



Instituto de Geociências de Timor-Leste, Instituto Público (IGTL)

CONCURSO PÚBLICO

FORNECIMENTO DO DETAILED ENGINEERING DESIGN (DED) DO LABORATÓRIO DO IGTL

CP/01/IGTL/VIII/2024

INTRODUÇÃO

O Instituto de Geociências de Timor-Leste (IGTL) é um instituto público criado pelo Decreto-Lei n.º 60/2023, de 6 de setembro, que altera o Decreto-Lei n.º 33/2012, de 18 de julho. A sua missão principal é conduzir investigações de geociências no território de Timor-Leste e nas áreas marítimas sob a sua jurisdição. A fim de cumprir a sua missão, o IGTL pretende contratar um consultor competitivo e fiável que assegure o fornecimento do Detailed Engineering Design (DED) do laboratório do IGTL no Aldeia 05 Tahu Laran, Suco Caicoli, Posto Administrativo Vera Cruz, Município de Dili.

SUBMISSÃO E PRAZO

A proposta completa deve ser submetida num envelope selado, marcado como "**CONFIDENCIAL**" e mencionando o número de referência do processo de contratação, dirigida ao Unidade de Aprovisionamento, e entregue em mãos ou por correio para: **Instituto de Geociências de Timor-Leste, City 8, CBD Level 2, Rua Has-Laran, Manleuana, Dili, Timor-Leste.**

Calendário

- Conferência previa: 14 de agosto de 2024 (15:00)
- Prazo para apresentação de propostas: 2 de setembro de 2024 (15:00)
- Abertura das propostas: 2 de setembro de 2024 (15:30)

INFORMAÇÕES ADICIONAIS

Questões ou pedidos de informações adicionais devem ser feitos por carta ou email para aprovisionamento@igtltl.

Nota: O documento do concurso podem ser obtidos mediante pedido escrito por email ou descarregados em formato PDF a partir do site do IGTL em www.igtltl.

PUBLIC TENDER

PROVISION OF DETAILED ENGINEERING DESIGN (DED) OF IGTL LABORATORY

CP/01/IGTL/VIII/2024

BACKGROUND

The Instituto de Geociências de Timor-Leste (IGTL) is a public institute established through Decree Law No. 60/2023 on September 6th, amending Decree Law No. 33/2012 from July 18th. Its primary mission is to conduct geoscience investigations in Timor-Leste's territory and maritime areas under its jurisdiction. In order to fulfill its mission, IGTL wishes to engage with a competitive and reliable consultant for the provision of Detailed Engineering Design (DED) of IGTL Laboratory at Aldeia 05 Tahu Laran, Suco Caicoli, Posto Administrativo Vera Cruz, Município de Dili.

SUBMISSION AND DEADLINE

The completed proposal should be submitted in a sealed envelope, marked "**CONFIDENTIAL**" and mentioned the procurement reference number for the attention of Procurement Unit, and submitted by hand or courier to: **Instituto de Geociências de Timor-Leste, City 8, CBD Level 2, Rua Has-Laran, Manleuana, Dili, Timor-Leste.**

Calendar

- Pre-conference 14 August 2024 (15:00)
- Deadline for submission of proposals: 2 September 2024 (15:00)
- Opening of proposals: 2 September 2024 (15:30)

FURTHER INFORMATION

Question or request for further information should be made by letter or email to aprovisionamento@igtltl.

Note: The Tender Document could be obtained by sending a written request via email or downloaded as a PDF copy from the IGTL website at www.igtltl.

Dili, 9 de agosto de 2024

Job Brites dos Santos
Presidente do IGTL



**Instituto de Geociências de Timor-Leste, Instituto Público
(IGTL)**

PUBLIC TENDER

NU: CP/01/IGTL/VIII/2024

TENDER DOCUMENT

**PROVISION OF DETAILED ENGINEERING DESIGN (DED) OF
IGTL LABORATORY
ALDEIA 05 TAHU LARAN, SUCO CAICOLI, POSTO ADMINISTRATIVO
VERA CRUZ, MUNICIPIO DILI.**

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I ANOUNCEMENT

1. Tender Identification
CP/01/IGTL/VIII/2024 – Provision of Detailed Engineering Design (DED) of IGTL Laboratory at Aldeia 05 Tahu Laran, Suco Caicoli, Posto Administrativo Vera Cruz, Municipio Dili.
2. Identification and contact details of the contracting authority;
Instituto de Geociências de Timor-Leste, Instituto Público (IGTL) Address: City 8, CBD Piso 2, Rua Has Laran, Manleuana, Díli, Timor-Leste Phone: (+670) 3310-179 E-mail: info@igtl.tl
3. Identification and Contact Details of the Procurement Unit;
Procurement Unit Address: City 8, CBD Piso 2, Rua Has Laran, Manleuana, Díli, Timor-Leste Phone: (+670) 3310-179 E-mail: aprovisionamento@igtl.tl
4. Object of the Tender
Provision of Detailed Engineering Design (DED) of IGTL Laboratory at Aldeia 05 Tahu Laran, Suco Caicoli, Posto Administrativo Vera Cruz, Municipio Dili.
5. Type of Procedure
Public Tender
6. Value of the Procurement Procedure
US\$250,000.00 (two hundred and fifty thousand US dollar) - Proposals whose value exceeds the value of the procedure will not be accepted. - Proposals with a value below US\$175,000.00 are considered to have an abnormally low price, under the terms of article 61 of the Legal Framework for Procurement, Public Contracts and the respective infractions.
7. Special procurement and/or contracting conditions
N/A
8. Place of contract execution

