility for all actions taken by subcontractors engaged under this Contract including utility authorities.
d) Sufficient restrictions and signs shall be used without being over restrictive. Warning signs and traffic control equipment shall be clearly visible to the road users.
e) Equipment shall comply with Section B Equipment of the New Zealand Transport Agency Code of Practice for Temporary Traffic Management, Third Edition: March 2006 Update.

A formal Traffic Management Plan (TMP) shall be prepared and submitted by the Contractor to the Engineer prior to commencement of work and shall demonstrate the Contractors ability to manage the traffic such that the site(s) is/are safe at all times and disruption to traffic flow is kept to a minimum. The Engineer shall review the TMP and provide feedback to the Contractor sufficient to allow finalization and formal approval of the TMP.

The TMP shall: -

a) Be consistent with the general specifications and shall include diagrams or layouts of signs and delineation devices proposed for all the situations that may be encountered.

b) Include a layout diagram of the work site
c) Include temporary speed restrictions which must be authorized in writing by the Engineer prior to commence of the works. Temporary speed limits shall be the maximum that is consistent with the safety of the work, workers and road users. Unnecessarily low temporary speed restrictions shall not be used.
d) Be kept on site and made available for inspection when requested by the Engineer.

In general, the following shall apply in regards to traffic management: -

i. The Contractor shall monitor the sign layout regularly and if necessary vary it to ensure that it meets the requirements of this specification.
ii. Signs, barriers and safety delineation equipment that is no longer required shall be removed or covered immediately.
iii. Without causing damage, the Contractor shall cover conflicting permanent signs until the work is completed or there is no conflict with work site signs.

2.1.13 Condition of Road Surface

The contractor shall carry out construction in a manner that protects the Works and permits the safe and convenient passage of the traffic through the site(s) with a minimum of delay. The road length shall be maintained firm, relatively smooth and readily negotiable to all traffic under all weather conditions. The Contractor shall leave the work site in a safe and trafficable condition at the end of each day's work such that;

a) No temporary speed restriction is required or
b) Appropriate traffic control measures are in place to ensure safe use of the road while the site is unattended.

2.1.14 Survey and Setting Out

It shall be the Contractor's responsibility to set out the works based upon the information supplied. The Engineer shall be given the opportunity to review the setting out prior to construction commencing.

It is expected that lift pegs shall be installed and used in order to ensure adequate width, shape and depth of pavement construction is achieved. Checks of lift pegs will be undertaken and measurement of quantities shall be assessed based on these checks.

2.1.15 Services Identified and Relocation

The Contractor is responsible for locating all services prior to construction.

The Contractor shall physically locate all underground services before commencing with any excavation. The Contractor shall expose all existing underground services, public and private as required. If failure to explore ahead necessitates altering work already done, then the cost of altering shall be borne by the Contractor.

Where existing services are damaged by trenching work, the Contractor shall immediately advise the Engineer and shall arrange for the service to be repaired by the appropriate authority.

In consultation with the service provider and the Engineer, those services requiring to be relocated shall be identified and the extent and cost of relocation agreed prior to construction.

2.1.16 Progress Reporting

Monthly progress reports shall be prepared by the Contractor and submitted to the Engineer, using the template included in Annex XIV. The monthly reports shall be submitted for each completed or partially completed month. Reporting shall continue until the Contractor has completed all the work known to be outstanding at the date stated in the Taking-Over Certificate of the works or section.

In addition to the Monthly Reports the Contractor shall submit a one (1) page Weekly Progress Report which shall be submitted to the Engineer no later than 4pm every Fridays throughout the course of Works. The Weekly Reports shall record; progress made during the week and works proposed for the following week, issues and risks affecting progress, including weather resources, sub-contractors, other suppliers or any other relevant matters. Progressive site photographs to be appended.

2.1.17 Claims for Payment

Claims for payment must be presented in the format of the Bill of Quantities. All payments will be made once the contractors loges the claim and a joint inspection by EFL Engineer and Contractors representative. All the works for the claim should meet the highest standard stipulated in the tender document and relevant industry standard before payments can be made.

2.2 Drainage

2.2.1 Clean Existing Water Channels

The Contractor shall clean existing water channels by removing all vegetation and detritus from the edge of pavement to back of water channel. The Engineer is to be informing when the first 200m section of clearing has been completed at each site. He shall than review and agree if the work is of an acceptable standard prior to work continuing.

Sufficient cut out drains are to be provided where appropriate. Cut out should be a minimum of 2m wide.

Upon completion of drainage works, water channels should be evenly graded to discharge to outlets (Culverts and cut-off drains), without water ponding in channels.

2.2.2 Construct New Water Channel

New water channels are to be constructed as per the typical drawing in Appendix 2.

Care shall be taken to ensure the depth and position of the new water channel is relative to the cross fall on the subgrade of the road.

The Engineer is to be informed when the first 200m section of new water channel has been completed at each site. He shall then review and agree if the work is of an acceptable standard prior to work continuing.

Sufficient cut out are to be provided where appropriate. Cutouts should be a minimum of 2m wide.

Upon completion of drainage works, water channels should be evenly graded to discharge to outlets (Culverts and cut-off drains), without water ponding in channels.

All excavated and rimmed materials shall be removed to a legal disposal area off the site(s). No spreading of excavated material within the road reserve is permitted without the written approval of the Engineer.

2.2.3 Culvert Extension, Relaying and Replacement

All new culverts are to be rubber ring jointed (RRJ). All RRJ culverts laid by the Contractor shall be constructed in accordance with the FRA standard, the manufacturer's instructions and good trade practice.

Culvert extension shall be carried out in such a manner that the finished joints are watertight and present a smooth invert surface.

Where trenches are required, the Contractor shall excavate in such a manner as will ensure that the pipes will be laid at true depths and grades as approved by the Engineer.

In some cases, removal of an existing culvert will be required before constructing a new one.

FRA standards states that the Contractor shall comply with the following Australian Standard or approved equivalent as applicable.

Precast Reinforced concrete pipes	AS 4058
Precast Reinforced concrete box culverts	AS 1597 Part 1
Rubber joint rings	AS 1646

The above Australian Standards will be available for inspection at the Engineers office and original can be downloaded online from the AS website.

2.2.4 Reinforced Concrete Single Cell Standard Headwalls

The Contractor shall supply and construct new Reinforced Concrete Culvert Single Cell Headwalls in accordance with Drawing No. 3.4 and Section 2.9 of the specification.

2.2.5 Subsoil Drains

Subsoil drains shall generally be constructed in accordance with Section 502 Subsurface Drainage of the standard specification of roadwork. Pipes shall be 110mm dia. high strength perforated plastic, surrounded on all sides by a filter material and the filter material shall be wrapped with bidum A29 filter cloth or equivalent geotextile with 500mm lap at joints. The depth of the subsoil shall be agreed and confirmed with the Engineer on site but shall generally be 500mm below road subgrade level.

2.2.6 Rock Fill Lining of Water Channels

Rock lining shall generally be in accordance with section 606 Beaching Type 1 of the standard specification for roadwork. The size of rock shall be between 100mm and 250mm ALD and it shall be placed in the water channel in a careful manner so has not to change the profile of the channel. The rock shall be laid to a minimum of 250mm below the finished road surface level and shaped to match the profile of the water channel, or as directed by the Engineer on site.

2.3 Earthworks

2.3.1 Cut to Waste

Cut to waste relates to bilk earthworks for realignment of the existing road or roadside embankments and not to removal of material from water channel or structural repairs.

The extent of cut to waste shall be agreed and marked on site with the Engineer prior to any work commencing. The area of the work shall be cleared of all obstructions except those specifically required to remain. Clearing shall include all removal of unwanted material from the site including but not limited to lose material, structures, foundations, logs, scrubs, grass, roots and other vegetation, paving materials, fences and garbage.

No tree shall be cut down until the Engineer has given written authorization for such work to commence. Individual trees indicated and marked by the Engineer as 'trees to be preserved' shall be left standing and uninjured.

Excavations shall be constructed to the shapes, lines, dimensions and other requirements as instructed by the Engineer. Excavation shall be carried out in a manner to produce neat cut faces and all excavation shall be done in manner which ensures the cut surfaces will be adequately drained at all times.

Where unsuitable material or potentially unsuitable material is encountered on the site, the Contractor shall, before proceeding to remove or cover such material, notify the Engineer. Within forty-eight (48) hours the Engineer will advise the Contractor of the required treatment, if any, and the extent of such treatment.

Unless otherwise specified, all material cleared shall become the property of the Contractor, and shall be removed from the site and disposed of in a safe and legal manner and so as not to inconvenience the owners of the adjoining property. The Contractor shall pay any disposal fees incurred. Trees and material from structures shall be removed from the site of the works unless specifically instructed otherwise by the Engineer. Material obtained from clearing and grubbing and from the demolition of any structures that is not to be reused shall be disposed of. The Contractor shall make his own arrangements for dumping the material at an approved location outside the site of the works.

2.3.2 Cut to Fill

The properties, placement and compaction of all filling shall be in accordance with FRA Specifications, except where stated in this specification.

No fill material shall be placed until Engineer has inspected and approved the surface preparation of that part of the site.

Fill shall be constructed in shapes, levels, dimensions or any other requirements as instructed by the Engineer. Fill shall be placed in a methodical manner so that uniform compacted densities are achieved. Layers shall be near horizontal and of uniform thickness.

The loose uncompacted thickness of each fill layer shall be limited to 250mm unless specified otherwise and or the Contractor can demonstrate that the specified Compaction is achieved for the full depth of the subject filling. Any lumps or rocks exceeding 100mm in greatest dimension shall be either broken down to less than 100mm or removed or used as directed by the Engineer.

The Contractor shall use suitable materials won from cut areas within the sites. In the event that material imported from off the site is used, the Contractor shall obtain the required permissions and permits, and may all royalties and charges have required in connection with its use.

2.3.2 Structural Repairs

Where the existing road surface is soft (visible movement of the pavement under normal traffic loading), or as directed by the Engineer, the area shall be dugout to a maximum depth of 300mm, have geotextile placed (Bidim A19 or equivalent) in the base, and backfilled with complying pavement aggregate.

Geotextile shall be applied to the trimmed and shaped subgrade with appropriate overlapping and ensuring the geotextile extends to the edge of the side drain.

Prior to application of the geotextile, the subgrade shall be trimmed to the design cross fall for the section of road (5 – 8% for normal chamber).

The depth of structural fill required may be varied by the Engineer in respect to the measured subgrade CBR. In no case shall the base of excavation be lower than the side water channels. All dig outs are to be inspected by the Engineer prior to backfilling.

The repair shall have design cross fall and be trimmed such that it does not allow water to pond on the surface. The completed repair shall be dense, stable and not move under the action of traffic.

2.4 Grade and Shape Existing Subgrade

Prior to new pavement and running course material being laid, the existing surface must be shaped and compacted, to the width defined in the typical cross section in Appendix 2 (carriageway width plus feather edge), to remove all corrugations and other defects and provide a cross fall of 5 – 8%. The Contractor shall notify the Engineer a minimum of 48 hours prior to pavement or running course construction to inspect the surface. Proof rolling of the existing surface may be necessary to confirm its suitability.

In addition, Scala penetrometer tests are to be undertaken at 50m intervals, or as otherwise directed by the Engineer, to determine existing CBR. From this, the actual depth of pavement or running course aggregate to be constructed shall be determined and confirmed in writing by the Engineer.

2.5 Pavement and Running Course Construction

2.5.1 C9.4.4.1 Materials

1. Definitions

Pavement – the layer of aggregate placed directly on top of the existing subgrade that provides the strength to withstand the expected traffic loading.

Running Course – the layer of aggregate placed on top of the pavement that, protects the pavement from erosion, provides a suitable finished surface for traffic to run on and is the layer that is maintained through routine grading and compaction.

2. General

The aggregate shall consist of naturally occurring or processed material originating from crushed river gravel, ripped or crushed rock, or combinations of these, together with sand, silt and clay elements.

All dirt and organic matter shall be removed.

3. Grading Requirements

Pavement aggregate shall be 65mm grade material, and running course aggregate shall be 40mm graded material, as specified for each site, and supplied in compliance with the gradings shown in Table 1.

Pavement and running course material

Aggregate grading % Passing

Sieve Size (mm)	40mm Material	Sieve Size (mm)	75mm Material
55	100	75	100
26.5	85-100		
9.5	65-100	19	45-90
4.75	50-85		
2.36	40-70	9.5	30-60
0.425	25-45		
0.075	15-28	0.075	0-10

Table 1 – Aggregate grading size

The grading curve for the aggregate shall be a smooth curve, which does not pass from the outer one third of the envelope across to the other outer one third between any 2 successive sieve sizes.

Where river gravel is used it must first be crushed so that at least 70% by weight of the pieces larger than 4.75mm have at least two mechanically fractured faces.

