ENERGY FIJI LIMITED
INVITATION TO TENDER

Geotechnical Investigation for Construction of EFL head office New Block

---

Tender No: MR 399/2024

LETTER OF INVITATION

Reference: MR 399/2024 **30th November 2024**

Dear Sir/Madam,

Subject:

1. You are kindly requested to submit a comprehensive proposal for the Geotechnical Investigation Works as stipulated in the Scope of Works in this tender to carry out geotechnical investigation for construction of EFL head office new block.

2. All bids for the contract shall be submitted on the appropriate forms provided and shall include the completed price schedule, technical schedule and schedules of experience etc. The bid shall be on the basis of a lump sum contract based on firm prices, and Payments will be made on milestone basis.

3. This proposal will cover the required Geotechnical Investigation works – refer Annex I, Annex II and Annex III.

4. 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, Scope of Works & 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: FIDIC

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

Site Visit

Not required, may be arranged upon 3 working days prior request, subject to need of visit.

ANNEX I
INSTRUCTIONS TO BIDDERS

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.

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, 576km of 33kV lines and over 10,900km of 11kV and 415V distribution lines, as at 31st December 2023.

Energy Fiji Limited (EFL) is hereby inviting Proposals to carry out geotechnical investigation for construction of EFL head office new block, to determine the soil bearing capacity and relevant design parameters for the civil and structural design of the new building block.

.

2. Acknowledgement and/or Withdrawal

2.1 Immediately upon receipt of this tender, if you intend to submit a proposal, you must send an email message to EFL's Contract Officer (Clause 6) advising who your contact person will be.

2.2 If at any point when considering this tender, you decide your organization is unable to respond or continue with this invitation, please contact the EFL Contract Officer (as shown in Clause 6) as soon as possible. This will enable EFL to evaluate the effects of such a withdrawal upon our procurement process.

3. Timetable

3.1 The following is our proposed timetable for this tender

30th November 2024	Issue of tender
11th December 2024	Closing Date
1 Month from Closing Date	Final Evaluation and Selection of contractor (if any). Negotiation with contractor will take place after this date.
3 Months from Closing Date	Proposal must remain open for acceptance by EFL.

3.2 Please note this timetable is indicative only and may be subject to change at the sole discretion of EFL. EFL will notify participants of any changes. Fiji Public Holidays are to be excluded for consideration days.

4. Delivery of Proposals

All proposals to be received by **1600hrs, 11th December 2024**

Submission of proposals are to be done through EFL Tender link Portal - https://www.tenderlink.com/efl

5. Further Communications

6.1 All communications as to this tender, or requests for clarification or further information, should be directed to EFL's Contracts Officer (CO);

Jitendra Reddy
Manager Procurement, Inventory & Supply Chain
2 Marlow Street, Suva, FIJI.
Phone: 679 3222320
Email: Tenders@efl.com.fj

6.2 At any time, additional discussions to clarify details in a Proposal may be required. As a matter of principle:

6.2.1 If such matters affect the content or interpretation of the terms or specifications in our tender, all Contractors will be advised without indicating the source of the query and the registered Contractors will be sent a formal Notice to Contractors (NTC). All NTC's issued will become part of this tender;

6.2.2 If the discussion relates only to a proposal being made by an individual Contractor, any matters raised will not be discussed with other Contractors.

6.3 EFL will not be bound by any statement, written or verbal, made by any person other than the EFL CEO. The CEO (or any other person authorized by CEO) is the only person authorized to make representations or explanations to Contractors as to this tender.

6. Confidentiality of Information

7.1 The information supplied by EFL (either itself or through its agents or advisors) in connection with this Proposal or any contract that that may arise out of it, is confidential. The information contained in this tender is provided for the sole purpose of allowing you to submit your Proposal to EFL. The information contained in this tender is not to be used for any other purpose or revealed to any other person or party not directly involved in the submission of your proposal. You are responsible for any unauthorized disclosure of such information by your employees, agents and sub-contractors.

7.2 You must not release or disclose any of the information to any other person (other than your employees or advisors), without the prior written consent of EFL.

7.3 You may not make any public statements to third parties or release any information to the press or other media in relation to this tender, its contents, your response to it, or the awarding of any consequential contract without the written permission of our CEO or his delegate.

7.4 EFL will keep Proposals received confidential except if the information is needed for the day to day running of EFL's business.

7. Proposal Validity Period

Your Proposal must be continuing and irrevocable and open for acceptance for 3 months **(90 Days)** from the closing date.

8. Bid Clarification

You may be asked to clarify your bid or provide additional information during the Proposal evaluation process. These requests will require prompt action and you must respond in writing within two business days or the time specified in the request. Otherwise, EFL reserves the right not to consider your Proposal.