Office of the Instituto de Geociências de Timor-Leste, Instituto Público (IGTL), City 8, CBD Level 2, Rua Has Laran, Manleuana, Díli, Timor-Leste
9. Deadline for the performance of the services and/or the duration of the contract
4 months
10. Qualification documents required
1. Copy of commercial registration certificate; 2. Copy of registration certificate; 3. Copy of economic activity license; 4. Copy of debt certificate; 5. Copy of company owner's status and electoral card/identity card/passport.
11. Qualifications and required qualification documents
1. Financial Capacity: • Proof of financial capacity amounting to at least 25% of the procedure value. • This must be demonstrated through a bank statement showing cash flow for the past three months. 2. List of Contracts: • Provide a list of contracts for services that are similar or almost similar in terms of complexity. • Include the contract values. • Detail the work in progress for each contract. • This should cover contracts from the past five years. 3. Experience Documentation: • Submit copies of contracts for the provision of similar services. • Each contract must be accompanied by appropriate references.
12. Form of consultation of the procedural documents
Interested bidders can obtain information about this public tender at the IGTL office during working hours.
13. Price for the provision of procedural documents
Free ☒ Cost:
14. Pre-conference
Pre-conference will be conducted on August 14 th , 2024 (15:00), at IGTL General Meeting Room.
15. Form of Proposal submission
• The proposal should be elaborated according to Annex I.

- The completed proposal should be submitted in a sealed envelope, marked **“CONFIDENTIAL”** and mentioned the procurement reference number for the attention of Procurement Unit, and submitted by hand or courier to: Instituto de Geociências de Timor-Leste, City 8, CBD Level 2, Rua Has-Laran, Manleuana, Dili, Timor-Leste. Telephone: +670 3310179

16. Deadline for submitting proposals

The deadline for submission of proposal will be on 2nd of September 2024 at 15:00 Timor-Leste time. Late application will not be considered.

17. Urgent deadline

Yes ☐

No ☒

18. Minimum proposal validity period

90 days

19. Award criteria

The best price-quality ratio

20. Guarantees

1. Performance Guarantee:

Yes ☒

No ☐

2. Quality Guarantee:

Yes ☒

No ☐

21. Tax

Obligation to pay taxes:

Yes ☒

No ☐

Obligation to withhold taxes at source in accordance with the law:

Yes ☒

No ☐

22. Author of the announcement

Name: Job Brites dos Santos

Position: President of IGTL

23. Date of opening of the procedure

August 9, 2024

Dili, August 9, 2024

Job Brites dos Santos
President of IGTL



2 PROCEDURE PROGRAM

1. Procedure Identification:	CP/01/IGTL/VIII/2024 – Provision of Detailed Engineering Design (DED) of IGTL Laboratory at Aldeia 05 Tahu Laran, Suco Caicoli, Posto Administrativo Vera Cruz, Municipio Dili.
2. Contracting Authority:	Instituto de Geociências de Timor-Leste, Instituto Público
3. Contact details of the contracting authority:	website: www.igt.tl ; Phone: (+670) 3310179
4. Entity or Procurement Service	Unidade de Aprovisionamento – IGTL
5. Contact details of the procurement entity or service	IGTL, IP, City 8, CBD Level 2, Rua Hás laran, Manleuana, Dili – Timor-Leste Phone: 3310179
6. Object of the procedure	Provision of Detailed Engineering Design (DED) of IGTL Laboratory at Aldeia 05 Tahu Laran, Suco Caicoli, Posto Administrativo Vera Cruz, Municipio Dili.
7. Type of procedure	Public Tender
8. Value of the Procurement Procedure	
- The value of the procedure is US\$250,000.00 (two hundred and fifty thousand US dollars) - Proposals whose value exceeds the value of the procedure will not be accepted. - Proposals with a value below US\$175,000.00 are considered to have an abnormally low price, under the terms of article 61 of the Legal Framework for Procurement, Public Contracts and the respective infringements. - The bidders must submit a justification note when the price submitted in the tender is abnormally low in accordance with Article 61.	
9. Place for Contract Execution	Instituto de Geociências de Timor-Leste, Instituto Público, City 8, CBD Piso 2, Rua Has-Laran, Manleuana, Dili, Timor-Leste
10. Deadline for the performance of the services and/or the duration of the contract	4 months
11. Required qualification documents	1. Copy of commercial registration certificate; 2. Copy of registration certificate; 3. Copy of economic activity license; 4. Copy of debt certificate; 5. Copy of company owner's status and electoral card/identity card/passport.
12. Qualifications and required qualification documents	1. Financial Capacity: • Proof of financial capacity amounting to at least 25% of the procedure value.

	- This must be demonstrated through a bank statement showing cash flow for the past three months. 2. List of Contracts: - Provide a list of contracts for services that are similar or almost similar in terms of complexity. - Include the contract values. - Detail the work in progress for each contract. - This should cover contracts from the past five years. 3. Experience Documentation: - Submit copies of contracts for the provision of similar services. - Each contract must be accompanied by appropriate references.
13. Form of consultation of the procedural documents	Interested bidders can obtain information about this public tender at the IGTL office during working hours.
14. Price for the provision of Tender documents	Free ☒ Cost:
15. Pre-conference - Pre-conference will be conducted on August 14th, 2024 (15:00), at IGTL General Meeting Room. - The pre-conference is open to the public and to all interested parties.	
16. Clarifications and rectification of documents - Interested parties must request the clarifications necessary for a proper understanding and interpretation of the parts of the procedure and submit a list in which they expressly and unequivocally identify the errors and omissions in the parts of the procedure that they have detected before one third of the deadline set for the submission of proposals has elapsed. - Clarifications are requested in writing, by means of a letter delivered to the address of the entity or procurement service or sent to the email address of the entity or procurement service.	
17. Competitor - Any natural or legal person or group may be a competitor. - Members of a competing group may not be candidates or competitors in the same procedure, nor may they be part of another competing group. - Natural or legal persons who: - Are in a situation or process of insolvency, cessation or suspension of activity, dissolution or liquidation; - Are in default of any pecuniary obligation owed to the State or any other public entity, in particular taxes and social security contributions; - Have been convicted, by a final judgment, within the last five years, of a crime related to their professional conduct, to the provision of false declarations or of erroneous	