4. Other Requirements

The aggregate shall have the following properties: -

- A crushing resistance greater than 100kN and a wet/dry test strength ration greater than 60% (both wet and dry strengths tested to MZS 3111 section 14 or AS 1141.22:2008).
- A CBR value greater than or equal to 50 tested after a 4-day soaking, no surcharge (NZS 4407:2015 test method 3.15, the California Bearing Ratio at 98% MDD by NZ Heavy Compaction to NZS 4402 test 4.12).
- Flakiness index not greater than 35 (BS 812-105. 1:1989 testing aggregates. Methods for determination of particle shape. Flakiness index.)
- Plasticity Index for pavement material not greater than 12 (NZS 4407:2015 test method 3.4 the plasticity index).
- Plasticity index for running course 5-10
- Plasticity modulus (PI multiplied by percentage passing 0.425mm sieve) < 250).

For running course material only, in order to reduce the loss of fines and prevent segregation the aggregate may, with the Engineer's approval be blended with fines which contain

plasticity. The actual quantity of plastic fines blended with the aggregate must be varied so as to bind the surface together without deforming during use when saturated.

The plastic fines must:

a) Be free of all organic, vegetable or other deleterious material;
b) Pass the 4.75mm sieve
c) Be blended, so the blended aggregate has a uniform texture with no segregation of fine and course material.

On completion of blending the blended running course material shall comply with all requirements of C2.4.4.1 section (3) and (4).

5. Frequency of Testing

a) Production Testing of Source Material – Material shall be tested at the source of production, from samples which are intended for use and are representative of the processing method. Initial production source testing must be carried out immediately prior to commencement of supply, and material shall not be brought to site until source tests have been submitted to, and accepted by Engineer. Any change of source or processing method, or any noticeable change in the material properties during the construction process will require that the full suite of tests be carried out again. Production testing shall be repeated for every 5000m^3 of material produced.

Representative samples of aggregate shall be obtained by qualified and experienced technicians in accordance with NZS 4407:2015. All tests described in C9.4.4.1 are required, and shall be carried out in a laboratory recognized by the Engineer as fit for purpose.

b) On Site Testing – Aggregate samples shall be collected for testing from stockpiles intending for use on site and from the completed layers of pavements to ensure that the material complies with the grading requirements of C9.4.4.1. This will be at a frequency of one set of tests for each 2000 linear meters of pavement laid or each 2500m^3 of stockpile, whichever is the first to be achieved.

Additional tests may be instructed by the Engineer. If the results of these show non-compliant material the cost of such tests shall be borne by the Contractor. If the tests show compliance in all tests asked for by the Engineer then the costs of such tests shall be borne by the Employer.

2.5.2 Construction of Pavement (AP 65)

Placement and grading of pavement aggregate shall be completed in such a way so as to minimize the loss of fines through and accumulation of larger sized aggregate only in the shoulders through excessive grading and manipulation of the material. Stockpiles shall also be managed so as to mitigate excessive segregation of the aggregates.

Compaction of pavement aggregate is to be undertaken in lifts not exceeding 200mm loose. Pavement aggregate is to be well compacted so that it does not move or deform under normal traffic loading. Proof rolling of the complete pavement shall be carried out to confirm adequate compaction has been completed.

An initial 400m trial section is to be competed to confirm the suitability of the material and compacting techniques to achieve the required well compacted finish. No further work

shall be carried out until the initial 400m section has been checked and approved in writing by the Engineer.

2.5.3 Construction of Running Course

Running course is not to be applied until written approval from the Engineer is received.

The finished surface shall be dense, smooth and shall not weave or creep under traffic and shall retain its shape and gradient. Proof rolling of the existing surface may be necessary to confirm its suitability.

Aggregate shall be placed from the point closest to the aggregate source to maximize truck compaction during placement unless otherwise approved by the Engineer.

Running course shall be carted, spread and trimmed to provide the required compacted depth, true to grade and cross fall without segregation.

2.6 Construct New Concrete Strips

Construction of concrete strips shall be constructed as per drawings provided in C3.3 and also in accordance with Section 2.9 (Concrete) of this specification.

2.7 Concrete Pavement Construction

2.7.1 This section covers the supply of materials, mixing, placing and curing of concrete, with associated formwork and reinforcement for concrete structures such as concrete roads, strip roads and similar structures.

2.7.2 Shape Existing Subgrade: the specification sub clause 2.4 for “Shaping Existing Subgrade” shall apply to both gravel pavements as well as concrete pavements.

2.7.3 Cement: cement shall comply with NZS 3122. Alternative cement may be used only if specifically approved in writing by the principal’s representative.

2.7.4 Aggregate and water

a) Aggregate and water shall comply with requirements of NZS 3122. The maximum nominal aggregate size used in the concrete mixes shall be 20mm.

b) Sand sourced on the islands is likely to have a high salt content that is likely to reduce the effective concrete strength. The Contractor shall provide details in their CQP of their methodology for mitigating this risk such as washing, additives or barging from salt free sources.

2.7.5 Concrete:

a) Concrete strengths for concrete roads and strips roads shall be a minimum of 30 MPa.

b) Concrete mix design details shall be submitted to the Contract Administrator for review at least three (3) weeks before concrete supply commences. This shall include details of the process for mixing concrete, curing methodology and avoidance of salt content in sand. Submission of these details in no way reduces the Contractor’s obligations to meet the requirements of this Contract. Neither does the submission of details infer in any way that the Contract Administrator ahs approved them.

c) The following mix details shall be supplied in writing:

   i. Specified strength of concrete and grade;

ii. Nominated slump;
iii. Source and type (crushed etc.) of aggregate and sand;
iv. Water/cement ration by weight;
v. Any admixtures, name and quantity;
vi. Source and type of cement and aggregates including sands.

d) Concrete mixtures shall be capable of being readily placed and compacted in normal placing situations without segregation. They shall result in homogenous, dense concrete with low shrinkage characteristics, and capable of achieving the specified surface finish.

e) No change shall be made to the submitted mix details without reference to the Principal's Representative.

f) All concrete mixes shall be produced strictly in accordance with submissions accepted in writing by the Principal's Representative.

2.7.6 Transport and Storage:

During transport and upon delivery to the site, cement and reinforcement shall be covered to protect it against salt air and moisture. On site it shall immediately be stacked above the ground and covered.

2.7.7 Durability:

a) To provide durable concrete structures, the Contractor shall provide, in place, a dense low permeability concrete with low chloride in content, sound aggregates free from alkali aggregate reaction, and a concrete which will provide adequate protection to the reinforcing steel.
b) Concrete shall be vibrated in accordance with section 7.6 of NZS 3109. Complete compaction of the concrete will be required to ensure that the concrete in place has the durability necessary for its long-term environment.
c) The Contractor shall ensure that the handling and placing of all concrete shall be in accordance with the section 7 of NZS 3109.
d) The personnel placing concrete shall be experienced in the handling and placing of concrete and supervised by staff of at least foreman level.

2.7.8 **Finishing**:

The surface of concrete roads shall be finished by brooming perpendicular to the direction of the road to provide a slip resistant surface for vehicles.

2.7.9 Tolerances:

Dimensional tolerances for concrete pavements shall be as below;
a) 8mm in plan
b) 5mm vertically

2.7.10 Joints:

Construction and shrinkage joints shall be formed as indicated on the drawings

2.7.11 Curing:

a) Curing shall be carried out in accordance with NZS 3109.
b) From immediately after placement, concrete shall be protected from premature drying, excessively hot or cold temperatures and mechanical injuries. The concrete shall be maintained with minimum moisture loss for the period necessary for the hydration of cement and hardening of the concrete as defined in clause 7.8 of NZS 3109.
c) Concrete shall be actively cured for a minimum of 7 days prior to trafficking, unless hardening agents are used.
d) A curing compound complying with ASTM C309 or AS 3799 may be used.

2.7.12 Fixing of Reinforcement:

a) Prior to concreting, reinforcement shall be cleaned of all loose rust, mill scale, dirt, oil, paint, etc. The cover to reinforcement shall not be less than 50mm. Ends of the tie wire shall be bent flat with the reinforcing to avoid reducing the cover to the reinforcing or tie wire.
b) Spacers block shall be plastic or 30MPa concrete. Concrete masonry spacers, or spacers made on site shall not be used.

2.7.13 Quality Assurance:

a) It shall be the Contractor's responsibility to ensure that the construction of all in-situ concrete work complies in all respects with the drawings and specifications. The Contract Administrator may, at his discretion, reject concrete that does not comply with the drawings and specifications. Rejected concrete shall be removed and replaced in accordance with the drawings and specifications.
b) The Contractor's quality assurance procedures shall encompass all aspects of the concrete construction, including, but not necessarily limited to:

    i. Concrete mix design;
    ii. Evidence of compliance with requirements to prevent salt reaction;
    iii. Testing procedures;
    iv. Inspection procedures;
    v. Concrete batch records;
    vi. Curing methodologies.

c) The Contractor shall nominate and advise the Contract Administrator of a suitably experienced and qualified representative to be responsible for the quality control of all concrete.

2.7.14 Inspection and Testing

a) The Contractor shall provide slump test results for each $3m^3$ of concrete poured, or part thereof. These shall meet the requirements of NZS 3109.
b) The concrete compressive strength shall be tested for compliance using a Schmidt hammer calibrated for vertical use:

    i. Tested concrete shall be 14 to 56 days old.
    ii. The surface of the concrete at the point tested must be smooth dry and free of honey combing.
    iii. The compressive strength of any panel shall be calculated by the average of 10 readings, excluding extreme readings (if any).

c) The Contractor shall provide 24 hours' notice prior to batching and casting of concrete to allow a Contract Administrator to attend these works, if required.

2.8 Crossing Construction – Ford and Reinforced Concrete Culvert Twin Cell Standard Details

2.8.1 The Ford and reinforced concrete culvert Twin Cell crossing shall be constructed in accordance with the Drawing Nos. 3.3 and 3.5 respectively.

2.8.2 At least 7 days prior to commencing armoring works, the Contractor shall submit for approval a Work Method Statement incorporating the following components:

a) Overview of the construction methodology and equipment.
b) Details of supervision staff, roles and supervisor contact information.
c) Details of the construction materials to be used and quality testing.
d) Proposed QC procedures for ensuring that the final structure meets specification and drawings.
e) Acknowledgements that permits/consents are obtained, and the Contractor is aware of the conditions that needs to be compiled with.
f) The proposed start date and predicted duration of the works.

2.8.3 Quality Control:

The Contractor shall agree a QA/QC regime with the Engineer that demonstrates compliance with the requirements of the Design. This may include;

i. Photographic evidence that shows in-situ ground material has been appropriately prepared, reinforcements has been placed in accordance with specs and as per design, pouring of concrete is undertaken in accordance with the specifications and crossing meets the alignment requirements.
ii. Concrete testing to ensure that the required strength is achieved as per specs.

2.9 Concrete

2.9.1 Quality:

a) It shall be the Contractor's responsibility to ensure that the construction of all precast and in-situ concrete work complies in all respects with the Drawings and Specifications.
b) The Contractor's quality assurance procedures shall encompass all aspects of the concrete construction including, but not necessarily limited to:

i. Concrete mix design;
ii. Evidence of compliance with requirements to prevent alkali-aggregate reaction;
iii. Proposed concrete testing procedures;
iv. Pre-pour inspection procedures
v. Reinforcing compliance records;
vi. Concrete batch/delivery docket record;
vii. Curing methodologies for the various parts of the structures.

c) The Contractor shall nominate and advise the Contract Administrator of a suitably experienced and qualified representative to be responsible for the quality control of all precast and in-situ concrete.
d) The Contractor shall supply evidence of production quality standards to the Contract Administrator in advance of construction in accordance with NZS 3109.

2.9.2 Concrete Technical Information

a) The Contractor shall provide the following information for review:

   i. The ready-mix concrete supplier's mix design, including evidence the Contractor has provided full information to the supplier to enable him to understand the concrete design requirements and to enable him to design the concrete mix to satisfy the requirements of the Contract;
   ii. Curing methodology;
   iii. Concrete compression test results analyzed in accordance with the requirements of NZS 3109;
   iv. Slump tests analyzed in accordance with the requirements of NZS 3109;
   v. Delivery dockets and pre-pour check sheets which shall be available for the Contract Administrator inspection at the pre-casting yard for precast or on site for in-situ pours.

b) Equivalent requirements shall apply where concrete is site batched.

2.9.3 Cement Standards

Cement shall comply with NZS 3122. Place of manufacture shall be advised to the Principals representative.

2.9.4 Aggregate and Water Standards

Aggregate and water shall comply with the requirements of NZS 3122. The maximum nominal aggregate size used in the concrete mixes shall be 20mm.