9. Representations

In submitting your Proposal in response to this tender, you are required by EFL to acknowledge specifically in your Proposal, that:

"Energy Fiji Limited may rely upon all representations made by you, in your Proposal and in conjunction with your Proposal to Energy Fiji Limited, whether such representations are expressed or implied, or given in writing or verbally. At Energy Fiji Limited's sole discretion, such responses may form part of any consequential contract to be entered into".

10. No Canvassing

All communications concerning this tender should be with the Contracts Officer only. You should not directly or indirectly lobby or attempt to influence any EFL employee or Board member or advisor in relation to this Proposal. Should you directly or indirectly make such an approach then you may be disqualified from the Proposal.

11. Propriety Rights

You must certify to EFL that any proprietary products or services, supplied with, or required by, the solution you propose are products or services over which you or your associated third party hold rights to supply and such right will continue to be available to EFL under license or other agreement and that for this purpose you may be required to disclose details of all relevant contracts with your suppliers and sub-contractors.

12. Acceptance of Proposals

13.1 EFL reserves the right to:

- Reject any or all Proposals at its sole discretion and not accept the lowest Proposal or any Proposal;
- Award separately for each scope of works depending on submissions/offers received;
- Deal separately with any of the divisible elements of any Proposal, unless the relevant Proposal specifically states that those elements must be taken collectively;
- Re-call the Proposal;
- Waive any irregularities or informalities in the tender process;
- Amend the closing date, the acceptance date or any other date in the Proposal documents;
- Amend this tender, or any associated documents, by the issue of a written amendment notice to each supplier;
- Seek clarification of any Proposal;
- Suspend or cancel, (in whole or in part), this Proposal process;
- Meet with any Contractor after Proposal close and prior to placing any order;
- Consider or reject any alternative Proposal, in EFL's sole discretion.

13.2 EFL Proposal will only be deemed to have been accepted or rejected when the fact of acceptance or rejection has been notified in writing to you by EFL. Prior to such written notification, by submitting a Proposal to EFL, you acknowledge that you are owed no legal or tortuous obligations by EFL.

13. Late Proposals

EFL reserves the right to accept or decline late Proposals at any time at EFL's absolute discretion. Should the decision to accept late Proposals be made prior to the notified Closing Date above, all Contractors shall be advised of the extended deadline for submitting or re-submitting their Proposals.

14. Changes to the Tender

15.1 EFL reserves the right to vary the requirements of this tender. Nothing in this tender or any subsequent communication or correspondence (taken individually or collectively) prior to our contract(s) being executed with the successful Proposal(s) will in any way bind EFL or impose any obligation on EFL.

15.2 EFL reserves the right to amend this tender in order to correct errors, rectify omissions or discrepancies. EFL also reserves the right to withdraw this tender at any time before the bid date and to accept any bid and to reject any or all bids for any reason and without cause.

15.3 EFL makes no representations and gives no warranties as to the information provided to you. You must examine this tender yourself, and make all other investigations you consider necessary (including as to the information provided by EFL in relation to this tender), before submitting your Proposal.

15.4 EFL accepts no responsibility for any error or mis-description in this tender, or any associated documents.

15. Amendments to your Proposal

16.1 EFL is under no obligation to check any Proposal for errors. Acceptance of a Proposal that contains errors will not invalidate any subsequent contract.

16.2 We may require you to document any amendment to your Proposal or to re-submit a revised Proposal prior to the execution of any contract between you and EFL.

16. Information Complete and Accurate

17.1 By submitting your Proposal you warrant that all information provided by you to EFL or the CO, in or in relation to your Proposal is complete and accurate in all material respects. You also warrant to EFL that the provision of that information to EFL, and the use of it by EFL for the evaluation of your Proposal and for the negotiation of any resulting contract, will not breach any third party intellectual property rights.

17.2 The bidder should provide the response in compliance to the requirements and any non-compliance or over compliance must be clearly and elaborately explained for it to be considered in the evaluation. There is no assurance that

EFL will consider any explanations for non-compliance and the bid may be rejected on account of such non-compliance, unless it is submitted as an alternate to the specified requirements in the best interest of EFL.

17.3 By submitting your Proposal, it shall be deemed that you have understood the specifications / scope and no claims on the grounds of 'lack of knowledge' will be accepted.

17. Ownership of Tender and Proposed Documents

The tender documents are the property of EFL and may not be copied or reproduced in any way (other than for the purposes of preparing and submitting your Proposal) without the prior written approval of EFL.

18. Status of Discussions and Communications

Unless as stipulated in this tender, no contractual negotiations, decisions or actions are to be initiated by you as a result of discussions with any of our employees or any other person purporting to act on our behalf. Only communications in writing from EFL which are signed by authorized individuals, can be regarded as duly authorized expressions on behalf of EFL.