information regarding their qualifications for the conclusion of a contract with a contracting authority; d. They have been convicted of corruption, influence peddling, fraud, tax fraud, money laundering, criminal association, terrorism, terrorist financing or human trafficking by a final judgment within the last ten years; e. Have provided, directly or indirectly, technical advice in the preparation or drafting of procedural documents; f. Are affected by conflicts of interest that cannot be effectively corrected by other less burdensome measures than exclusion; g. Have, in the last two years, terminated a contract without just cause or have been ordered by a final decision to pay compensation for breach of contract; h. Have been subject to an accessory sanction prohibiting participation in procurement procedures which has not expired; i. Adopt, participate in, support or encourage the conduct listed in no. 1 of article 32 of the Legal Framework for Procurement, Public Contracts and the respective infractions. • The impediment provided for in the previous number also applies to legal persons when their managers, administrators or management bodies are in any of the situations listed therein.
18. Form of submission of proposals • The Proposals must follow the model set out in Annex I. • The proposals must be placed in an opaque, sealed envelope, with the identification of the procedure and the contracting authority indicated on the front. • The proposals must be delivered, against receipt of delivery, to the address of the procurement entity or service within the deadline for the submission of proposals.
19. Documents constituting the proposal • The proposal is made up of the following documents: a. The competitor's declaration, under a pledge of honor, of unconditional acceptance of the terms of reference, according to the model provided for in annex II; b. Declaration by the competitor, on his honor, that he is not prevented from participating in the provisioning procedure, in accordance with the model provided for in annex III; c. Technical proposal, which includes the documents relating to the conditions of execution; d. Financial proposal, which includes the price; e. Note justifying an abnormally low price, when the price presented in the proposal is abnormally low;
20. Language • Proposals must be submitted in Portuguese, Tetum or English. • The documents accompanying the proposal may be submitted in the original foreign language version together with a translation into one of the official languages.
21. Documents that must accompany the proposals and the form of submission • The proposal must be accompanied by the copies of following documents: a. Commercial registration certificate; b. Registration certificate; c. Economic activity license; d. Debt certificate; e. Company Statute (Estatuto Companhia)

f. Electoral Card/Identity Card/Passport of Company's owner. The documents listed in the previous number must be presented in the same way as the proposal.	
22. Deadline for submission of proposals The deadline for submission of proposal will be on 2nd of September 2024 at 15:00 Timor-Leste time. Late application will not be considered.	
23. Urgent Deadline	No
24. Deadline for correcting irregularities found in the documents submitted	3 days
25. Opening of proposals	2 September 2024 (15:30)
26. Minimum Proposal validity period	90 days
27. Existence of a negotiation phase and modality	No
28. Award criteria	The best price-quality ratio
29. Evaluation model	The evaluation model is presented in Annex IV.
30. Existence of essential factors	No
31. Tie-breaking criteria - In the event of a tie, the proposals will be ranked in descending order taking into account the best score obtained in the factors and sub-factors of the technical evaluation with the highest evaluation weight. - In the event of a remaining tie, the proposals will be drawn by lot.	
32. Numeric value below which proposals are excluded	Minimal 60 point
33. Guarantee Performance Guarantee: Yes ☒ No ☐ Value: 5% from total value Form: Bank Guarantee emitted from a Commercial Bank in Timor-Leste	

Quality Guarantee:Yes ☒No ☐

Value: 5% from total value

34. Calendar

The dates contained in this timetable are indicative and depend on the date on which the procedure is opened.

Phases	Date
Announcement	9 August 2024
Pre-conference	14 August 2024 (15:00)
Deadline for submission of proposals	2 September 2024 (15:00)
Opening of proposals	2 September 2024 (15:30)
Publication of preliminary report	6 September 2024
Award of contract	10 days after the date of the notification of evaluation result.
Signing of contract	Within 5 days upon receiving acceptance letter and submission of performance guarantee.

35. Applicable legislation and jurisdiction

- In all that is omitted from this program, the provisions of the Legal Regime for Procurement, Public Contracts and the respective infractions, approved by Decree-Law no. 22/2022, of May 11, shall apply.
- In the event of any disputes, these will be settled using Timorese law at the Dili District Court, expressly waiving any other.

3 ANNEX I - PROPOSAL TEMPLATE

The proposal must be organized according to the structure of this model and include all the elements referred to in it, unless there is any aspect that is not applicable or does not exist and which must be expressly stated as such, otherwise it will be considered missing.

The document may not exceed 50 (fifty) pages, preferably in A4 format, Arial 10 font and 1.5 spacing.

The page limit does not apply to the documents accompanying the proposal, namely the qualification documents, the classification documents and the curriculum vitae.

All the requirements set out in the technical specifications are mandatory and failure to comply with them, or omission of the elements set out in this model, will constitute grounds for exclusion.

MODEL

CHAPTER I - INTRODUCTION

Where the bidder presents its understanding of the work and services to be provided and other content that it considers pertinent as an introduction to its proposal.

CHAPTER 2 - PROPOSED SERVICES

In this chapter, the bidder must demonstrate the suitability of the proposal to the requirements and specifications described in Part II of the Terms of Reference.