2.9.5 Reinforcement Standards

a) Reinforcing steel bars shall be hot rolled steel bars complying with requirements of AS/NZS 4671 unless otherwise approved in writing by the Principals representative.
b) Reinforcing steel shall be Class E in accordance with the AS/NZS 4671. Class L and N shall not be used unless expressly noted on the drawings.
c) Grade 500 reinforcing steel shall be manufactured by micro alloy techniques. Reinforcing manufactured by quenching and tempering processes will not be permitted.
d) Reinforcing steel shall be identified along its length with:

   i. The strength grades
   ii. The ductility classes
   iii. The steel producer
   iv. The method of manufacture

Plain round mild steel bars (Grade 300E)

- Deformed mild steel bars (Grade 300E)
- Deformed high tensile steel bars (Grade 300E)
- Reid bars
- Laps shall be located where shown on the drawings and these positions shall not be varied without the approval of the Principals Representative.
- Where no laps are shown for long length bars, then random lapping shall be used provided laps in adjacent bars are staggered. Unless shown otherwise the length of the laps shall be in accordance with NZS 3101.
- Hooks and bends shall be in accordance with NZS 3101 and NZS 3109.

- Reid reinforcing bars and fittings (couplers, footplates, etc.)shall comply with the reinforcements of the manufacturer, Reid Engineering Systems Ltd, and shall be used strictly in accordance with their recommendations.
- Except where shown on the drawings, mechanical connections of reinforcement shall not be permitted without prior written approval from the Principals Representative. All mechanical connections where permitted shall be installed in accordance with the manufacturer's recommendation and shall comply with provisions of NZS 3101.

2.9.6 Concrete Standards

a) In-situ Concrete

i. Exposure classification is B2 (as per FRA Design Guide).
ii. Minimum 28th day compressive strength of 30 MPa.
iii. Include a minimum total cementitious binder content of 370kg/m^3
iv. Have a maximum water/binder ratio (by mass) of 0.45
v. Have a concrete cover of 65mm. Note that maximum cover tolerance are – 5mm and + 10mm, so that an absolute minimum cover of 60mm is achieved.
vi. Include BASF Masterlife 2006 or other FRA approved corrosion inhibitor in accordance with the supplier's recommendations.
vii. Be continuously water cured for minimum 3 days by retention of formwork that has been sealed against moisture loss, or direct water application such as ponding, continuous sprinkling and continuous application of a mist spray. Where formwork is removed prior to completion of the curing period, curing by direct water application shall commence within half an hour of the formwork stripping. Curing beyond 3 days in accordance with Clause 7.8 of NZS 3109.

b) Precast Concrete

i. Exposure classification is B1 (as per FRA Design Guide)
ii. Minimum 28th day compressive strength of 30 MPa.
iii. Include a minimum total cementitious binder content of 370kg/m^3
iv. Have a maximum water/binder ratio (by mass) of 0.45
v. Have a concrete cover of 55mm. Note that maximum cover tolerances are – 5mm and + 10mm, so that an absolute minimum cover of 50mm is achieved.
vi. Be continuously water cured for minimum 3 days by retention of formwork that has been sealed against moisture loss, or direct water application such as ponding, continuous sprinkling and continuous application of a mist spray. Where formwork is removed prior to completion of the curing period, curing by direct water application shall commence within half an hour of the formwork stripping. Curing beyond 3 days in accordance with Clause 7.8 of NZS 3109.

2.9.7 Concrete Mix Design Submissions

a) Concrete mix design details shall be submitted to the Contract Administrator at least two (2) weeks before concrete supply commences. Submission of these details in no way reduces the Contractor's obligations to meet the requirements of this contract. Neither does the submission of details infer in any way that the Contract Administrator has approved them.

b) The following mix details shall be supplied in writing:

i. Specified strength of concrete and grade;
ii. Minimum target mean strength;

iii. Nominated slump;
iv. Grading curve for the aggregates;
v. Source and type (crushed etc.) of aggregate;
vi. Batch weights of cement and aggregate;
vii. Total free water content;
viii. Water/cement ration by weight;
ix. Fineness modulus of the sands;
x. Any admixtures, name and quantity;
xi. Yield;
xii. Source and type of cement and aggregates including sands; and
xiii. Proposals for extending the workability for time periods longer than the ninety (90) minutes in NZS 3109 Clause 7.4.1, if required.

c) Concrete mixes shall be capable of being readily placed and compacted in normal placing situations without segregation. They shall result in homogenous, dense concrete with low shrinkage characteristics, and capable of achieving the specified surface finish. The Contractor shall show by previous records or trial mixes that these requirements can be met with concrete achieving the specified strength.
d) No change shall be made to the submitted mix details without reference to the Principals Representative.
e) All concrete mixes shall be produced strictly in accordance with submissions accepted in writing by the Principals Representative.

2.9.8 Concrete Supply

a) Concrete used in the construction shall be either made on the site, supplied ready mixed, or supplied in the form of pre-cast products. Site mixed concrete shall comply with NZS 3104.
b) The concrete plant must have a current Certificate of Audit in terms of NZS 3104. The concrete supplier shall submit to the Contract Administrator the current Certificate of Audit and the name and contact details of the assigned plant Engineer.
c) Delivery dockets shall be supplied by the producer for each load. Dockets shall contain the following minimum information for each load: -

i. Name of concrete supplier;
ii. Specified grade of concrete;
iii. Cement content;
iv. Maximum aggregate size;
v. Slump;
vi. Date and time of mixing;
vii. Quantity delivered;
viii. Identifying number of truck; and
ix. Additives used.

2.9.9 Concrete Additives

a) Unless otherwise specified, no concrete additive shall be included in the concrete mixes without the written approval of the Principals Representative. Chemical admixtures, where approved by the Contract Administrator for use in concrete, shall comply with AS 1478, and shall be used in accordance with NZS 3109.
b) No calcium chloride or chloride containing admixture shall be added to any mix.
c) An approved air entraining agent shall be added to all concrete mixes sufficient to provide an air content of 4.5% ± 1.5%.

d) An approved water reducing agent may be included in the mix designs.

2.9.10 Storage

Reinforcements: upon delivery to the site, the reinforcement shall immediately be stacked in racks in a clean dry area removed from construction traffic.

2.9.11 Defective Material Acceptance Criteria

a) Acceptance of concrete in the works will be primarily based on the result of sump and compression testing in accordance with the acceptance criteria in table 9.3 of NZS 3109 and tolerances for slump in table NZS 3109.
b) Where concrete is liable for rejection, the location and extend of the concrete so represented shall be assessed and identified. No further concrete shall be placed where it would prejudice the subsequent removal of the concrete in question.
c) If the Contractor disputes the results and elects to have confirmatory testing of hardened cores undertaken, all pouring and testing shall be at the Contractor's expense and shall be under taken by a testing authority approved by the Principal's Representative.

2.9.12 Execution

a) Inspection

i. The Contract Administrator may inspect construction in accordance with NZS 3109 clause 1.3. Before pouring of precast and in-situ concrete commences, the Contract Administrator shall be given forty-eight (48) hours' notice to enable inspection of formwork, reinforcement and construction joints. No concrete shall be placed until the Contract Administrator's satisfied that all provisions of the specifications of the drawings have been compiled with.
ii. Where necessary the Principal's Representative instruction shall be carried out before concrete placing commences.
iii. The Contractor shall submit in writing to the Contract Administrator for approval, a method statement for handling, placing, finishing, curing and protecting fresh concrete giving the precautions that will be taken to prevent the influences of the weather causing premature cracking of the concrete element.

b) Concrete Assessment

The concrete manufacturing process shall follow the sampling testing and control requirement of NZS 3104. Concrete shall be assessed as follows;

i. All concrete placed on site shall have control test undertaken on it to ensure that the required concrete properties are achieved. The Contractor shall take control tests as follows;
    - Four (4) standard test cylinders shall be taken at the site (on a sample taken randomly from the truck) for each pour of concrete.
    - One (1) cylinder will be tested at 7 days and three (3) at 28 days.
    - Control testing and evaluation shall be in compliance with NZS 3104.
ii. Additional testing to justify early loading, or early stripping of formwork or supports may be carried out at the Contractor's expense.
iii. Delivery docket and certified records of quality and quantity shall be forwarded to the Contract Administrator within three (3) days of testing and kept on site and available for inspection by the Contract Administrator on request.

c) Durability

i. The environment in Fiji is aggressive towards concrete. This specification is designed to ensure permanent structures have a 100 year working life. To provide durable concrete structures, the Contractor shall provide in place a dense low permeability concrete with low chloride ion content, sound aggregates free from alkali aggregate reaction and a concrete which will provide adequate protection to the prestressing and reinforcing steel.
ii. The Contractor shall ensure that the handling and placing of all concrete shall be in accordance with section 7 of NZS 3109.
iii. The personnel placing concrete shall be experienced in the handling and placing of the concrete.
iv. Compliance with the specification shall be the minimum requirement necessary to meet the objectives in the first paragraph above.

d) Compaction

i. The environment in Fiji is aggressive towards concrete. This specification is designed to ensure permanent structures have a 100 year working life. To provide durable concrete structures, the Contractor shall provide in place a dense low permeability concrete with low chloride ion content, sound aggregates free from alkali aggregate reaction and a concrete which will provide adequate protection to the prestressing and reinforcing steel.
ii. The Contractor shall ensure that the handling and placing of all concrete shall be in accordance with section 7 of NZS 3109.
iii. The personnel placing concrete shall be experienced in the handling and placing of the concrete.
iv. Compliance with the specification shall be the minimum requirement necessary to meet the objectives in the first paragraph above.

e) Surface Finishes

i. Surface finishes shall comply with NZS 3114. Specific surface finishes, shall be as follows;
   - All jointing between units to be filled using specialized products and to have a U3 finish.
   - Grouted areas over floor cleats shall have a U3 finish with zero abrupt deviations perpendicular to the flow.
   - The concrete approach slabs shall be broomed to U6 finish (wire broom and rubber tyning).

ii. Surfaces not specifically scheduled shall be finished to the most appropriate standard detailed in NZS 3114 table 1 (formed finishes) and Table 2 (unformed finishes).
iii. Defects such as honeycombing, voids around reinforcement, etc., shall not be prepared without the knowledge and approval of the Principal's Representative. The Contractor shall provide a methodology of prepare to the Contract Administrator prior to the execution of the work. Superficial defects shall be repaired by grinding and bagging with motor.

f) Formwork

i. All formwork shall be designed by the Contractor to meet the requirements of section 5 of NZS 3109 and AS 3610.

ii. Formwork may be reused provided forms are adequately cleaned to maintain the standard of finish an tolerances specified.

iii. Unless specified otherwise forms shall be radiused or chamfered at all sharp edges with a dimension of 20mm across the diagonal face. The surface finish of the fillets shall match that of all the forms. All fillets shall be well greased to avoid tearing of edges during form stripping.

iv. Dimension tolerances shall be in accordance to table 4 of NZS 3109.

v. Where ties pass through joints, the ties shall be removed after concreting so that no part remaining in the concrete shall be nearer the surface then 40mm.

vi. Holes left after removal of the tie cones shall be filled with epoxy mortar or hard packed cement grout such that leakage or damp patches are prevented in the completed hydraulic structure. The Contractor shall obtain the approval of the Contract Administrator for the mortar or grout prior to filling the holes.

vii. Formwork shall be removed without shock or vibration and in such a manner to permit the concrete to take the imposed stresses gradually. Stripping times shall be in accordance with clause 5.4 of NZS 3109. The due regard shall be taken of the special characteristic of concrete containing duracem cement, such as longer cure time for example. For exposure classification C concrete the curing requirements should be strictly adhere too prior to removing formwork.

viii. The Contractor shall be responsible for the engineering design, erection, maintenance, safety and staged removal of all falsework, including staging, walkways, forms, ladders, etc.

ix. All falsework shall be designed and constructed to provide the necessary rigidity and to support the loads. Falsework for the support of the superstructure shall be designed to support the loads that would be imposed if the entire superstructure were placed at one time.

x. Falsework shall be placed on solid footings, safe against undermining, and protected for softening.

xi. Where falsework is supported on any portion of the structure which is already constructed, the load imposed by the falsework shall be spread, distributed and braced in such a way as to avoid any possibility of damage to the structure.

g) Construction joints:

i. Concrete placed monolithically shall be of such size, geometry and sequence that shrinkage cracking is minimized. Where any shrinkage crack exceeds 0.1mm in width and where required by the Principal's Representative, remedial work shall be carried out. The Contractor shall obtain the approval of the Contract Administrator for all materials and methods before undertaking the repairs.

ii. Construction joints shall be as shown on the drawings:

Either	first 7	all concrete and its formwork and other surfaces shall be kept continuously wet by ponding where possible and protect from sun and dry winds.
	8 – 14	all concrete surfaces shall be protected from sun and dry winds, and shall be kept damp by occasional

or	where approved in writing by the Contract Administrator, a curing compound complying with

h) Reinforcements

i. Cover to reinforcements is stated on the drawing. Concrete casts against ground shall have 80mm cover. Minimum cover specified is the absolute minimum.
ii. Cover is measured from concrete surface to the nearest layer of reinforcements unless otherwise shown on the drawing. Minimum cover specified is the absolute minimum.
iii. If concrete surface contains rebates or architectural features which in places reduce the cover then the cover is measured from the deepest surface rebate to the nearest layer of reinforcement.
iv. Prior to bending, bars shall be cleaned of all loose rust, mill scale, dirt, oil, paint, etc. The use of flame for cleaning and straightening is not permitted.
v. Badly twisted bars shall be rejected and removed from the site. Bars shall not be bent or straightened after placing unless approved in writing by the Principal's Representative, for each specific case.
vi. At the time of concreting, the bars shall be free of any foreign coatings, form oil or dried accumulation of mortar, which reduces the effective bond between the concrete and steel.
vii. Spacer block shall be plastic or 30 MPa concrete. Concrete masonry spacers made on site shall not be used.
viii. Welding of reinforcing is not permitted with the Principal's Representative, including tech welding.
ix. For concrete cast against ground, particular care shall be taken to ensure that;
x. No damage occurs to any water proving membrane or damp proof course; and
xi. Reinforcement is not displaced by foot traffic to reduce its cover.

i) Precast Units

Supply of precast units include;

i. Provision of shop drawings to show lifting eyes (detail and location) and construction joints.
ii. Supply of all plants and services necessary for construction of the culvert units.
iii. Supply of all materials including concrete, reinforcing steel, location and design of lifting eyes.
iv. Clear permanent marking of each unit prior to curing to identify type as per the listing (C15, C16, LS3 and LS4) and to identify the exposure type (B2) s per NZS 3101.
v. Storage of each unit in a manner and location that;
   - Is secure
   - Allows uplift of units without the need to move units unnecessary
   - Prevents damage to adjacent units on placement or uplift.