19. Evaluation Criteria

The main points or selection criteria for comparative analysis and objective assessment of the Contractor's ability to perform the contract is as follows:-

EFL reserves the right to apply any weighting to the criteria

19.1 Technical Submission: - (60%)

- Compliance with this tender technical requirements
- Information about your organization / Company profile
- Reference customers that is similar to this tender
- Ability to supply required service in a timely manner
- Registrations – Company registration / business license, FNPF Compliance, VAT Compliance, FNU Compliance
- Required insurance cover

19.2 Commercial Solution: - (40%)

- Pricing VIP in Fijian Dollars
- Price validity
- Delivery time
- Work Schedule
- Milestone Payment
- Acceptance of EFL's 90-days term

20. Results of this Tender Action

On completion of our evaluation stage, EFL expects to either:

20.1 Enter directly into negotiation(s) with a preferred Contractor(s); or

20.2 Seek further Proposals; or

20.3 Terminate our tender process

21. The Successful Bidder

The successful bidder will be expected to carry out the whole project as stipulated in the scope of works within a period of **4 Weeks** or less, from the time a purchase order is issued.

21.1 Eligible Bidders

This invitation is open to all Bidders who have sound Financial Background, and have previous experience in handling such turnkey 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 practice.

21.2 Eligible Materials, Equipment and Services

The materials, equipment, and services to be supplied under the Contract shall have their origin from reputable companies as specified by EFL and from various countries and all expenditures made under the Contract will be limited to such materials, equipment, and services. Upon request, bidders may be required to provide evidence of the origin of materials, equipment, and services.

For purposes of contract "services" means the works and all contract-related services including design services.

For purposes of contract “origin" means the place where the materials and equipment are mined, grown, produced or manufactured, and from which the services are provided. Materials and equipment are produced when, through manufacturing, processing or substantial or major assembling of components, a commercial recognized product results that is substantially different in basic characteristics or in purpose or utility from its components.

The materials, equipment and services to be supplied under the Contract shall not infringe or violate any industrial property or intellectual property rights or claim of any third party.

21.3 One Bid per Bidder

Each bidder shall submit only one bid either by itself, or as a partner in a joint venture. A bidder who submits or participates in more than one bid will cause all those bids to be rejected.

21.4 Cost of Bidding

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

21.5 Tender submission

Tenders shall be submitted in two parts in the following manners: -

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 11th December 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.

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 **Five (5)** working days prior to the tender closing date.

Tender Submission via email or fax will not be accepted.

21.6 Insurances

Certificates of following valid insurances are mandatory for bidders:

1. Contractors All Risk insurance
2. Professional indemnity

ANNEX III
B. SCHEDULE RATES AND PRICES
C. SCOPE OF WORKS

A. 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

Subject to any deduction which the Owner may be authorized to make under this Contract, and or to any additions or deductions provided for in this Contract, the Contractor shall be entitled to payment as follows:

a. All payments shall be made in Fijian Dollars (FJD), unless otherwise specified in the LPO/Contract Agreement. All payment shall be made on the basis of actual measurement for the quantified items as per schedule of works.

b. The Contractor shall submit the bill for claim in 1 Original copy with all supporting documents as per the Contract condition to EFL. After due verification and recommendation, EFL shall process verified bills for release of payment. Payments shall be released in 30 (Thirty) days from date of submission of clear invoice.

c. All taxes and deductions shall be applicable as per prevailing income tax and other statutory rules and provisions in force.

d. In case Contractor fails to submit the invoice with all the required documents to process payments, EFL reserves the right to hold the payment of the Contractor against such bills until all the required documents are submitted for Verification.

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 Mode of Payments for Each Milestone.

Item	Description	Amount
1.0	Mobilization of necessary equipment's, other in situ test equipment's, men and materials to the project site for carrying out the geotechnical investigation and demobilization of the same after completion of all the field works.	
2.0	2 x machine drilled boreholes to be carried out to a depth of 25m with Standard Penetration Tests (SPT) carried out in the borehole at 1.5m interval.	
3.0	Conducting various laboratory tests on soil samples at an approved laboratory including preparation of soil samples to determine the following properties of soil, preparation & submission of report of geotechnical investigation and foundation recommendation etc. all complete as per specification. **Tests on Disturbed Samples** 1. Visual and Engineering Classification 2. Liquid, Plastic, and Shrinkage limits 3. Specific Gravity 4. Proctor Compaction test 5. California Bearing Ratio **Tests on Undisturbed Samples** 1. Bulk Density and Moisture Content 2. Relative Density 3. Unconfined Compression Test.	
4.0	Preparation and submission of report	
	Total Cost (VIP)	
	Acceptance of 90 days bid validity	

Note: The Contractor is to submit the geotechnical investigation report soft copy as well as 2 sets of hard copy of detail geotechnical report along with recommendation and analysis as per Specifications and relevant standards. The above rate quoted by the bidders shall be including preparation and submission of report.