To this end, the bidder must describe the main technical activities of the service, indicating the tools they intend to use;

CHAPTER 3 - IMPLEMENTATION

In this chapter, the bidder must demonstrate that the proposal meets the implementation requirements of Part II of the Terms of Reference.

To this end, the bidder must describe the project implementation methodology, detailing activities, results, responsibility and interdependence.

CHAPTER 4 - ORGANIZATION AND TEAM

The proposal must present and describe:

1. The organizational structure of the team and other parties involved, and the composition of the team assigned to the execution of the contract.
2. For each member of the team, their profile, academic background, main skills, the role and responsibilities they will carry out in the planned team, as well as the certifications defined in the Terms of Reference by profile.
3. The information provided above must be accompanied by an up-to-date curriculum vitae and proof of the certifications declared.

CHAPTER 5 - FINANCIAL CONDITIONS

In this chapter, the proposal must present the following elements relating to the financial conditions:

1. The overall price of the service, i.e. the price to be paid by the Public Contractor for the execution of all the services that are the object of the contract to be concluded;
2. Detailed unit price figures. Prices must be indicated in numerals and in full. In the event of contradiction, the values indicated in full shall prevail.

BIDDER FORM

Bidder legal/official name	
In the case of Joint Venture, legal name of each partner	
Registration Country	
Registration Year	
Official Address	
Legal Representative (Name, address, telephone number, fax number, e-mail address)	
Please attach copies of registration documents as requested in Procedure Program No. 11 and 12. ☐ 1. Authorization to represent the company or JV above mentioned ☐ 2. In the case of JV, intention letter to form a JV or agreement	

JOINT VENTURE FORM

Each party of JV should fill this form

Bidder Legal Name	
Partner Legal Name	
Country of the JV Partner	
Partner Registration Year	
Partner official address	
Information regarding authorized representative (name, address, telephone number, fax number, e-mail address)	
Please attach copies of registration documents as requested in Procedure Program No. 11 and 12. ☐ 1. Authorization to represent the company or JV above mentioned ☐ 2. In the case of JV, intention letter to form a JV or agreement	

4 ANNEX II - DECLARATION OF ACCEPTANCE OF THE TERMS OF REFERENCE

[Name of the company/grouping/entrepreneur], [Identification document number], with registered office at [address], hereby represented by [name] in the capacity of its legal representative (in the case of a company/grouping), declares, on oath, that it unconditionally accepts the specifications for the procurement procedure [identification of the procedure].

Dili, [Date]

[Name, position and signature]

5 ANNEX III - DECLARATION OF NON-IMPEDIMENT

[Name of the company/grouping/entrepreneur], [Identification document number], with registered office at [address], hereby represented by [name] as its legal representative (in the case of a company/grouping), declares, under oath, that it is not prevented from participating in the provisioning procedure because it does not find itself in any of the situations provided for in article 29 of the Legal Framework for Provisioning, Public Contracts and the respective infractions.

Dili, [Date]

[Name, position and signature]

6 ANNEX IV – EVALUATION MODEL

The award criteria are the best price-quality ratio.

The proposals will be evaluated according to the factors, sub-factors and weightings described below:

Components	Weighting	Factors	Weighting	Indicator	Weighting
Technical	60%	Technical factor 1 – Experience in similar or almost similar services (Laboratory Design and Build)	30%	Has experience in providing similar or almost similar services (Laboratory Design and Build). The Contracts must be annexed.	
		Technical factor 2 - Curriculum of the company and the team	25%	The company must possess qualified and experienced persons to conduct the service.	
		Technical factor 3 – Time Schedule	5%	Provide the proper time schedule according to the duration of the service.	
Financial	40%	Financial factor 1 - Price	40%	The lowest price (price of proposal X) will automatically obtain 40% weight or 400 points.	

The factors are scored on a scale of 0 to 100 points.

Proposals are excluded if they score below 60 points in any of the factors.

The financial factor is only evaluated for proposals that are not excluded in the technical evaluation.

The overall score of the proposals will be equal to the sum of the scores of the factors, taking into account the weighting of each factor, obtained using the following formula:

$(\text{Technical factor 1} \times \dots\%) + (\text{Technical factor 2} \times \dots\%) + (\text{Technical factor 3} \times \dots\%) + (\text{Financial factor 1} \times \dots\%) = \text{Overall score}$

7 ANNEX V - TERMS OF REFERENCE

Identification of the procedure:	CP/01/IGTL/VIII/2024
Contracting authority:	Instituto de Geociências de Timor-Leste, Instituto Público (IGTL)
Object of the procedure:	Provision of Detailed Engineering Design (DED) of IGTL Laboratory at Aldeia 05 Tahu Laran, Suco Caicoli, Posto Administrativo Vera Cruz, Municipio Dili.

PART I
LEGAL CLAUSES

Clause 1

Terms of Reference and contract

1. These Terms of Reference comprise the clauses of the contract to be concluded following the procurement procedure for contractual object in accordance with the technical specifications contained in Part II of the Terms of Reference.
2. The contract to be concluded also includes the clarifications and rectifications relating to the specifications made by the contracting authority, the proposal awarded and the clarifications relating to the proposal made by the author of the proposal.

Clause 2

Contractual object

The contractual object is the Provision of Detailed Engineering Design (DED) of IGTL Laboratory

Clause 3

Obligations of the private contractor

The private contractor shall perform the design services to the highest standards of professional and ethical competence and integrity, considering their experience in laboratory constructions.

Clause 4

Obligations of the public contractor

The public contractor shall supervise the provision of services, ensure that the services are delivered according to the required terms of reference, and execute the payment in a timely manner.

Clause 5

Place of execution of contractual services

Instituto de Geociências de Timor-Leste, Instituto Público, City 8, CBD Piso 2, Rua Has-Laran, Manleuana, Dili, Timor-Leste.