Specialist subcontractor for precast

i. The Contractor must engage a specialist precast subcontractor if not a specialist themselves for the manufacture off-site of all precast units required, including storage until the units are uplifted by the Contractor for installation on site in accordance with the Contractor's programme.
ii. The Contractor shall liaise with the subcontractor and obtain information required for training and preparation of health and safety and quality plans.

Storage

i. The precast subcontractor shall be responsible for the storage of all precast units until they are uplifted by Contractor for transporting to site.
ii. The storage will be in two stages;
   - During the curing period: the subcontractor shall have responsibility for when the units may be shifted.
   - Following the curing period: until the units are uplifted for transport to site.
iii. There shall be no storage of precast unit on site. Units shall be transported direct from the subcontractor's yard to site and lifted by crane from the truck to the final location in the works.

Erection

i. Provide stainless steel brackets, standard 20mm diameter Reid bar and anchor assemblies, fixing and shims, Sika grout 212 and Sikadur 33 epoxy mortar as required for installation of precast units.
ii. Prior to erection of precast units, the foundation shall be levelled to within the tolerances limits stated on the drawings, using 100mm x 100mm incompressible plastic shims.
iii. Precast units shall be adequately placed and supported during erection to ensure proper alignment and safety. Such bracing shall be maintained until adequate permanent connections have been made.
iv. The Contractor shall not use any lifting or erection method which places excessive stress on the precast units.

Grouting

Joints and ducts shall be filled with a pourable epoxy levelling grout (Sika grout 212 or equivalent).

Filling In

i. The Contractor shall fill in all lifting eye holes, incorrectly drilled holes (if any), form tie holes and the like using dry pack mortar. Where visible in the finish works, all such filling shall be color matched to the concrete of the main precast item.
ii. Chamfers between precast units shall be grouted using epoxy mortar (Sikadur 33 or equivalent).

2.9.13 Dry Pack Mortar

a) Mix
   i. Dry pack mortar shall be a sand cement mortar in the proportions of one (1) part cement to three (3) part sand by weight. Additives to reduce water content or to enhance addition shall not used without the written approval of the Principal's Representative.
   ii. The mortar should have a dry consistency so that when squeezed in the hand to a ball, the mortar shall retain its shape, but shall not be so dry that it shows cracking on its pouter surface.

iii. The water cement ratio shall not exceed 0.40 by weight.

b) Application
   i. Tie holes, spalled or honeycombed concrete and surrounding areas shall be presoaked with clean water to a saturated, surface-dry condition (SSD).
   ii. The dry pack mixture shall be installed into the tie holes or in other repair areas filling the entire void with mortar flush to the surface. Where necessary, a rod is to be used to force mortar into the depths of the tie hole void.
   iii. The application shall be protected for a minimum of 48 hours from:
      - Rapidly dry out due to heat
      - Damage from rain
      - Excessive wind.

2.9.14 Loading of New Concrete

a) No vehicle loading shall be applied to new in-situ concrete until at least 7 days.
b) No mechanical compaction equipment shall be operated within 1m of in-situ or precast concrete until at least 7 days after pouring.

2.9.15 Existing Structures

When matching new concrete work to existing structures and where stated in this specification, the Contractor shall verify specified dimensions against site measurements prior to fabrication and report discrepancies to the Principals Representative.

2.9.16 Shop Drawings for Precast Units

a) The Contractor shall allow for;
   i. Preparation of shop drawings, and
   ii. Preparations of designs and specifications for those portions of the Contract Works which the Contract documents specify as being designed by the Contractor (if any),
   iii. For submission of such documentation for review by the Principals

b) The Contractor shall submit the required documentation for the review to the Engineer in due term to ensure conformance with the programme and not less than the period stated. The Contractor shall make due allowance in the programme for the design work, review and re-review, prior to the time required for ordering materials an commencing fabrication.
c) The status of documents submitted the Contractor and reviewed by the Principal shall be in accordance with the following;

   i. Review of shop drawings or Contractor design items shall not relieve the Contractor of responsibility for the correctness of its shop drawings, designs and site dimensions, or for ensuring the contract works are performed in compliance with the Contract documents.
   ii. Review merely establishes whether the Engineer or Principal has any objection to the documentation and indicates only that it has been reviewed without the need for further modification other than the corrections indicated by the Principals Representative.
   iii. Reviewed documentation which contains comments or notations indicating where the documents are at variance with the contract documents shall be modified and resubmitted to the Engineer for re-review.

iv. Unless otherwise specified the shop drawings and the Contractor designed items shall comply with stated requirements, details and specifications of the manufacturers and suppliers of individual equipment components and materials.
v. Review shall not be construed as authorizing any variation from the requirements of this contract, except where explicitly stated.

d) The Contractor must provide final shop drawings, and final Contractor designs (if any), including modifications required by Principals Representative, before proceeding with procurement, fabrication or erection. Any works executed in advance final review of such documents shall be at Contractor's risk.
e) Shop drawings in this section refers to drawings developed by the Contractor from drawings, designs and descriptions of the Contract works prepared by Principal.
f) Prior to submitting shop drawings for review, the Contractor shall ensure that:
   i. Site measurements have been performed and documents prepared by Engineer or Principal have been checked.
   ii. The shop drawings have been coordinated with all designs and specifications, and
   iii. The shop drawings have been coordinated with requirements and shop details of all other trades.
g) The Contractor shall advise the Engineer of any errors, omissions or ambiguities in the drawings or specifications found in the course of preparing the shop drawings may shall comply with the notice of the manner in which the error, omission or ambiguity to be resolved.
h) Shop drawings shall contain sufficient detail to enable competent tradespersons to fabricate the items to the dimensions and standards stated in the drawings and specifications.
i) The Contractor shall at least ten (10) working days for first review by the Engineer of shop drawings and layouts, and at lease five (5) working days for re-review.

3.0 Rock Excavation

a) "Rock Excavation" shall comprise the excavation of material that cannot be excavated without blasting or which cannot be removed by ripping by the use of single-shank hydraulic ripper mounted on a bulldozer (Caterpillar D9H or equivalent).
b) Where it is impractical to classify rock excavation by the above method, the limit of rock excavation shall be determined by the Engineer.
c) Individual boulders and detached stone over 1 cubic meter in volume which cannot be removed by the Contractor's equipment available on the site shall be classified as rock excavation.
d) The fattening of cut slopes in rock excavation, when ordered by the Engineer shall be classified as rock excavation. For rock excavation required to be carried out for the formation for the side drains, the dimension shall be 2 meters max in width; 1 meter in depth and the side slope shall have a 1:1gradient. The Contractor will be required to set out these works and get Engineers approval prior to commencement. The Engineer may alter the specified dimensions to suit site condition.

C3 DRAWINGS

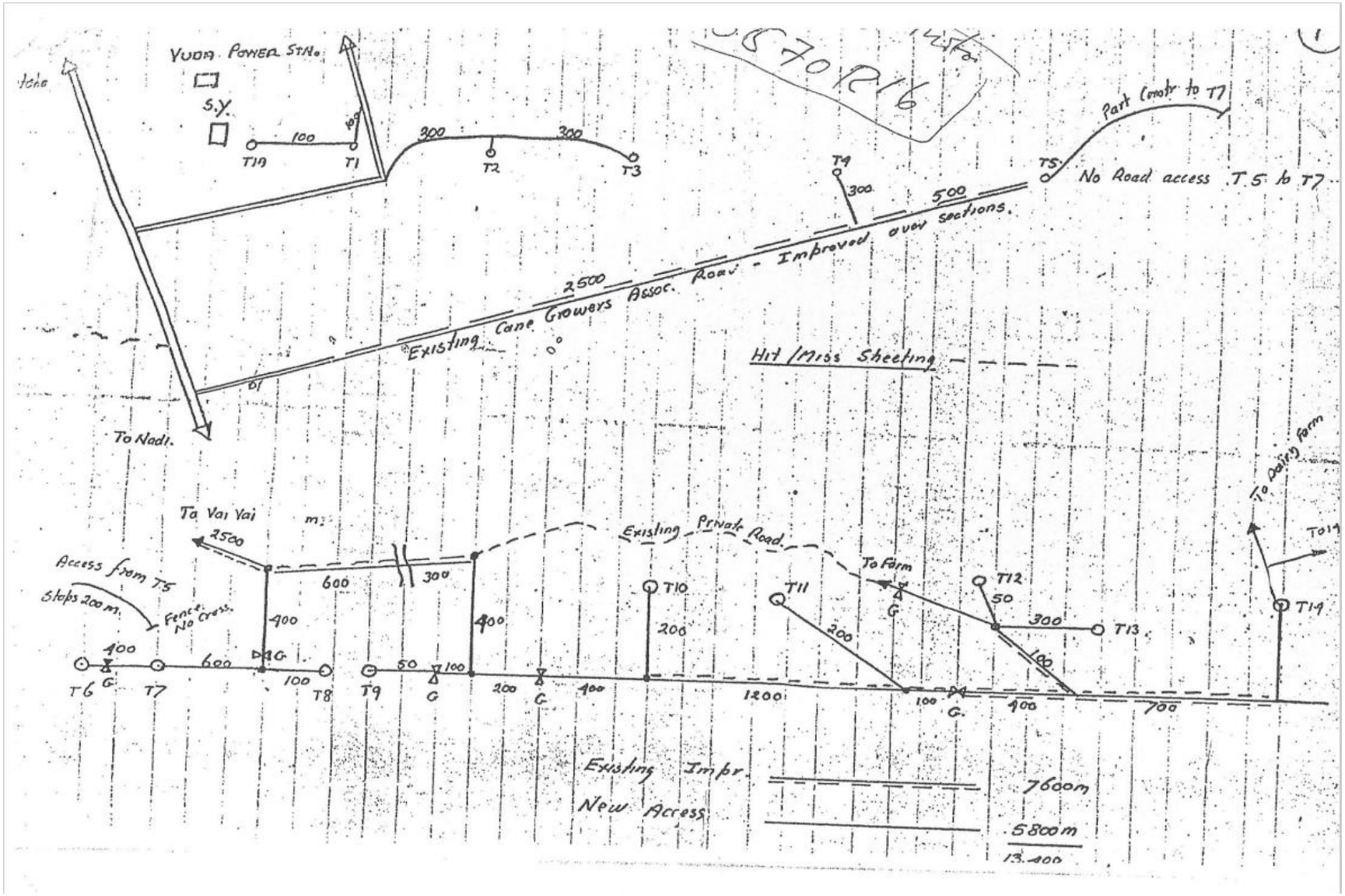
2.1 Tower Locality Drawing.