C2 SPECIFICATIONS

2.1 Objective of Scope of Works

The Energy Fiji Energy (EFL) intends to construct a new block 3 storey office building with provision for future extension. Therefore, the main objective of this tender is;

a. Carry out geotechnical investigation of the identified site, to determine the soil bearing capacity and relevant design parameters

b. Contractor to provide best economical and technical recommendations for the above works foundation design and associate works.

2.2 Summary of Scope of Works

Summary of Work: The purpose of the proposed geotechnical investigations is:

a. To determine type of substrata and their characteristics up to the specified depths to assess the general suitability of the site for the proposed works,
b. To enable an adequate and economic design to be prepared, including the design of temporary & permanent works;
c. To plan the best method of construction; to foresee and provide against difficulties and delays that may arise during construction due to ground and other local conditions.
d. To determine the changes that may arise in the ground and environmental conditions, either naturally or as a result of the proposed works, and the effect of such changes on adjacent works and on the environment in general;

All the tests that are considered necessary for this purpose, in the opinion of the EFL, shall be conducted. Any additional tests/works, change in the number and type of specified tests, revision in the diameter and/or depth of boreholes, samples to be collected, etc. shall be carried out as directed by the EFL or Bidder to obtain prior approval.

The work shall include mobilization of all necessary equipment's, transportation & shifting of equipment's, preparation of temporary access to site/working area, providing necessary engineering supervision and technical personnel, skilled and unskilled labour, accommodation, storage, safety and securities of manpower & equipment's, arrangement of construction power & water, liasoning with local/government authorities etc., as required to carry out the entire field as well as laboratory investigation, analysis and interpretation of data collected and preparation of a Geotechnical report. The entire field as well as laboratory investigation work shall be supervised by a qualified Geotechnical Engineer with enough years of experience in Geotechnical Investigation work. A Geologist shall also be deputed at site during investigation whenever rock drilling is undertaken. The scheduling of laboratory tests, analysis and interpretation of test results and drafting of report shall be carried out by a qualified Geotechnical Engineer.

All the field and laboratory data shall be recorded in the proforma recommended in AS/NZS Standard Codes. All the field records shall be reviewed by EFL/ EFL's representative, soon after the completion of each bore hole/test. The Contractor shall submit to the EFL two copies of field bore logs.

The Contractor shall intimate the EFL, giving reasons, if any additional specific tests required necessary to be carried out duly considering local soil conditions before starting of such tests.

The Contractor shall carry out all work meant within parameters of this specification even if not explicitly mentioned under the scope. All works shall be executed to the satisfaction of the EFL.

All the laboratory test data shall be recorded in the proforma recommended in the AS/NZS Standard Codes and a copy of these shall be sent to the EFL every week during the progress of laboratory testing. Whenever desired during the progress of the work the EFL may be present at the laboratory where the Contractor is arranging for execution of the laboratory tests.

The contractor shall interact with the EFL to get acquainted with the different types of structures envisaged and in assessing the load intensities on the foundations for the various structures of the Power project to enable him to calculate the allowable bearing pressure

After the review of the draft report, the EFL may call for discussions in order to explain to the Contractor the EFL's observation on the report. Within one week of such a request, the Contractor's technically qualified Geotechnical Engineer shall be available at the EFL's Head Office in Suva for a discussion. Any expenditure on account of redrafting, finalizing the report including cost of visits to EFL head Office shall be deemed to have been included in the quoted rates.

The Contractor shall carry out all the work of this Specification even if not explicitly mentioned under the Scope. All work shall be executed to the satisfaction of the EFL and relevant AS/NZS Standards.

2.3 General Requirements

a. In areas which have already been developed, the Contractor shall take advantage of existing local knowledge, records of trial pits, bore holes, etc., in the vicinity and the type of foundations adopted and behaviour of existing structures, particularly those of similar nature to the ones proposed for this project.
b. The Contractor shall make use of information gathered from quarries, unlined wells, cuttings from nearby areas, etc. The general topography of the nearby areas will often give some indication about the variation of the soil conditions which are likely to exist.
c. The Contractor shall gather data regarding the removal of overburden by excavation, erosion or landslides, etc. in the areas. Similarly, data regarding recent fills shall also be studied to determine the characteristics of the fill as well as the original strata.
d. The water level in streams and water courses in the neighborhood shall be noted. Reliable information regarding ground water level shall also be gathered from water level nearby.
e. The Contractor shall make enquiry and verify regarding earlier use of the site which can have important bearing on its suitability for the proposed structures. The possibility of damage to the structures, sewers, conduits and drainage system by subsidence shall also be investigated.
f. It is essential that the equipment's/ instruments are properly calibrated at the time of commencement of the work so that they represent true values and submit the test reports to EFL. If EFL so desires, the Contractor shall arrange for having the instruments tested in presence of EFL representative at a Govt. approved laboratory, the cost for calibration of instruments shall be in the scope of Contractor.