Clause 5

Deadline for the execution of contractual services or the duration of the contract

The duration of the contract is 4 Months.

Clause 7

Value of the procedure

The value of the procedure is US\$250,000.00 (two hundred and fifty thousand US dollars) includes tax.

Clause 8

Payment

1. An initial payment of 30% of the total amount will be issued upon submission of the Interim Report.
2. A second payment of 30% of the total amount will be issued upon submission of the Draft Final Report.
3. A final payment of 40% of the total amount will be issued upon submission of the Final Report.

Clause 9

Guarantees

The guarantee is based on Articles 108 and 109:

- The performance bond is equivalent to 5% of the contract value.
- The quality deposit is equivalent to 5% of the contract value.

Clause 11

Intellectual property

1. Ownership of intellectual property rights over any works and materials developed, created, modified or customized by the private contractor for the public contractor or by the public contractor under the Contract, including in particular writings, reports, schemes, drawings, images, photographs, specifications, parameterizations, data in electronic format and tabulations, surveys and questionnaires, inventions, technical innovations, know-how, processes, techniques, research methods, documents or any other creations, of any nature or medium, belongs to the public contractor, with the agreed contract price being considered sufficient consideration for this.
2. With the acceptance of the goods, services and/or works which are the object of this contract, ownership of them is transferred to the public contractor, as well as of all the documents drawn up by the private contractor, and the public contractor may use, reproduce, alter and transfer them freely, without any restrictions and without the need for authorization from the private contractor.
3. The private contractor shall be liable for the infringement of any patent, design, license, project, trademark, name or any other intellectual, industrial or similar property rights relating to the goods, services or works covered by the contract, namely projects, studies, computer programs, equipment, materials, documentation or work carried out.

Clause 12

Confidentiality

1. The private contractor undertakes not to disclose any information and documentation, technical and non-technical, commercial or otherwise, of which it becomes aware under or in connection with the performance of the contract.
2. No document or data to which the private contractor has access, directly or indirectly, within the scope of the contract may be reproduced without the express written authorization of the public contractor.
3. The private contractor undertakes not to use the information obtained for purposes unrelated to the performance of the contract.
4. The duty of confidentiality shall remain in force after the termination of the obligations arising from the contract.
5. The duty of confidentiality does not apply to information and documentation which has been proven to be in the public domain, or which the private contractor is legally obliged to disclose by law, legal proceedings or at the request of regulatory authorities or other competent administrative bodies.

Clause 13

Termination of the contractual position

Without prejudice to the other situations provided for in the Legal Framework for Procurement, Public Contracting and the Respective Infringements, in the event of non-compliance with the contractual obligations by the private contractor, the public contractor may notify the private contractor to transfer its contractual position to a competitor ranked in a subsequent position, to be indicated by the public contractor.

Clause 14

Communications and notifications

1. The notifications and communications to be made within the scope of the contractual execution are made under the terms of article 18 of the Legal Framework for Procurement, Public Contracting and the Respective Infringements.
2. The parties' contact details are as follows:
 - a) Public Contractor:
Unidade de Aprovisionamento – IGTL
Address: City 8, CBD Piso 2, Rua Has Laran, Manleuana, Díli, Timor-Leste
Phone: (+670) 3310-179
E-mail: aprovisionamento@igt.tl
 - b) Private contractor:
[Name and position]
[Address]
[Email address]

Clause 15

Contractual penalties

1. In the event of non-compliance with the deadlines set out in this contract due to a cause attributable to the Private Contractor, a pecuniary penalty of 1% (one percent) may be applied for each day of delay until effective compliance.
2. Without prejudice to the provisions in previous number, failure by the Private Contractor to comply with any of the obligations arising from this contract, shall entitle the Public Contractor communicate, in writing, the loss of interest in contracting and the immediate resolution of the contract cumulatively with the effectuation of contractual and extra-contractual civil liability for damages caused.

Clause 16

Settlement of disputes

Any omissions and disputes relating to this public contract that cannot be resolved by mutual agreement between the parties shall be submitted to the **RJA** in force and, in the absence of mutual agreement, to the jurisdiction of the **District Court of Dili, East Timor**.

Clause 18

Applicable law

This contract is governed by the legislation of the Democratic Republic of Timor-Leste, in particular by Decree-Law No. 22/2022 of May 11, on the *Legal Regime for the Procurement of Public Contracts and Related Infractions*.

PART II
TECHNICAL CLAUSES



**INSTITUTO DE GEOCIÊNCIAS DE TIMOR-LESTE,
INSTITUTO PÚBLICO (IGTL)**

**TERMS OF REFERENCE
DETAILED ENGINEERING DESIGN
“Geoscience Laboratory of the Instituto de
Geociências de Timor-Leste”**

Aldeia 05 Tahu Laran, Suco Caicoli, Vera-Cruz, Dili, Timor-Leste

DILI, AUGUST 2024

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I INTRODUCTION

I.1 Background

The Instituto de Geociências de Timor-Leste (IGTL) is a public institute established through Decree Law No. 60/2023 on September 6th, which amended Decree Law No. 33/2012 from July 18th (formerly known as the Instituto do Petróleo e Geologia). Its primary mission is to conduct geoscience investigations in Timor-Leste's territory and maritime areas under its jurisdiction.

To support its primary mission, the Instituto de Geociências de Timor-Leste (IGTL) requires a standard and adequate laboratory facility.