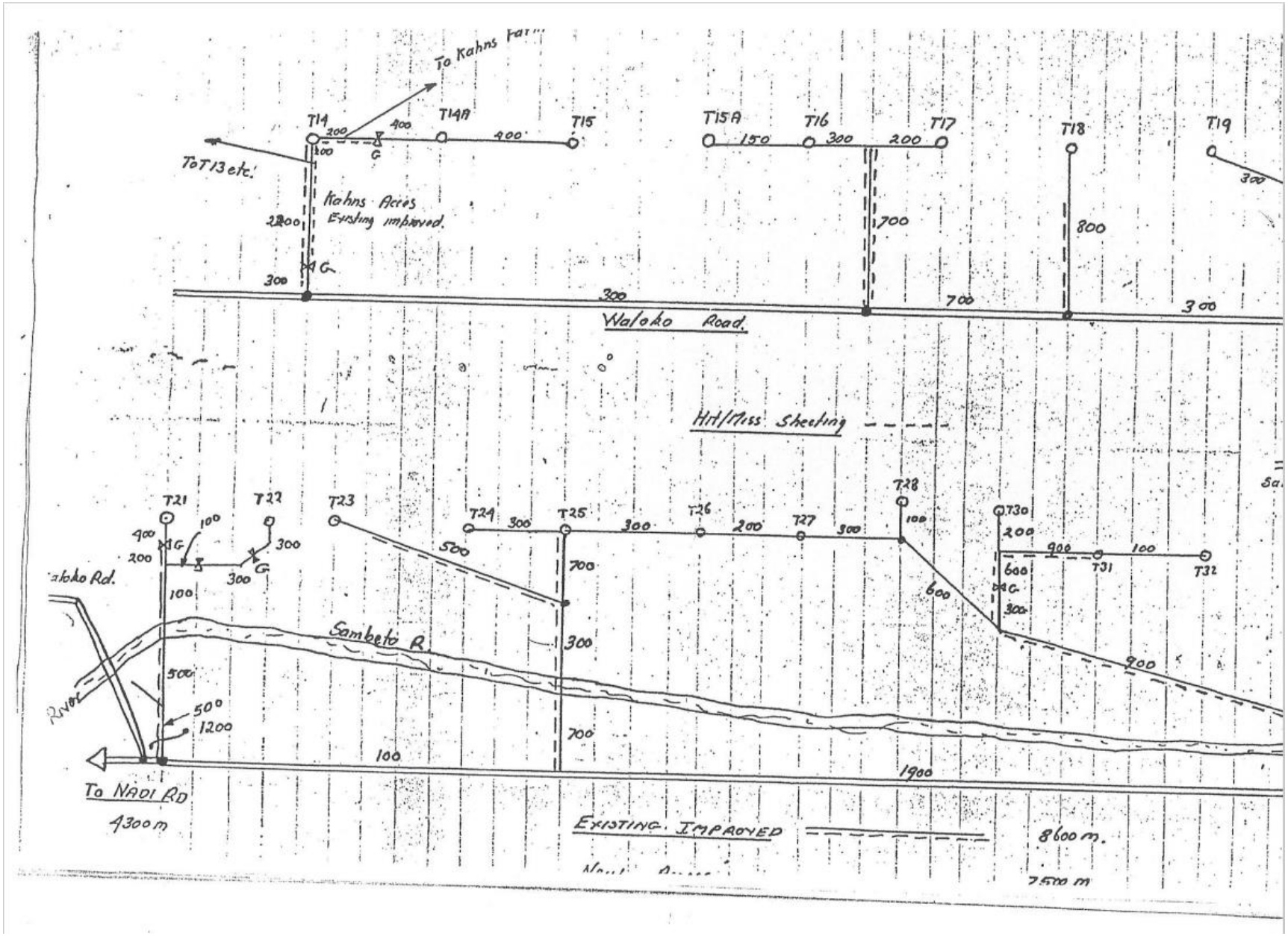
2.2 Road Cutting Techniques.

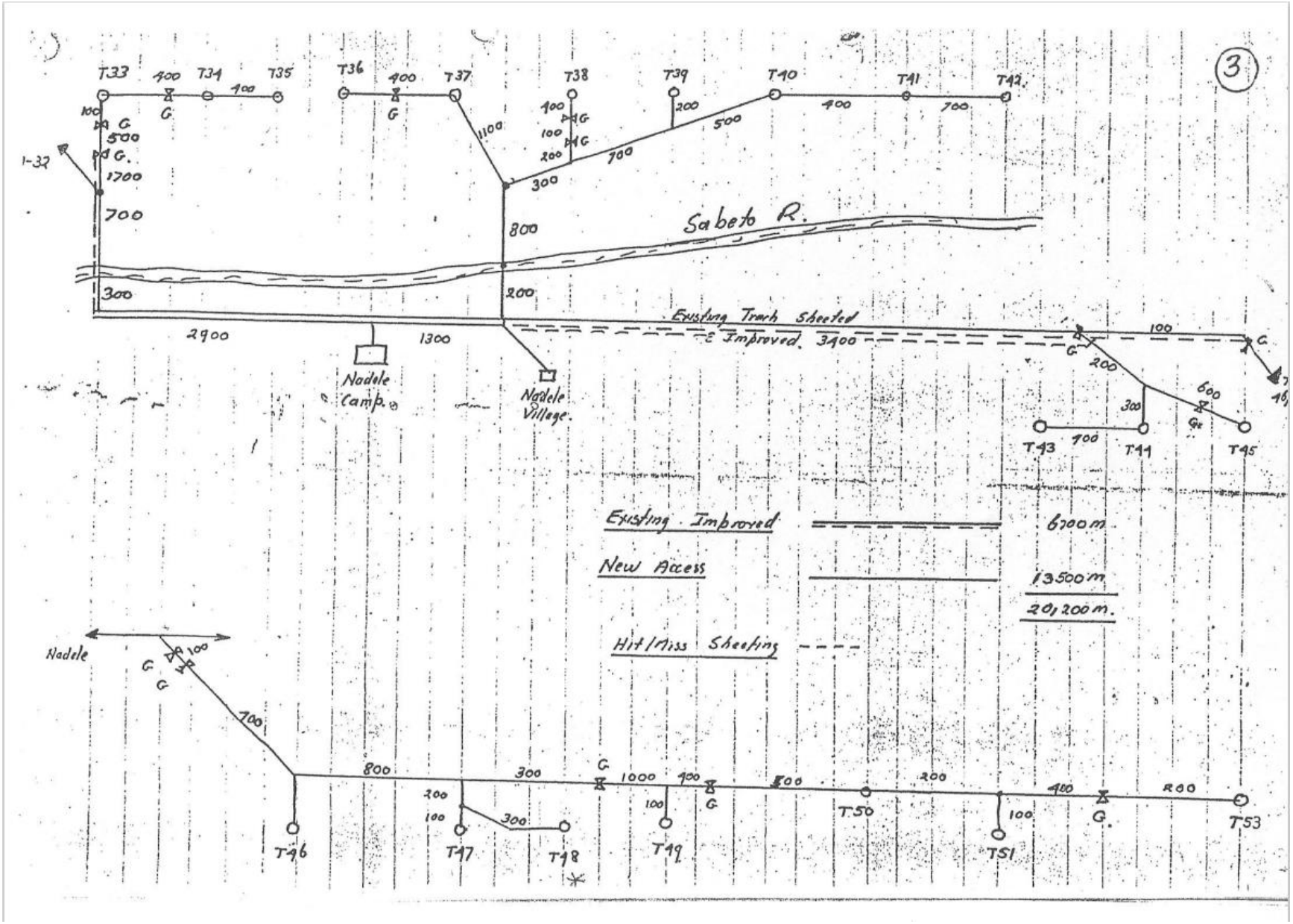
2.3 Unsealed Secondary, Country and Residential Single Lane Roads Cross Section.

2.4 Underground Storm water Drainage.

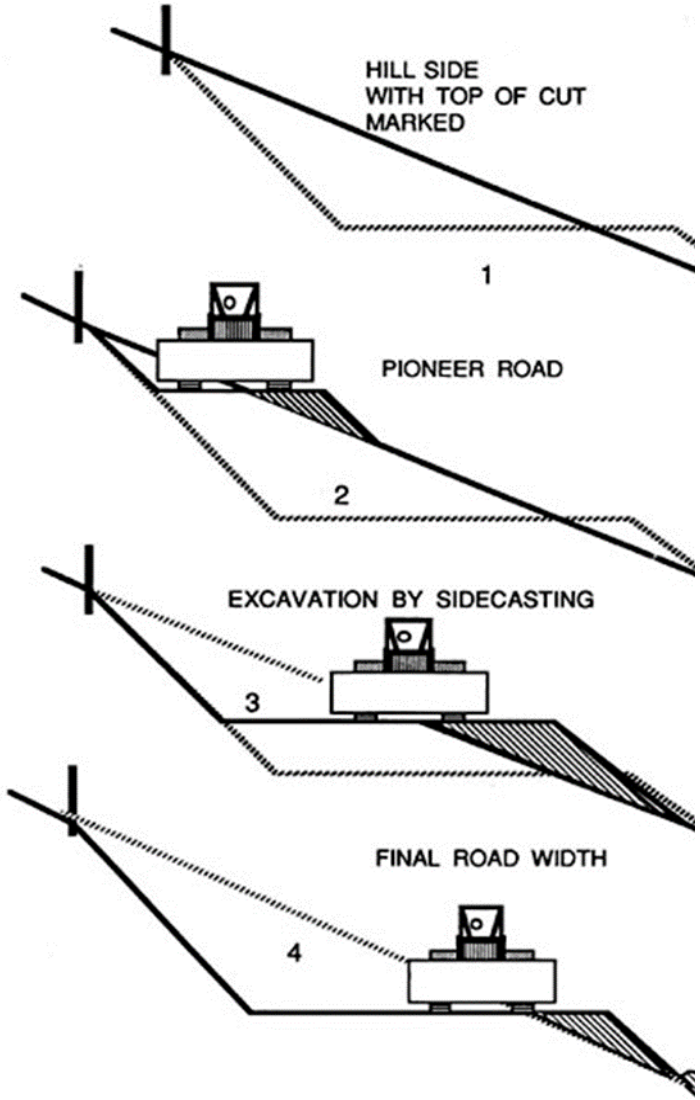
2.1 - Tower Locality Drawings

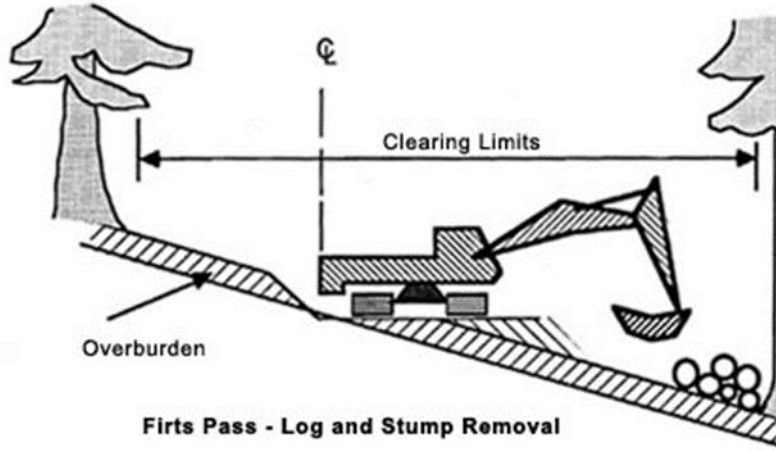



To Kahns Farm
T14
T14A
T15
T15A
T16
T17
T18
T19
200
400
400
150
300
200
100
G
To T13 etc.
Kahns Acres
Existing improved
2200
700
800
300
300
700
300
Waioko Road
Hdf/Mess Sheeting
T21
T22
T23
T24
T25
T26
T27
T28
T30
T31
T32
400
100
300
200
300
300
500
700
600
900
100
600
300
Waioko Rd.
Sambeto R.
River
500
50°
1200
300
100
700
100
1900
To NAOI RD
4300 m
EXISTING IMPROVED
8600 m.
7500 m