g. No claim whatsoever shall be entertained for differences between the extent, location, depth, etc. of soil test indicated on the construction drawings and those shown on the tender drawings, if any.
h. When blasting with explosives is involved, agency/contractor shall arrange statutory clearance and also the portable magazine for storing /carrying the explosives. Only licensee shall handle these explosives.

2.4 Codes and Standards:

All standards, specifications and codes of practice referred to herein shall be the latest editions including all applicable official amendments and revisions.

In case of conflict between this specification and those (IS codes, Standards etc.) referred to herein, the former shall prevail.

All work shall be carried out as per the following AS/NZS Standards and Codes:

Standards & Codes	Description
AS 1289.5.3.1—2004	Methods of testing soils for engineering purposes
NZS 1170.5:2004	Structural design actions - Part 5: Earthquake actions
AS 2159—2009	Piling—Design and installation
AS/NZS 2312.1:2014	Guide to the protection of structural steel against atmospheric corrosion by the use of protective coatings
NZS 4407:2015	Methods of sampling and testing road aggregates
NZS 4402.2.8.1:1986	Methods of testing soils for civil engineering purposes - Soil classification tests
NZS 4402.2.8.1	Particle Size Distribution Coarse and Fine (Wet and Dry)
NZS 4402.2.8.4	Particle Size Distribution (Hydrometer)
NZS 4402.2.7.1,2.7.2	Particle density/ Soil density
NZS 4402.2.1/NZS 4407	Moisture Content
NZS 4402.2,2.3,2.4,2.5	Plasticity Index (liquid and plastic limits)
NZS 4402.6.1.1	California Bearing Ratio
ASTM C1245-06	Point Load
NZS 4407.3.15	California Bearing Ration

Note: The above Standards shall not be limited to, the contractor to advice and carry out the works as per the best industry practice and Standards.

2.5 Field Investigations in Soil:

The CONTRACTOR shall have on site all required survey instruments to carry out the work accurately according to specifications and drawings. All the specified locations for boreholes and field tests shall be set out at site by the CONTRACTOR from two established reference grid lines which will be shown to him by the EFL, or as indicated in the drawing. If required, the CONTRACTOR shall set out the base lines and the locations of boreholes and field tests with reference to the property line as indicated by the EFL or as indicated on the drawing. At each location of boreholes, plate load tests and other field tests, the CONTRACTOR shall establish the ground prior to commencing of the operations. The ground level shall be related to an established bench mark or to a GTS bench mark or as directed by the EFL or indicated on the Drawing.

If the area, where the field tests are located, is likely to be inundated by tidal waters, the field work shall include provision for temporary fill, erection and removal of platforms, making good the ground, access, etc., as necessary for carrying out the work in this area and no extra claims will be entertained on this account.

The CONTRACTOR shall submit with his bid the list of equipment/apparatus he would mobilize to site, if work is awarded to him. If necessary, to complete the work within the stipulated time, the CONTRACTOR shall mobilize additional equipment without additional cost to the EFL unless specifically agreed earlier.

2.5.1 Standard Penetration Test (SPT):

This test shall be conducted in all types of soil deposits met within a bore hole, to find the variation in the soil stratification by correlating with the number of blows required for unit penetration of standard penetrometer. This test shall be conducted at intervals agreed by the EFL and CONTRACTOR and every change of strata to the satisfaction of the EFL. The starting depth of performing SPT shall be 0.5m depth below ground level. This depth shall be staggered in alternate boreholes. The depth interval between the top levels of Standard penetration test and next undisturbed sampling shall not be less than 1.0 m. The specifications for the equipment's and other accessories, procedure for conducting the test, presentation of test results and collection of the disturbed soil samples.

For conducting the test, the bottom of borehole shall be cleaned properly and the spoon shall be properly and centrally seated in position in the borehole. It is necessary to ensure that drive hammer is of specified weight and has a specified free fall. It shall be ensured that energy of the falling weight is not reduced by friction between the drive weight and guides or between rope and winch drum. Only BIS recommended standard connecting rods shall be used for the test.