The current laboratory condition to carry out tests and analyses does not meet minimum health and safety standards. This condition is precarious and may pose a health risk. Apart from the fact that the space is small and does not comply with the general laboratory conditions, there is a lack of gas and dust extractors, which makes the environment in which the work is performed significantly harmful to health. It is especially hazardous, given the fact that silicate dust may cause not only silicosis or other types of lung conditions but also the gases may cause poisoning, difficulty with breathing, and, what is more, conditions, leading to the possibility of an explosion. It should also be mentioned that some of the services provided by us involve the use of very dangerous substances such as hydrofluoric acid, nitric acid, mercuric chloride, and potassium cyanide.

Moreover, the current condition may pose a risk to public health due to the poor storage conditions of many reagents, leading to the potential release of significant quantities into the surrounding area, that could generate significant environmental impacts, primarily affecting public health.

The IGTL urgently needs to build a laboratory that will allow for proper testing and accommodate existing equipment as well as new acquisitions. This is essential for the preparation of samples for analysis, their elemental quantification, and the tests required to support various research areas. Without these results, much of the work conducted may be fruitless due to a lack of validation and technical support, preventing the IGTL from performing credible work and advancing knowledge.

This new space should also enable the construction of prototypes for experimentation and research, particularly in mineral processing and material characterization. These laboratory prototypes are crucial for verifying the potential of industrial minerals for exploration and control, as well as for characterizing minerals and assessing their economic value.

Therefore, the IGTL is currently seeking an experienced consultant to prepare a detailed engineering design (DED) for the Geoscience Laboratory of the Instituto de Geociências de Timor-Leste to be constructed in **Aldeia 05 Tahu Laran, Suco Caicoli, Vera Cruz, Dili, Timor-Leste**.

2 Objectives

1. This Term of References (ToR) should be used for guidance for the satisfactory and timely completion of the project. This ToR sets out the output, principles, criteria, process and output.
2. In this task, the consultant will implement the duties in a professional manner so as to deliver the outputs in accordance with the technical specifications and standards stated in this ToR.
3. The objective of this ToR is to provide technical guidance and instructions to interested consulting companies so that they can fulfil the technical specifications in terms of architectural, structural and functional aspects.

3 Scope of services

The scope of services for the Consultant is as follows:

- a) Carry out the detailed engineering design for the IGTL laboratory building.

- b) The Project will include other complementary facilities, utilities and landscape as its integral and inseparable part.

4 Location

The future construction of the IGTL laboratory building is planned on a plot of land measuring approximately 1,900m² in Aldeia 05 Tahu Laran, Suco Caicoli, Vera-Cruz, Posto Administrativo Vera Cruz, Municipio Dili. This site is bordered by UN Compound to the north, the Vera Cruz Health Center to the west, the Dili District Registry Office and STAE to the east, and Rua de Mascarenhas de Vera Cruz to the north, as shown on the map (**see Annex I**).

5 Scope of work

To ensure the attainment of the objectives of this engagement, the Consultant shall provide the following services:

1. Interpret the Terms of Reference (ToR) in general.
2. Conduct topographical surveys, geotechnical studies, earthquake analysis, and wind load analysis.
3. Define the construction works needed as well as the technical specifications for any materials to be provided by the Contractor. Include these details in the bidding documents as required.
4. Validate the information and collect additional field data as may be required for finalizing the design.
5. Formulate the building design concept as a laboratory building, including details of air extraction and treatment, air conditioning, environmental safety program, and water treatment, considering that the project must be for a two-storey building.
6. Ensure the design provides specific conditions for laboratory rooms and work cabinets in terms of temperature control, waterproof walls and ceilings, and fire-proof materials.
7. Undertake an Initial Environmental Impact Assessment (EIA) and prepare a report.

The Consultant will address the following issues:

- a. Outline the environmental impacts of construction activities on the building and annexes (if necessary).
 - b. Describe and evaluate the project impacts.
 - c. Recommend the most appropriate protective, corrective, or compensatory measures.
8. Prepare the **preliminary design** once the design concept has been completed, which covers the following:
- a. Technical reports containing descriptions of the building concept choice, structural sub-systems, mechanical/electrical sub-systems, and information technology sub-systems to be used.
 - b. Drawings illustrating the location map, site plan, layout, elevations, and cross sections.
 - c. Engineering cost estimates based on rough calculations.
9. Prepare the **interim design** which covers the following:
- a. Architectural design works describing the site plan, layout, elevations, cross sections, and main detailed drawings, explaining room program utilization for the entire building comprehensively.

- b. Structural design and description of the concept and calculations covering air management systems, lighting, electrical systems including generators, plumbing, water supply and sanitation, drainage, fire protection, work safety and health, and termite control.
 - c. Technical specifications describing the classifications, types, and characteristics of materials to be used.
 - d. Preliminary cost estimates covering aspects of local social culture, history and architecture, environmental mitigation measures, structural, mechanical/electrical systems to conform to the design concept.
10. Prepare the **detailed engineering design** that covers the following:
- a. Detailed engineering design of architecture, structure, utilities, mechanical/electrical systems, and information technology to conform to the approved design drawings.
 - b. Technical Specifications.
 - c. Bill of Quantities.
 - d. Cost Estimates including Unit Price Analysis, Unit Price of Labour, Material, and Equipment.
 - e. Construction Schedule, Bar Chart, and “S” Curve.
 - f. Design Report covering all engineering disciplines applied.

6 Responsibilities of the Design Consultant

- 1. The Consultant shall perform the design services to the highest standards of professional and ethical competence and integrity, taking into account their experience in laboratory constructions.
- 2. In general, the primary roles and responsibilities of the Consultant will be as follows:
 - a. The result of design services should fulfil design criteria standards
 - b. The result of design services should accommodate the limitations expressed by the Employer including the requirements of this ToR such as in the aspect of payment, work schedule and the quality of building to be designed.
 - c. The result is that design services should fulfil the regulations, standards and technical guidance of design that are generally in effect.