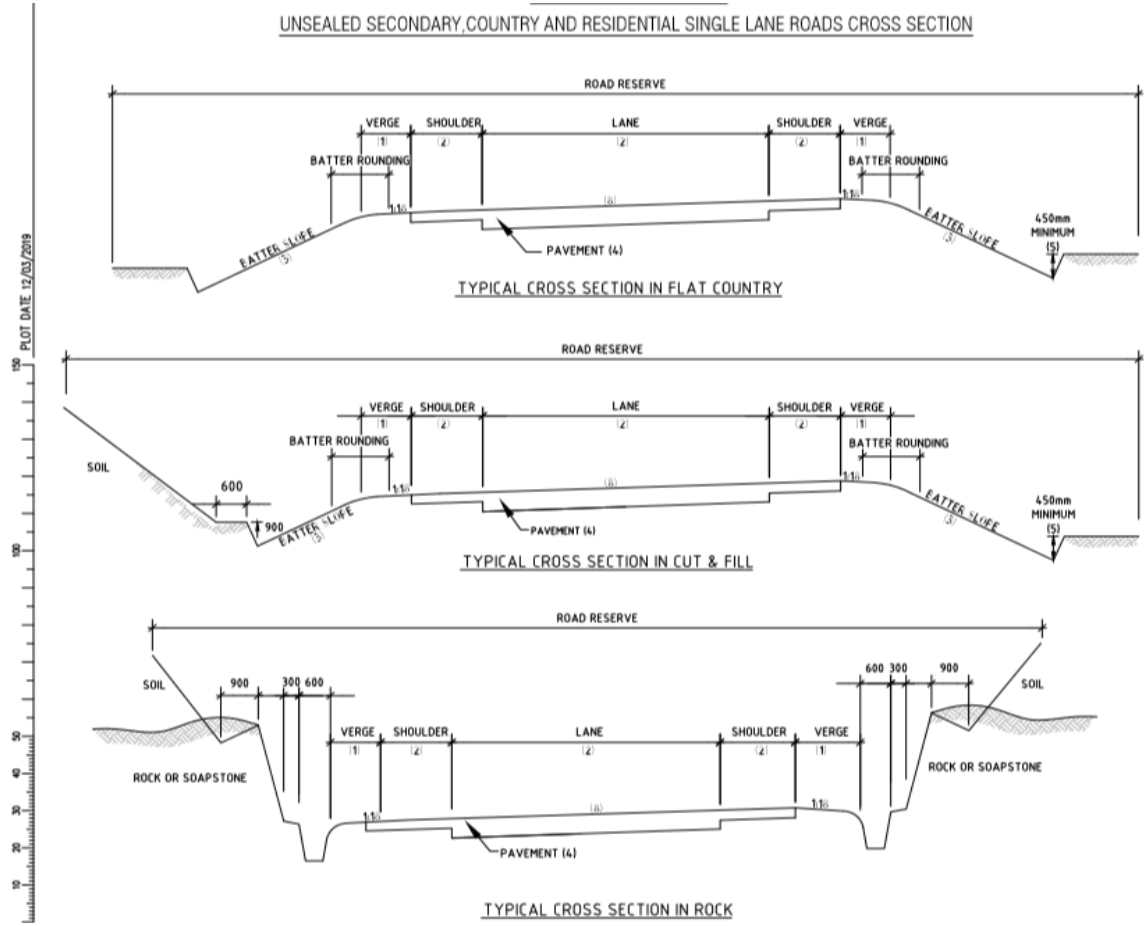

3
T33
400
T34
400
T35
T36
400
T37
T38
T39
T40
T41
T42
1-32
700
Sabeto R.
800
300
200
2900
1300
Existing Track Sheeted
& Improved. 3400
Nadele Camp.
Nadele Village.
T43
700
T44
T45
Existing Improved
6700m.
New Access
13500m
20,200m.
Hit/Miss Shooting
Nadele
700
800
300
1000
400
T46
T47
T48
T49
T50
T51
T53

2.2 -ROAD CUTTING TECHNIQUES

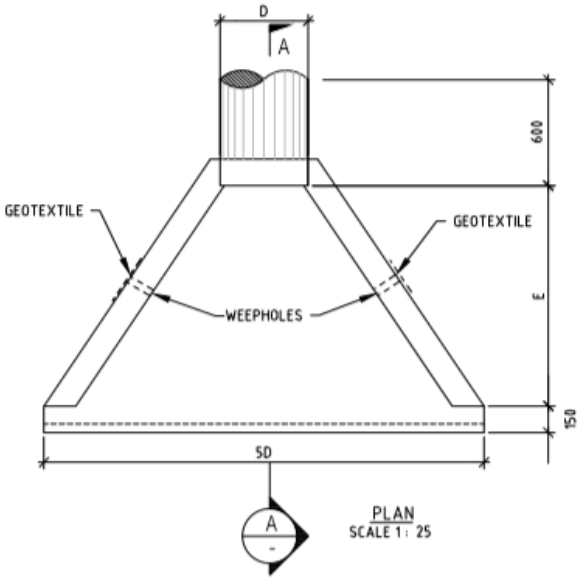




Firts Pass - Log and Stump Removal



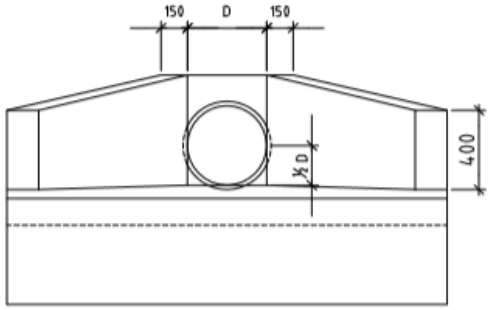
2.3 Unsealed Secondary, Country and Residential Single Lane Roads Cross Section.

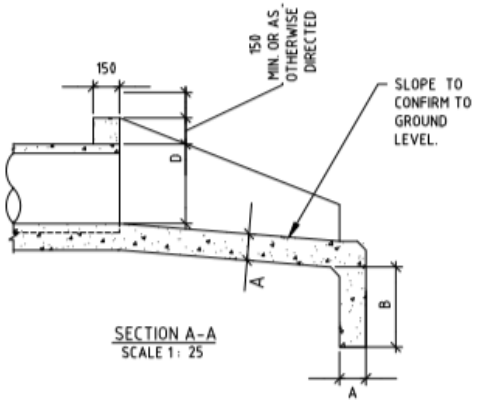


NOTES

1. DIMENSION MAY BE VARIED ACCORDING TO ENGINEER'S DIRECTIONS.
2. CONCRETE STRENGTH TO BE 25MPa AT 28DAYS.
3. REINFORCEMENT HEADWALLS AND APRON SLAB WITH 10mm ϕ BARS BOTHWAYS OR AS DIRECTED BY ENGINEER.
4. FOR ADDITIONAL SCOUR PROTECTION DETAILS REFER R501-15
5. WEEPHOLES OF 75mm PVC @1200 SPACINGS WITH 200X200 GEOTEXTILE FILTER.
6. FRA APPROVAL SHALL BE SOUGHT FOR ALTERNATIVE PRECAST UNITS

PIPE DIA	A	B	C	E
600	200	600	150	800
900	200	900	230	1620
1200	250	900	250	2400
1500	250	900	250	2400





2.4 -UNDERGROUND STORM WATER DRAINAGE (FRA STANDARD DRAWINGS)

ANNEX IV
PROPOSAL SUBMISSION FORM
Invitation to Tender no: MR 423/2023
Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele.

Tender MR 423/23 – Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele

Energy Fiji Limited (EFL)
Supply Chain Unit
Private Mail Bag
Suva – Fiji

Dear Procurement,

Having examined the Solicitation Documents for the MR 423/23 Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele, the receipt of which is hereby duly acknowledged, we the undersigned, offer to execute and complete the works within the time for completion and remedy any defects therein in conformity of Invitation to Tender and the Conditions therein for the Proposal Price taken from the completed Bill of Quantities, namely $_____(inwords,_____
___).

We acknowledge that:

- EFL may exercise any of its rights set out in the Invitation to Tender documents, at any time;
- The statement, opinions, projections, forecasts or other information contained in the Invitation to Tender documents may change;
- The Invitation to Tender documents are a summary only of EFL's requirements and is not intended to be a comprehensive description of them;
- Neither the lodgment of the Invitation to Tender documents nor the acceptance of any tender nor any agreement made subsequent to the Invitation to Tender documents will imply any representation from or on behalf of EFL that there has been no material change since the date of the Invitation to Tender documents, or since the date as at which any information contained in the Invitation to Tender documents is stated to be applicable;
- Excepted as required by law and only to the extent so required, neither EFL, nor its respective officers, employees, advisors or agents will in any way be liable to any person or body for any loss, damage, cost or expense of any nature arising in any way out of or in connection with any representations, opinions, projections, forecasts or other statements, actual or implied, contained in or omitted from the Invitation to Tender documents.

We undertake, if our proposal is accepted, to commence and complete the full scope within the time frame stipulated.

We understand that you are not bound to accept any proposal you may receive and that a binding contract would result only after final negotiations are concluded on the basis of the Technical and Price Components proposed.

Date this _____day of _____, 2023

Firm / Institution:

_____

Signature of Witness:

_____

Representative:

_____

Address of Witness:

_____

Position of Representative:

_____

Address of Representative:

_____

ANNEX V
TECHNICAL PROPOSAL SUBMISSION FORM
Invitation to Tender no: MR 423/2023
Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele.

PART A: RELEVANT EXPERIENCE

Part A1: Firm / Institution Background

Registered Name:	
Year Established:	
Physical Address:	
Postal Address:	
Telephone Contact:	
Fax:	
Email:	
Contact Person:	
Position of Contact Person:	
Number of Employees:	
Having Sound Financial Statement (Audited) over the last five (5) years	

Part A2: Work Experience

(6 pages maximum, 2 per project)

Using the format below, bidders shall provide[1] details of three (3) projects that demonstrate their experience in completing the following type of work: -

- Drainage and minor earthworks on unsealed roads
- Unsealed road pavement construction
- Drainage structures

Detailed evidence of the proposed subcontractor's relevant experience must also be submitted.

The projects cited must have been completed or substantially completed withing the last 5 years and be of a similar nature to this contract.

[1] Bidders who fail to provide the details required above, or whose experience is considered by EFL to be below the standard required for a contract of this nature, may be deemed non-conforming.

Bidder's Experience			
Relevant Experience – Project One[2]			
Project Title:		Previous Client Name:	
Project Location:		Project Dates:	*[Start Date and Contract Duration]*
Contract Value:	*[Fiji Dollar Equivalent]*	Tenderer's Role:	*[e.g. Main Character, Subcontractor, Joint Venture]*
Project Description:			
Length of Unsealed Pavement Construction:			
Quantity/type of drainage completed (e.g. water channels, culverts, headwalls):			
Previous client contact name and phone number[3]:			
Names of key delivery team members and roles:			
Names and roles of bidder's subcontractors:			

Part A3: Track Record

(3 pages maximum, 1 per project)

Using the format below, bidders shall provide[4] details of three (3) projects that demonstrate their track record in completing works similar to the Contract works.

The projects sited must have been completed within the last 5 years, be of a similar nature to this contract and one of the projects must be of at least 25% of the value of the price proposed for this contract.

The areas on which referees will be asked to comment may include:

- Quality of the work,
- Programme achieved versus planned,
- Management style, claims nature,
- Clarity of documentation submitted,
- Health, safety and environmental management,
- Coordination and communication skills (internally and externally),
- Effectiveness of quality assurance systems.

[2] Add extra pages in the same format for each reference project, up to the number specified.
[3] Previous clients or others may be contacted by EFL to verify the information provided.
[4] Bidders who fail to provide the details required above, or whose track record is considered by EFL to be below the standard required for a contract of this nature, may be deemed non-conforming.

Bidder's Track Record			
Track Record – Project One[5]			
Project Title:		Previous Client Name:	
Project Location:		Project Dates:	*[Start Date and Contract Duration]*
Contract Value:	*[Fiji Dollar Equivalent]*	Tenderer's Role:	*[e.g. Main Character, Subcontractor, Joint Venture]*
Project Description and key points on Contractor's Performance:			

Client Reference contact name and phone number[6]:	
Was the project complete prior to the contract completion date including any extensions of time (if not state reasons why).	
Was the project delivered to the required quality standards and was any rework required.	
Was project completed within the required budget and/or what were reasons for any cost overruns.	

[5] Add extra pages in the same format for each reference project, up to the number specified.
[6] Previous clients or others may be contacted by EFL to verify the information provided.

PART B: METHODOLOGY

(3 pages maximum)

A bidder is expected to demonstrate their understanding of the project and the EFL's needs, and the means and methods by which the desired results can be achieved in a practicable and efficient manner.

By answering the questions below, bidders shall describe the methods they will use to carry out the Contract Works on time and to the standards and requirements specified in the Contract[7].

Methodology

1. Describe the key risks you have identified with this project and state how these will be managed?
2. Detail your proposed methodology for the drainage and pavement construction work including any key hold points.
3. What quality assurance procedures in terms of material quality, pavement depth and width, adequacy of compaction, etc. will you utilize on this contract?
4. What environmental considerations and mitigation measures do you envisage are required to finish this project?
5. Provide a preliminary construction programme demonstrating how you will complete the works within the contract timeframes (the construction programme may be appended and will not be counted in the page allowance).

[7] Methodologies which fail to satisfy EFL of the soundness of the tenderer's approach to the Works may be deemed non-conforming.

PART C: RESOURCES

Part C1: Materials and Contractors Equipment

(2 pages maximum)

Using the format below, bidders shall submit details of materials and the availability, brand, age and condition of Contractor's Equipment that will be used in the execution of the Works[8]. Tenderers must demonstrate that they own or have the ability to hire the specific plant listed below.

Part C1 Materials and Contractor's Equipment[9] (to be used on this Contract)	Tick One		
1. Contractor's Equipment *[list]*	Already Owned	Will be Purchased	Will be Hired
Grader(s) Roller(s) Watercart(s) Truck(s) Excavator(s)			

[8] Bidders, whose resources of equipment and materials proposed for the Contract are not considered both sufficient for the Works and plausibly procurable, may be deemed non-conforming.

[9] Bidders must list all items of Contractor's Equipment to be used on this Contract and ensure all items nominated in the proposal comply with any requirements stated in the specification. All items of the Contractor's Equipment nominated herein must be available for viewing during the tender evaluation process. Tenderers that do not comply with this requirement may be deemed non-conforming.

Part C2: Key Personnel

(2 pages maximum)

Using the table below, for each key role listed, bidders shall describe their proposed team members (one page per role). The CVs for key personnel must also be provided.

It is acceptable for roles requiring partial commitment to be undertaken by the same person, provided they have the appropriate skills[10] [11] [12] [13].