This test shall be carried out by driving a standard split spoon sampler in the bore hole by means of a 650 N hammer having a free tall of 0.75 m. The sampler shall be driven using the hammer and for 450 mm. While driving the number of blows for every 150 mm penetration and the penetration for every 50 blows shall be recorded. The number of blows for the last 300 mm drive shall be reported as N value. This test shall be discontinued when the blow count is equal to 100 and the penetration shall be recorded. Refusal shall be considered to be met with when the blow count is equal to or greater than 100. At the location where the test is discontinued the penetration and the number of blows shall also be reported. Sufficient quantity of disturbed soil samples shall be collected from the split spoon sampler for identification and laboratory testing. The sample shall be visually classified and recorded at the site and shall be properly preserved and labeled for future identification.

2.6 Sampling:

General Requirement:

a. Sufficient number of soil samples shall be collected for reliable estimation of soil properties. The samples collected shall be either disturbed or undisturbed. Disturbed soil samples shall be collected for field identification and conducting tests such as sieve analysis, index properties, specific gravity, chemical analysis, etc. Undisturbed samples shall be collected to estimate the strength and settlement properties of the soil.
b. All the accessories required for sampling and the method of sampling shall conform to AS/NZS. All the disturbed and undisturbed samples collected in the field shall be classified at the site as per AS/NZS.

c. All the samples shall be identified with date, bore hole or trial pit number, depth of sampling, etc. It is also essential to mark an arrow pointing towards the top surface of the sample. Care shall be taken to keep the undisturbed soil samples and box samples vertically with the arrow directing upwards. The tube samples shall be properly trimmed at both ends and sealed with molten paraffin wax at both ends immediately after extracting the samples from the bore hole and suitably capped on both sides.
d. When the Contractor fails to collect the undisturbed soil sample at a specified depth the reason for the same shall be indicated in the borelog and the bore hole shall be advanced by 0.5 M. Subsequently, for cohesionless soil Standard Penetration Test shall be performed and for very soft cohesive soil field vane shear test shall be performed.
e. Precaution shall be taken to ensure that there shall not be any change in moisture content and disturbance of the soil samples and they shall be placed in a temporary store at the end of the day‘s work. All the samples shall be kept over a bed of sand, jute bags, saw dust, etc. and covered over on top with similar material. The bed and top cover shall be kept moist till they are properly packed in boxes. The Contractor shall be responsible for packing and transporting of all the samples from site to the laboratory within seven days after sampling with proper protection against loss and damage.
f. The CONTRACTOR shall properly store all the samples at site till they are transported to his laboratory for testing. Sampling tubes containing undisturbed soil samples shall not be exposed to direct sun and shall be kept in a shade covered with wet gunny bags All the samples shall be packed in wooden boxes using sand, saw dust etc. all around the samples before transportation to laboratory for testing.
g. The rock cores obtained by drilling shall be carefully removed from the core barrel and placed in a properly constructed wooden core boxes with hinged wooden covers as specified above. The cores shall be placed in the boxes in the correct sequence and with each run segregated accurately by labelled wooden blocks 25 mm thick. No box shall contain more than 6m of core. Depths of all runs shall be marked on the portions with paint.
h. The CONTRACTOR shall transport all samples to his testing laboratory as quickly as possible and test the samples.

Disturbed sample:

a. Disturbed soil samples shall be collected in bore holes at regular intervals to provide complete description of soil profile and its variation. Jar samples weighing approximately 10 N shall be collected in bore holes at 0.5 m intervals starting from a depth of 0.5 m below ground level and at every identifiable change of strata to supplement the boring records. Samples shall be immediately stored in air tight jars or polythene bags and labelled with bore hole number and depth.
b. In elevated areas, if superficial material is available in plenty, then bulk samples from a depth of about 0.5 m below ground level shall be collected to establish all the required properties to use it as a fill material. Disturbed samples weighing about 250 N shall be collected at shallow depths and immediately stored in polythene bags. The bags shall be sealed properly and they shall be kept in boxes.

Undisturbed Samples:

In each bore hole undisturbed sample shall be collected at every change of strata and at regular intervals of 3.0 m and as directed by the Owner. The starting depth

of collection of UDS shall be between ground level and 1.0 m below ground level and as decided by the Owner. The starting depth shall be staggered in alternate boreholes. In cohesive soils collection of UDS shall be preferred in place of SPT. The depth interval between the top level of undisturbed sampling and standard penetration test shall be at least 0.5m. Undisturbed samples shall be 100 mm dia and 450 mm length. Samples shall be collected in such a manner that the structure of the soil and its moisture content do not get altered. The specifications for the accessories required for sampling and the sampling. Thin walled sampler shall be used to collect undisturbed samples by pushing the tube into the soil. The sampling tube shall have a smooth finish on both surfaces and minimum effective length of 450 mm. The area ratio of sampling tubes shall be less than 12.5%. However, in case of very stiff soils, area ratio upto 20% shall be permitted.