7 Output of design consulting

The output of design activities undertaken by the Consultant shall consist of reports presented in a systematic manner and contains the following:

7.1 Inception Report

This stage if design concept will consist of the following:

- a. Preparation of design concept covering number and qualification of team members and their responsibilities, methodology of implementation, work schedule and manning schedule.
- b. Design concept covering room program, number of rooms, and organization of room connections.
- c. Scope of works, reports on validation of existing site data, information covering environmental survey, soil investigation, information from the user regarding facilities required, the need of rooms, capacity of rooms, total number of users and other purposes needed.

These documents should be submitted, two weeks after signing the contract, in one (1) original and three (3) copies and three (3) electronic copies in CD and /or other forms of electronic copies.

This design concept should be approved by the IGTL within one week before proceeding to the preliminary design stage.

Comments on Inception Report will be prepared and discussed between the Consultant and the Project Manager together with the IGTL and an agreed technical design concept will be approved by the Employer enabling the Consultant to continue his work with minimal delay.

7.2 Interim Report

7.2.1 Interim design will consist of the following:

- a. Interim design of Building in the aspect of architecture, structure, supporting utilities and environment.
- b. Outline of Technical Specifications
- c. Preliminary Cost Estimates
- d. Initial Environmental Impact Assessment (EIA) Report
- e. Results of consultations with the Employer

These documents should be submitted, three weeks after approved, in one (1) original and three (3) copies and three (3) electronic copies in CD and /or other forms of electronic copies.

This preliminary design should be submitted two weeks after the preliminary report was approved by the IGTL and should be approved by the IGTL within one week after the submission, before proceeding to the design development stage.

7.2.2 Development design will consist of the following:

- a. Development design drawings of building in the aspect of architecture, structure, supporting utilities and environment based on approved interim design
- b. Description of design concept and calculations needed
- c. Draft Technical Specifications
- d. Draft Cost Estimates

These documents should be submitted, two weeks after approved, in one (1) original and three (3) copies and three (3) electronic copies in CD and /or other forms of electronic copies.

This preliminary design should be approved by the IGTL within one week of assignment, before proceeding to the design development stage.

Comments on the Interim Report will be prepared and discussed between the Consultant and the Project manager together with IGTL and an agreed technical design concept will be approved by the Employer enabling the Consultant to continue his work with minimal delay.

7.3 Draft Final Report

Detailed engineering design will consist of the following:

- a. Detailed engineering design drawings of the buildings for construction works based on development design.
- b. Technical Specifications
- c. Bill of Quantities
- d. Cost Estimates including Unit Price Analysis, Unit Price of Labour, Material, and Equipment
- e. Construction Schedule, Bar Chart, and "S" Curve
- f. Design Report covering all engineering disciplines

- g. Terms of Reference (TOR) for construction supervision services.

These documents should be submitted, three weeks after approved, in one (1) original and three (3) copies and three (3) electronic copies in CD and /or other forms of electronic copies.

This Draft Final Report should be submitted to the Employer within three weeks of assignment of the Interim Report.

This preliminary design should be approved by the Employer within one week of assignment.

Comments on the Draft of Final Report will be prepared and discussed between the Consultant and the Project manager together with IGTL and an agreed technical design concept will be approved by the Employer enabling the Consultant to continue his work with minimal delay.

7.4 Final Report

Final Report will be submitted to the Owner within two weeks of assignment as the result of Draft Final Report that has already been discussed and approved by the Employer.

These documents should be submitted, one week after approved, in one (1) original and three (3) copies and three (3) electronic copies in CD and /or other forms of electronic copies.

Final Report should be presented with a miniature design that includes surrounding area.

7.5 Principles

The Consultant, in the implementation of his/her tasks, should take notice of the principles of state building as follows:

- a. The building should be functional, efficient, attractive but simple.
- b. The design should not express an imitative style and luxurious materials, but the ability to sublimate the technical functions and the social functions of the building.
- c. The design should ensure easy access for disabled people.
- d. The design should consider minimal consumption of energy by applying the concept of Green Building.
- e. By the limitations of not disturbing the works activities, the investment cost and the operation and maintenance cost during the lifetime of the building should be undertaken as low as possible.
- f. The design of the building should be made so that the construction works be done in a short time and utilized as soon as possible.
- g. The building should increase the quality of the environment and become a reference for the building arrangement and environment surroundings.
- h. Any design prepared by the Consultant for the Employer under the contract shall belong to and remain the property of the employer. The Consultant may retain a copy of such document and software, and such document shall not be used for other purposes without the expressed written consent of the Employer.

7.6 Design Criteria

7.6.1 General Criteria

The Consultant should take notice of the general criteria of the laboratory building to conform to its functionality and complexity, and are as follows:

- a) Conditions of allotment and intensity:
 - i. To ensure that the building is constructed based on the regulation of spatial plan and building plan determined by the local authority.

- ii. To ensure that the building will be used to conform to its functions.
 - iii. To conform to the state of budget principles:
 - Economical, not luxurious, efficient and conforms to the technical purposes specified.
 - To focused and controlled to conform to the plan, program, and its functions.
 - To utilize local products and resources as much as possible to promote national prosperity. Apply for both material and human resources where it is applicable.
- b) Conditions of architecture and environment:
- i. To ensure that the building is constructed based on the environment characteristics, in order to obtain balance, harmony and compatibility with the environment.
 - ii. To ensure the creation of Green Building that is balanced and in harmony with the environment.
 - iii. To ensure that the building is constructed and utilized with a minimum of negative impacts to the environment.
- c) Conditions of building structure:
- i. To ensure the structural stability of the building to withstand the increasing loads as the result of its utilization in accordance with its functions.
 - ii. To ensure the safety of people from possible accidents or injuries due to the failure of the building structure.
 - i. To protect people from losses or damage to their properties due to the failure of the building structure.
 - ii. To safeguard other properties from physical damage due to the failure of the building structure.