List of Key Roles for this Contract:

- Contract Manager / Contractor's Representative
- Site based Construction Supervisor / Construction Manager

<table>
<tr><td colspan="4">Part C2: Key Personnel [expend space below, to a maximum 1 page per role]</td></tr>
<tr><td colspan="4">Role 1: [state role]</td></tr>
<tr><td>Person's Name:</td><td></td><td>Current Commitments:</td><td></td></tr>
<tr><td>Fluency in English

Spoken:

Written:</td><td></td><td>Commitment to proposed Contract

% of time:

Total Hours:</td><td></td></tr>
<tr><td colspan="4">Relevant Experience and Skills brought to this project:</td></tr>
<tr><td colspan="4">Relevant Qualifications and Training for this project:</td></tr>
</table>

[10] Bidders whose resources of key personnel proposed for the Contract are not considered both sufficient for the Works and plausibly procurable, may be deemed non-conforming.

[11] Where a key role(s) will be performed by the subcontractor, this should be clearly stated and the same information provided.

[12] The successful bidder must provide the team members proposed in its proposal, or others of equivalent caliber, for the performance of the specified roles. Failure to do so will be regarded as a Contractor default.

[13] Previous clients may be contacted by the EFL to comment on the team member's previous performance. Bidders will be deemed to have checked that the previous client contact details are valid and that the previous client and employee are willing for the information to be provided.

Previous Client referee contacts for the person's most recent project:	Previous Client referee, Name and Position: _____ Company: _____ Contact details (phone): _____ Email: _____

PART D: LOCAL CAPACITY

Part D1: Building Local Capacity

(2 pages maximum)

Using the format below, bidders shall describe their proposals for engagement and development of local (Fijian) professional staff, tradespersons and laborers, residing nearby the vicinity of the proposed works area.

The submission must identify the bidder's commitment to engaging Fiji based personnel and indicate how the bidder intends to further develop the relevant skills and qualifications of local personnel working on the project[14].

Bidders must say how they will build better local capability during the term of the agreement.

1. Local Business *[Describe how you will support local business through this contract]*
2. Professional Staff *[Describe ways in which you propose to support and develop local Fijians pursuing construction management roles and/or technical/professional qualifications through this contract]*
3. Trades Staff *[Describe proposed actions to support and develop local Fijians pursuing trade qualifications through this contract]*
4. Laborers *[Describe proposed actions to support and develop local Fijian laborers through this contract]*

[14] Failure to satisfy EFL that the bidder will take sustainable procurement seriously and provide a meaningful programme of skills transfer appropriate to the nature and duration of the Works may result in the tender being deemed non-conforming.

Part C2: Subcontractors

Using the table below, bidders shall state details of the subcontractors they propose to use for the Contract[15].

Subcontractor 1

Name:

Location:

Proposed Role:

Percentage of Works allocated: _____%

Subcontractor 2

Name:

Location:

Proposed Role:

Percentage of Works allocated: _____%

[Add lines if necessary]

[15] Bidders, whose resources of labor and subcontractors proposed for the Contract are not considered both sufficient for the Works and plausibly procurable, may be deemed non-conforming.

ANNEX VI
FINANCIAL PROPOSAL SUBMISSION FORM
Invitation to Tender no: MR 423/2023
Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele.

SCHEDULE OF RATES OR PRICES

Basis of Proposal

The bidder shall provide details of its Proposal Price by completing the schedule of Rates below.

The Proposal Price shall the bidder's comprehensive offer of the Contract Price, in consideration of the bidder meeting all obligations, conditions and liabilities under the Contract Agreement and other documents referenced therein, inclusive of the cost of supplying all labor, materials, plant and supervision required to carry out the Contract Works, overheads and profit, subject only to such measurement, evaluation and adjustment as is provided for in the Contract.

Basis of Schedules

Descriptions of various items contained in the Schedule of Rates are not intended to be a complete definition for the scope of the Contract Works, for which reference shall be made to the Specification, Drawings, Basis of Proposal and calculating progress payments and valuing variations.

Abbreviations used in the Schedule of Rates are as per the following table, or otherwise using International System of Unit (SI units):

Abbreviation	Description
LS	Lump Sum
PS	Provisional Sum
PI	Provisional Item
day	Calendar Day
h	Hour
m^2	Square Meter
m^3	Cubic Meter (solid measure)
meas.	Measurable Item

Provisional Items

Provisional Items are items at the EFL's option and are fixed rates or lump sum prices inclusive of overheads and profit. The inclusion in the Schedule of Rates of a Provisional Item does not confer on the Contractor the right to perform the work to which the item relates. Such item shall be carried out only on the instructions of the Engineer and paid for at the rates or lump sums in the Schedule of Rates.

Provisional Sums

Provisional sums are amounts of money for work that may or may not be carried out by the Contractor. Such work shall only be performed on the written instruction of the Engineer.

Records of Measurement

Pursuant to Sub-Clause 12.1 [Works to be Measured] of the General Conditions, where the Permanent Works are to be measured from records, such records (including cross-sections before and after construction for earthworks), shall be prepared by the Contractor which is to be checked and certified by the Engineer. Typical examples of measurement schedules will be supplied by the Engineer to the Contractor at the first contract meeting.

Units and Pricing

Definitions of units and their abbreviations used in the Schedule of Rates shall be consistent with SI units as defined in NZS 6501. When the price for an item is left blank, the figure zero (0) shall be inferred and the cost of the item shall be deemed to be covered elsewhere in the Schedule of Rates.

Basis of Payment

Payments will be based on a measure-value contract whereby payments are done in accordance to work performed and to verified Bill of Claims.

Currency of Payment

All prices in the proposals must be presented in Fiji Dollars (FJD) and should be inclusive of all taxes, duties VAT as applicable.

Bill of Quantities

Stage A: Access Road to Tower 1A to 8 (Vuda)

Estimate for: Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele					
Length: 3300m					
Item	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
A1.0	Preliminary and General				
A1.1	Establishment and Disestablishment	Ls	1		
B1.0	**Drainage**				
B1.1	Clean Existing water channels	m	0		
B1.2	Construct new water channels	m	6600		
B1.3	Rock fill and lining of water channels	m	0		
B1.4	Supply and construct new 450 dia. RCRRJ Culvert	ea	12		
B1.5	Supply and construct new 600 dia. RCRRJ Culvert	ea	12		
B1.6	Supply and construct new 600 dia. Culvert Headwall	ea	8		

B1.7	Supply and construct new 450 dia. Culvert Headwall	ea	8		
C1.0	**Pavement Construction**				
C1.1	Grade and shape existing surface	m	3300m		
C1.2	Supply and construct 50-75mm aggregate for Pavement aggregate, 150mm thick (Solid Measure) (4m wide)	m^3	2376		
C1.3	Unit Price of Cartage of Aggregate (VIP)	$/$m^3$/km	2376		
E1.0	**Earthworks**				
E1.1	Remove landslide soil	m^3	0		
F1.0	**Structural Repairs**				
F1.1	Structural Repairs	m^2	0		
H1.0	Contingencies	PS	1		
TOTAL (VIP)					
I1.0	**Day Works Rates (All sites)**				
I1.1	Laborer	hr.			
I1.2	Supervisor	hr.			
I1.3	Utility/light truck <3.5m^3	hr.			
I1.4	Truck 3.5 – 9.0m^3	hr.			
I1.5	Excavator 6 – 16tonne	hr.			
I1.6	Loader 0.5 – 1.5m^3	hr.			
I1.7	Roller 1.5 -4.5tonne (static or vib)	hr.			
I1.8	Grader	hr.			
I1.9	D6 Dozer	hr.			
I1.10	Rock Breaker >16tonne	hr.			

Stage B: Access Road to Tower 9 to 12 (Vaivai)

Estimate for: Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele					
Length: 2400m					
Item	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
A1.0	Preliminary and General				
A1.1	Establishment and Disestablishment	Ls	1		
B1.0	**Drainage**				
B1.1	Clean Existing water channels	m	0		
B1.2	Construct new water channels	m	4800		
B1.3	Rock fill and lining of water channels	m	0		
B1.4	Supply and construct new 600 dia. RCRRJ Culvert	ea	35		
B1.5	Supply and construct new 600 dia. Culvert Headwall	ea	22		
B1.6	Supply and construct new 450 dia. RCRRJ Culvert	ea	9		
B1.7	Supply and construct new 450 dia. Culvert Headwall	ea	6		
C1.0	**Pavement Construction**				
C1.1	Grade and shape existing surface	m	2400		
C1.2	Supply and construct 50-75mm aggregate for Pavement aggregate, 150mm thick (Solid Measure)	m^3	1728		
C1.3	Unit Price of Cartage of Aggregate (VIP)	$/$m^3$/km	1728		
E1.0	**Earthworks**				
E1.1	Remove landslide soil	m^3	0		
F1.0	**Structural Repairs**				
F1.1	Structural Repairs	m^2	0		

H1.0	Contingencies	PS	1		
TOTAL (VIP)					
I1.0	**Day Works Rates (All sites)**				
I1.1	Laborer	hr.			
I1.2	Supervisor	hr.			
I1.3	Utility/light truck <3.5m^3	hr.			
I1.4	Truck 3.5 – 9.0m^3	hr.			
I1.5	Excavator 6 – 16tonne	hr.			
I1.6	Loader 0.5 – 1.5m^3	hr.			
I1.7	Roller 1.5 -4.5tonne (static or vib)	hr.			
I1.8	Grader	hr.			
I1.9	D6 Dozer	hr.			
I1.10	Rock Breaker >16tonne	hr.			

Stage C: Access Road to Tower 13 to 20 (Wailoko)

Estimate for: Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele					
Length: 3450m					
Item	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
A1.0	Preliminary and General				
A1.1	Establishment and Disestablishment	Ls	1		
B1.0	**Drainage**				
B1.1	Clean Existing water channels	m	0		
B1.2	Construct new water channels	m	6900		
B1.3	Rock fill and lining of water channels	m	0		
B1.4	Supply and construct new 600 dia. RCRRJ Culvert	ea	29		
B1.5	Supply and construct new 600 dia. Culvert Headwall	ea	18		
B1.6	Supply and construct new 450 dia. RCRRJ Culvert	ea	18		
B1.7	Supply and construct new 450	ea	12		

	dia. Culvert Headwall				
B1.8	Supply and construct new 900 dia. RCRRJ Culvert	ea	3		
B1.9	Supply and construct new 900 dia. Culvert Headwall	ea	1		
C1.0	**Pavement Construction**				
C1.1	Grade and shape existing surface	m	3450		
C1.2	Supply and construct 50-75mm aggregate for Pavement aggregate, 150mm thick (Solid Measure)	m^3	2484		
C1.3	Unit Price of Cartage of Aggregate (VIP)	$/m^3/km	2484		
E1.0	**Earthworks**				
E1.1	Remove landslide soil	m^3	0		
F1.0	**Structural Repairs**				
F1.1	Structural Repairs	m^2	0		
H1.0	Contingencies	PS	1		
TOTAL (VIP)					
I1.0	**Day Works Rates (All sites)**				
I1.1	Laborer	hr.			
I1.2	Supervisor	hr.			
I1.3	Utility/light truck <3.5m^3	hr.			
I1.4	Truck 3.5 – 9.0m^3	hr.			
I1.5	Excavator 6 – 16tonne	hr.			
I1.6	Loader 0.5 – 1.5m^3	hr.			
I1.7	Roller 1.5 -4.5tonne (static or vib)	hr.			
I1.8	Grader	hr.			
I1.9	D6 Dozer	hr.			
I1.10	Rock Breaker >16tonne	hr.			

Stage D: Access Road to Tower 21 to 35 (Sabeto)

Estimate for: Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele					
Length: 8600m					
Item	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
A1.0	Preliminary and General				
A1.1	Establishment and Disestablishment	Ls	1		
B1.0	**Drainage**				
B1.1	Clean Existing water channels	m	0		
B1.2	Construct new water channels	m	17200		
B1.3	Rock fill and lining of water channels	m	0		
B1.4	Supply and construct new 600 dia. RCRRJ Culvert	ea	36		
B1.5	Supply and construct new 600 dia. Culvert Headwall	ea	24		
B1.6	Supply and construct new 450 dia. RCRRJ Culvert	ea	21		
B1.7	Supply and construct new 450 dia. Culvert Headwall	ea	14		
B 1.8	Supply and construct new 900 dia. RCRRJ Culvert	ea	8		
B 1.9	Supply and construct new 900 dia. Culvert Headwall	ea	4		
C1.0	**Pavement Construction**				
C1.1	Grade and shape existing surface	m	8600		
C1.2	Supply and construct 50-75mm aggregate for Pavement aggregate, 150mm thick (Solid Measure)	m^3	6192		

C1.3	Unit Price of Cartage of Aggregate (VIP)	$/m^3/km	6192		
E1.0	**Earthworks**				
E1.1	Remove landslide soil	m^3	0		
F1.0	**Structural Repairs**				
F1.1	Structural Repairs	m^2	0		
H1.0	Contingencies	PS	1		
TOTAL (VIP)					
I1.0	**Day Works Rates (All sites)**				
I1.1	Laborer	hr.			
I1.2	Supervisor	hr.			
I1.3	Utility/light truck <3.5m^3	hr.			
I1.4	Truck 3.5 – 9.0m^3	hr.			
I1.5	Excavator 6 – 16tonne	hr.			
I1.6	Loader 0.5 – 1.5m^3	hr.			
I1.7	Roller 1.5 -4.5tonne (static or vib)	hr.			
I1.8	Grader	hr.			
I1.9	D6 Dozer	hr.			
I1.10	Rock Breaker >16tonne	hr.			