2.7 Ground Water:

One of the following methods shall be adopted for determining the ground water table in bore holes as per relevant prevailing AS/NZS standards and as per the instructions of the EFL.

a. In permeable soils, the water level in the bore hole shall be allowed to stabilize after lowering it adequately by bailing. When the water level inside the bore hole is found to be stable, the depth of water level below ground level shall be measured. Stability of sides and bottom of the bore hole shall be ensured at all times.
b. For both permeable and impermeable soils, the following method shall be suitable. The bore hole shall be filled with water and then bailed out to various depths. Observations on the rise or fall of water level shall be made at each depth. The level at which neither a fall nor a rise is observed shall be considered as the water table elevation. This shall be established by three successive readings of water level taken at an interval of two hours.
c. In case any variation in the ground water level is observed in any specific boreholes, then the water level in these bore holes shall be recorded daily during the course of the field investigation. Levels in nearby wells, streams, etc. if any, shall be noted whenever these readings are taken.
d. If so called for, observation wells shall be drilled for the purpose of long term studies of the fluctuation in ground water levels and pressure. Either a Stand pipe or Piezometer shall be installed in selected previously drilled or specially drilled bore holes covering the complete site area. These shall be at specified depths as per the specifications and instructions of the Engineer. Daily water level readings shall be recorded immediately following the installation up to the time of leaving the site. At the end of field work, these installations shall be handed over in satisfactory working condition to the Engineer without disturbing their position so that the owner can continue further observations. It is important to install some Stand pipes and Piezometers prior to the coming monsoon, in order to record the local effects and variations in the ground water level during the period.

2.8 Static Cone Penetration Test:

Static cone penetration test shall be conducted to know the soil stratification and to estimate the various physical and engineering soil properties. The cone penetrometer shall be advanced by pushing and the static force required for unit penetration shall be determined. The test shall be conducted using a 200 KN capacity mechanically operated equipment up to the specified depth or refusal whichever is earlier. For this

test refusal'means meeting a very hard strata which cannot be penetrated at the rate of at least 0.3cm/sec even when the equipment is loaded to its full capacity. At the ground level, pre boring up to 0.5m depth shall be permitted if the overlying strata is hard. No extra payment shall be made for boring. Continuous record of the penetration resistance shall be maintained. On completion of the test, the results shall be reported in an approved proforma.

2.9 Dynamic Cone Penetration Test:

Dynamic cone penetration test shall be conducted using bentonite slurry by driving a standard size cone attached to the bottom of a string of drill rods. The test shall be conducted upto the specified depth or refusal whichever is earlier. Refusal shall be considered when the blow count exceeds 150 for 300 mm penetration. The specification for the equipment and accessories required for performing this test, procedure, field observations and reporting of results shall conform to Relevant AS/NZS standards.

The driving system shall comprise of a 650 N weight having a free fall of 0.75 m. The cone shall be 65 mm diameter provided with vents for continuous flow of bentonite slurry through the cone and rods in order to avoid friction between the rods and soil. On completion of the test, the results shall be presented as a continuous record of the number of blows required for every 300 mm penetration of the cone into the soil in a suitable chart supplemented by a graphical plot of blow count for 300 mm penetration vs depth.

2.10 Vane Shear Test:

Field vane shear test shall be performed inside the bore hole to determine the shear strength of cohesive soils, especially of soft and sensitive clays, which are highly susceptible to sampling disturbance. This test shall be conducted by advancing a four winged vane of suitable size (75 mm or 100 mm diameter as per the soil condition) into the soil up to the desired depth and measuring the torque required to rotate the vane.

Test may also be conducted by direct penetration from ground surface. If the cuttings at the test depth in the bore hole show any presence of gravel, sand, shells, decomposed wood, etc., which are likely to influence the test results substantially, the test at that particular depth may be omitted with the permission of the Engineer. However, the test shall be conducted at a depth where these obstructions cease to occur. On completion of the test the results shall be reported in an approved proforma as specified.

2.11 Field California Bearing Ratio Test:

This test shall be carried out to obtain the properties of soil required for the construction. The equipment's and accessories required for carrying out the test procedure, recording of observations and presentation of results shall conform to relevant prevailing standards. The test locations and depth shall be as agreed on by EFL and CONTRACTOR at site to meet the requirements of the Project.

2.12 Seismic Refraction Test:

a. This test shall be carried out to establish the rock and soil profiles of varying density. The dynamic shear modulus of the soils shall also be obtained from the results of this test. The specification for the equipment's and other accessories, procedure for carrying out the test, recording and analysis of results.

b. This test shall be carried out by inducing shock waves into the soil, at ground level or at a certain depth below by striking a plate, placed on the ground surface with a hammer or by exploding small charges in the soil. The shock waves shall be picked up through geophones placed on the ground surface at regular intervals in line with the plate along a straight line. The time elapsed before the waves reach the geophones shall be recorded to an accuracy of one milli second or better.
c. The distance between the shock point and the geo-phones shall be increased to cover a wider area. Alternatively, multiple geo-phones shall be used simultaneously using multiple channel seismograph to record the arrival time and intensity of the waves reaching the geophones. The spacing of the geo-phones shall be 5 m. As the distance between the geophones and the shocks producing point are increased, the time lapse for the waves passing through different underlying strata and reaching the geophone shall be recorded. The wave forms shall be recorded for each test using multi-channel seismograph.
d. The test shall be conducted along traverses in two orthogonal directions as per the drawing or the instructions of the Engineer. During testing, proper care shall be taken to avoid disturbance caused due to the movement of vehicles or other working operations around the test location. The type of wave (compression or shear) shall be analyzed properly using the data recorded during the test.

2.13 Laboratory Testing:

a. All laboratory tests shall be conducted in an approved laboratory using approved apparatus complying with the requirements and specification of Indian Standards or other approved standards for this class of work. It shall be checked that the apparatus are in good working condition before starting the laboratory tests. Calibration of all the instruments and their accessories shall be done carefully and precisely.
b. Depending on the type of sub strata encountered, appropriate laboratory tests shall be conducted on soil and rock samples collected in the field. Laboratory tests shall be scheduled and performed by qualified and experienced personnel who are thoroughly conversant with the work. Tests indicated in the schedule of items shall be performed on soil, water and rock samples as per relevant AS/NZS Codes indicated in specification. One copy of all the laboratory test data records shall be submitted to the EFL progressively every week. Laboratory tests shall be carried out concurrently with field investigation since initial laboratory test results could be useful in planning the later part of field work. A schedule of laboratory tests shall be established by the Contractor and the same shall be submitted and got approved by the Engineer before starting of laboratory tests.
c. All samples, whether undisturbed or disturbed, shall be extracted, prepared and examined by competent personnel, properly trained and experienced in soil sampling, examination, testing and in using the apparatus as per the specified standards.
d. Undisturbed soil samples retained in liners or seamless tube samplers shall be taken out without causing any disturbance to the samples using suitably designed extruder just prior to actual testing. If the extruder is horizontal, proper support shall be provided to prevent the sample from breaking. For screw type extrudes, the pushing head shall be free from the screw shaft so that no torque is applied to the soil sample in contact with the pushing head. For soft clay samples, the sample from tube shall be cut by means of a high

speed hacksaw to specified test length and placed over the mould before pushing the sample into it with a suitable piston.

e. While extracting a sample from a liner or tube, care shall be taken to see that its direction of movement is the same as that during sampling to avoid stress reversal.
f. On all undisturbed soil samples tested for bulk density, water content, grain size distribution, liquid limit and plastic limit tests shall also be performed.
g. On all rock samples tested for unconfined compression test, bulk density, water absorption, point load index tests shall also be performed.

2.13.1 Required Tests on Samples:

The CONTRACTOR is required to carry out the following tests and submit detailed reports with recommendations:

a. **Tests on Undisturbed and Disturbed Samples**
    1. Visual and Engineering Classification
    2. Liquid, Plastic, and Shrinkage limits
    3. Specific Gravity
    4. Proctor Compaction test
    5. California Bearing Ratio

b. Tests on Undisturbed Samples
    1. Bulk Density and Moisture Content
    2. Relative Density (for sand)
    3. Unconfined Compression Test

"Note: Variation- No Variation will be allowed unless changes in scope or design by EFL."

2.13.2 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.

2.13.3 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.

2.13.4 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

2.13.5 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.

2.13.6 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).

a. 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.

b. 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.

c. 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.

2.13.7 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.

2.13.8 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.

2.13.9 2.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.

2.13.10 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.

2.12.11 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.

2.12.12 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.

ANNEXURES

PART A: RELEVANT EXPERIENCE

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

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

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[1].

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).

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

PART C: HEALTH & SAFETY QUESTIONNAIRE

Bidders shall complete the following Health and Safety Questionnaire[2] and submit it with their tenders[3].

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:		

[2] 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.

[3] Joint Venture bidders must complete the Questionnaire in respect of each partner.

GENERAL CONDITIONS FOR CONTRACT

The contract will be based on FIDIC General Terms and Conditions of FIDIC Client/Consultants Model Services Agreement – 5th Edition 2017 [White Book] – FIDIC [White Book]..

Copies of the FIDIC Conditions of Contract can be obtained from:

FIDIC Secretariat

P.O. Box 86

1000 Lausanne 12

Switzerland

Facsimile: 41 21 653 5432

Telephone: 41 21 653 5003

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 11th December, 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.