Stage E: Access Road to Tower 36 to 42 (Naqele)

Estimate for: Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele					
Length: 6000m					
Item	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
A1.0	Preliminary and General				
A1.1	Establishment and Disestablishment	Ls	1		
B1.0	**Drainage**				
B1.1	Clean Existing water channels	m	0		
B1.2	Construct new water channels	m	12000		
B1.3	Rock fill and lining of water channels	m	0		

B1.4	Supply and construct new 600 dia. RCRRJ Culvert	ea	21		
B1.5	Supply and construct new 600 dia. Culvert Headwall	ea	14		
B1.6	Supply and construct new 450 dia. RCRRJ Culvert	ea	15		
B1.7	Supply and construct new 450 dia. Culvert Headwall	ea	10		
B 1.8	Supply and construct new 900 dia. RCRRJ Culvert	ea	8		
B 1.9	Supply and construct new 900 dia. Culvert Headwall	ea	4		
C1.0	**Pavement Construction**				
C1.1	Grade and shape existing surface	m	6000		
C1.2	Supply and construct 50-75mm aggregate for Pavement aggregate, 150mm thick (Solid Measure)	m^3	4320		
C1.3	Unit Price of Cartage of Aggregate (VIP)	$/m^3/km$	4320		
E1.0	**Earthworks**				
E1.1	Remove landslide soil	m^3	0		
F1.0	**Structural Repairs**				
F1.1	Structural Repairs	m^2	0		
H1.0	Contingencies	PS	1		
TOTAL (VIP)					
I1.0	**Day Works Rates (All sites)**				
I1.1	Laborer	hr.			
I1.2	Supervisor	hr.			
I1.3	Utility/light truck <3.5m^3	hr.			
I1.4	Truck 3.5 – 9.0m^3	hr.			
I1.5	Excavator 6 – 16tonne	hr.			

I1.6	Loader 0.5 – 1.5m^3	hr.			
I1.7	Roller 1.5 -4.5tonne (static or vib)	hr.			
I1.8	Grader	hr.			
I1.9	D6 Dozer	hr.			
I1.10	Rock Breaker >16tonne	hr.			

ANNEX VII
PROPOSAL SECURITY FORM
Invitation to Tender no: MR 423/2023
Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele.

Bidders must provide a letter from their bank confirming willingness to issue the required Performance security should their proposal be accepted. The bank's letter must use wording not materially different from that stated in *italics* below.

(1 page maximum)

****BANK LETTERHEAD****

Date _____2022

To: Energy Fiji Limited (EFL)
2 Marlow Street
Suva
Fiji

WHEREAS [name and address of Contractor] (hereinafter called "the Bidder") has submitted a Proposal to EFL dated _____ to execute Services _____ (hereinafter called "the Proposal"):

AND WHEREAS it has been stipulated by you that the Bidder shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security in the event that the Proposer:

a) Fails to sign the Contract after EFL has awarded it;
b) Fails to comply with EFL's variation of requirement, as per tender instructions; or
c) Fails to deliver the goods and services as outlined in their proposal

AND WHEREAS we have agreed to give the Proposer such this Bank Guarantee:

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Proposer, up to a total of [_____] such sum being payable in the currency in which the Price Proposal is payable, and we undertake to pay you, upon your first written demand, any sum or sums within the limits of [amount of guarantee].

SIGNATURE AND SEAL OF THE GUARANTOR BANK
Date: _____
Name of Bank: _____
Address: _____

ANNEX VIII
HEALTH AND SAFETY QUESTIONNAIRE
Invitation to Tender no: MR 423/2023
Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele.

Health and Safety Questionnaire

Bidders shall complete the following Health and Safety Questionnaire[16] and submit it with their tenders[17].

Health and Safety Management		
Is the bidder aware if its responsibilities relating to health and safety at work as contained in the Fiji Health and Safety at Work Act 1996?	☐ Yes	☐ No
Does the bidder's health and safety management systems comply with the Act in regards to the duties placed on the bidder as the Principal?	☐ Yes	☐ No
Does the bidder have written health and safety procedures in place?	☐ Yes	☐ No
If the bidder answered "yes" to the previous question, do the procedures clearly identify responsibilities and actions to be followed by its personnel?	☐ Yes	☐ No
Subcontractors		
Does the bidder engage subcontractors? *(If no, skip the remainder of this section and go straight to Training)*	☐ Yes	☐ No
Does the bidder audit and/or take responsibility to manage its subcontractors for health and safety on a regular basis? *(if yes, please give details)*	☐ Yes	☐ No
Training		
Does the bidder have a health and safety induction/orientation programme for new workers and visitors to site(s)?	☐ Yes	☐ No
Hazard Management		
Does the bidder have a hazard register and procedures for advising, eliminating, isolating and minimizing significant hazards?	☐ Yes	☐ No
Accident Statistics		
Number of workplace facilities in the last 36 months:		
Number of serious harm workplace accidents in the last 36 accidents:		
Number of workplace accidents resulting in notifiable environmental damage or pollution in the last 36 months:		
Number of improving notices, prohibition notices or prosecutions issued by the relevant regulating authority in the last 36 months:		
Number of instances of damage to power cables, water or gas mains in the last 36 months:		
Average number of bidder employees per year to which above statistics apply:		

[16] Failure to satisfy EFL that the bidder has, or will have, in place systems to adequately manage the health and safety aspects of the works may result in the proposal being deemed non-conforming and the proposal not being evaluated further.
[17] Joint Venture bidders must complete the Questionnaire in respect of each partner.

ANNEX IX
SCHEDULE OF COMPLIANCE AND DEPARTURES
Invitation to Tender no: MR 423/2023
Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele.

Schedule of Compliance and Departures

(1 page maximum)

Using the format below, bidders shall provide details of any non-compliances and departures from the requirements of the Invitation to Tender. EFL reserves the right to reject any proposal that contains non-compliances and departures which it deems unacceptable and which the bidder declines to remove or amend when asked to do so. Even departures acceptable to EFL may result in adjustment to the price for the purposes of comparison of proposals.

Schedule of Compliance and Departures		
Clause reference in TENDER	Detailed description of the departure or non-compliance[18]	Perceived benefit to EFL (if any)
We, the bidder, confirm that our proposal is fully compliant with the requirements of the Invitation to Tender, except in the respects scheduled above.		

[18] If any non-compliances or departures come to light that are not listed in this schedule, they need not be considered as such by EFL and the requirements of the Contract may be enforced at no penalty to EFL.

ANNEX X
BIDDER'S INSURANCE STATEMENT
Invitation to Tender no: MR 423/2023
Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele.

Bidder's Insurance Statement

(1 page maximum)

Using the format below, bidders shall undertake to provide the insurances set out in the conditions of contract[19].

Bidder's Insurance Statement

Statement by the Bidder

In accordance with the requirements of the Invitation to Tender, this is to confirm the insurance arrangements that we undertake to make in relation to the Contract, should our proposal be successful.

We have supplied our insurer or broker with a full copy of the Invitation to Tender and they have agreed to effect on our behalf insurance policies which satisfy the Agreement's requirements for:

- Insurance for Works (Sub-Clause 8.1 in NZS 3910)
- Insurance for Contractor's Equipment (Sub-Clause 8.2 in NZS 3910)
- Insurance for Public Liability (Sub-Clause 8.3 in NZS 3910)
- Motor Vehicle Third Party Property Damage and Legal Liability Insurance (Sub-Clause 8.3 in NZS 3910)
- Insurance for Contractor's Personnel (Sub-Clause 18.4)

We acknowledge that after award of the Contract

- Evidence of the Contract insurances will be completed and forwarded to EFL using the insurance information forms in section C12.3 of the Contract.
- Copies of policies and receipts for payment of the current premiums will be forwarded to EFL in accordance with Sub-Clause 18.1 *[General Requirements for Insurances] of the conditions of contract.*

We confirm that we understand and agree to the Insurance Requirements as per Clause 12.3, in particular relating to the use of approved or alternative insurers.

Signed: _____ Date: _____

On behalf of the bidder _____

[19] Bidders who fail to complete the undertaking may be deemed non-compliant and their proposal not be evaluated further.

ANNEX XI
NZS 3910 GENERAL CONDITIONS FOR CONTRACT FOR BUILDING AND CIVIL ENGINEERING CONSTRUCTION
Invitation to Tender no: **MR 423/2023**
Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele.

Copy can be downloaded from the NZS website.

ANNEX XIII
LOCATION PLANS
Invitation to Tender no: **MR 423/2023**
Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele.

MONTHLY REPORT TEMPLATE

Energy Fiji Limited

Contract Number: - *[insert contract number]*

Contract Name: Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele.

Contractor Name: - *[insert name]*

Monthly Report

[Insert Date]

Contents

1.0 SUMMARY

1.0 Progress Summary

Progress to Date in % (Summary BOQ Items			
Description		**Target**	**Achievement**
1	e.g. Establishment	100%	100%
2	e.g. Drainage	100%	80%
3	e.g. Pavement works		
Physical Overall		**XX%**	**XX%**

1.1 Description of Progress to Date

[Word description of progress made during the month]

1.2 Goals and Risks

1.2.1 Achievements Against Goals set Last Month	
1	
2	

1.2.2 Goals for Next Month	
1	
2	

1.2.3 Challenges / Risks Ahead	
1	
2	

1.2.4 Risk Matrix Profile (List Top 5 Risks)		Mitigations
1		
2		
3		
4		
5		

1.3 Health and Safety / Quality

[Describe any issues with Health and Safety of Quality during the month]

2.0 CONTRACT AND FINANCIAL DETAILS

2.1 Contract Details

Contract Details:	
Commencement Date	
Original Contract Period (days)	
Original Completion Date	
Extension of Time Requested	
Extension of Time Approved	
Revised Completion Date	
Forecasted Completion Date	
Defects Period	

2.2 Financial Details

Forecast Final Contract Price	**Amount (VEP)**
Accepted Contract Amount	$
Subtotal	**$**
Approved Variations	$
Proposed Variations	$
Amendments to schedule items (+ or -)	$
Forecast Final Cost	**$**

3.0 OUTSTANDING ACTIONS

3.1 Contractor Actions		**By**	**When**
1	None		

3.2 Engineer Actions		**By**	**When**
1	None		

4.0 PHOTOGRAPHIC RECORD

ANNEX XIV
SITE PHOTOGRAPHS
Invitation to Tender no: **MR 423/2023**
Access Roads Upgrade to 132kV Transmission Towers from Vuda to Naqele.

TENDER CHECKLIST

The Bidders must ensure that the details and documentation mention below must be submitted as part of their tender Bid

Tender Number _____

Tender Name_____

1. Full Company / Business Name: _____

   (Attach copy of Registration Certificate)

2. Director/Owner(s): _____
3. Postal Address:_____
4. Phone Contact:_____
5. Fax Number:_____
6. Email address: _____
7. Office Location:_____
8. TIN Number: _____

   (Attach copy of the VAT/TIN Registration Certificate - Local Bidders Only (Mandatory)

9. FNPF Employer Registration Number: _____ **(For Local Bidders only) (Mandatory)**

10. **Provide a copy of Valid FNPF Compliance Certificate (Mandatory- Local Bidders only)**

11. **Provide a copy of Valid FRCS (Tax) Compliance Certificate (Mandatory Local Bidders only)**

12. **Provide a copy of Valid FNU Compliance Certificate (Mandatory Local Bidders only)**

13. Contact Person: _____

I declare that all the above information is correct.

Name: _____

Position: _____

Sign: _____

Date: _____

Tender submission

Bidders are requested to upload electronic copies via Tender Link by registering their interest at: https://www.tenderlink.com/efl

EFL will not accept any hard copy submission to be dropped in the tender box at EFL Head Office in Suva.

This tender closes at 4.00pm (1600hrs) on Wednesday 21st February, 2024.

For further information or clarification please contact our Supply Chain Office on phone **(+679) 3224360 or (+679) 9992400** or email us on tenders@efl.com.fj

The bidders must ensure that their bid is inclusive of all Taxes payable under Fiji Income Tax Act. Bidders are to clearly state the percentage of VAT that is applicable to the bid prices.

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

The Tender Bids particularly the "Price" must be typed and not hand written.

Any request for the extension of the closing date must be addressed to EFL in writing three (3) working days prior to the tender closing date.

Tender Submission via email or fax will not be accepted.