7.6.2 Landsite Structure Criteria

a) Lighting Conditions

To ensure that sufficient daylight enters the building

- i. Artificial lighting shall be provided under certain conditions.
- ii. To ensure that lighting – whether natural or artificial – is adequate to support activities inside the building in accordance with its functions.

b) Conditions of fire-fighting system:

To ensure that the laboratory building remains stable and safe in case of fire:

- i. To ensure that the building should be equipped with an adequate fire-fighting system, which may include a fire-fighting central station, mobile fire-fighting equipment, a fire alarm system, and undercover hydrant connections throughout the area.
- ii. Allow sufficient time for firefighters to arrive at the location to extinguish the fire.
- iii. To prevent damage to surrounding properties.

c) Conditions of water supply

To ensure that the construction of the building is provided with the water-supply facilities:

- i. Meet the quality standard, sufficient discharge minimum 100 liters/person/day.
- ii. Fulfill the fire protection requirements by providing adequate measures for at least 45 minutes of fire-fighting operations.

d) Conditions of sanitation facilities:

- i. To ensure the provision of adequate sanitation facilities to support the activities inside the building in accordance with its functions.
 - ii. To ensure the creation of a clean, hygienic, and comfortable environment for the dwellers of the building and surrounding area.
- e) Conditions of wastewater:
 - i. To ensure that the construction of the building is equipped with the facilities for discharging the wastewater from the kitchens, bathrooms, and washrooms to the city drainage canals.
 - ii. Ensure that discharged water containing suspended solids is released into the city's drainage channels properly cleaned.
 - iii. Ensure that wastewater from the chemical sector is discharged into drainage channels after being properly neutralized.
 - iv. The discharge of wastewater from the kitchens, bathrooms, and washrooms should use pipes to conform to the specifications.
- f) Conditions of solid waste:
 - i. Ensure the availability of waste bins and temporary collection points for solid waste for 3 liters/person/day and, separately for inert waste from test materials for an average of 50 kg per day.
 - ii. Temporary collection points for solid waste must be made of watertight materials and enclosures.
- g) Conditions of drainage:
 - i. To ensure the provision of drainage canals could retain the rainwater before discharging to the city drainage canals.
 - ii. To ensure the provision of drainage canals could manage the flood that historically happened in the plot of land.
 - iii. Provide good water drainage with sufficient elevation in the channels to prevent water accumulation
- h) Conditions of electrical installations, lighting rod, and communications facilities:
 - i. To ensure that the installations of electrical facilities adequately and safely support the activities inside the building to conform to its function.
 - ii. To ensure the safety of the building and its occupants from the danger of lightning.
 - iii. To ensure that the provision of communication facilities adequately support the activities inside the building to conform to its functions.
- i) Conditions of ventilations and air conditions:
 - i. To ensure that adequate air supply, whether natural or man-made, is provided to support the activities inside the building to conform to its functions.
 - ii. To ensure that the air condition facilities are in good working condition during testing and commissioning.
 - iii. To ensure adequate working conditions within laboratory areas.
- j) Conditions of noises and trembles:
 - i. To ensure the creation of comfortable environment free from unexpected noises and vibration disturbance.
 - ii. To adopt environmental pollution mitigation measures should be included in the detailed construction cost estimate.
 - iii. Ensure that the noisiest equipment transmits minimal noise to the upper floors.

- iv. Ensure that the equipment transmits minimal vibrations to the building.
- k) Conditions of transport facilities inside the building:
 - i. To ensure the provision of proper, safe and comfortable transport facilities inside the building.
 - ii. To ensure the provision of transport facilities for individuals with disabilities.
- l) Conditions of access entry and exit ways:
 - i. To ensure safe, proper and comfortable access to the entry and exit points of the building facilities, as well as to service areas inside the building.
 - ii. To ensure that easy access is provided for individuals with disabilities.
- m) Conditions of emergency situation, exit signs and early warning system of danger:
 - i. To ensure the provision of an early warning system in the event of an emergency.
 - ii. To ensure the occupants can evacuate easily and safely in emergency situations.

7.6.3 Specific Criteria

The specific criteria relate to the building to be designed, whether from the perspective of special functions or other technical aspects, are as follows:

- a) The integration of the building design with its façade, aesthetics, and the scope of services in the surroundings, such as the framework of environment and area planning.
- b) Addressing Solutions and contextual limitations, such as aspects of local social culture, geography, climate, and others.

8 Design process

- a) In the design services process, to produce the outputs required, the Consultant should prepare a schedule of periodic meetings with the Owner.
- b) During the periodic meetings, the consultant and the Owner should determine which inception, intermediate, and main products are to be provided by the Consultant to conform to output plan specified in the ToR.
- c) In the implementation of the tasks, the Consultant should always consider that the work time schedule is fixed.
- d) The working time is four (4) months from the date of signing of the contract.

9 Design input

9.1 Information

- a) To implement the tasks, the Consultant should collect additional information/data apart from the information provided by the Employer.
- b) The Consultant should check the validity of information to be used in the implementation of his/her tasks. The faults of design work as the result of lack information shall be the responsibility of the Consultant.
- c) The information required that should be obtained for design works are as follows:
 - i. Information on the specifics of the facilities
 - ii. Information regarding the budget for construction of the laboratory construction provided by the IGTL
 - iii. Information regarding site covers:
 - Physical condition of location, such as the extent of area and boundaries
 - Allotment of land use
 - Coefficient of building base

- Coefficient of building floor
- Breakdown of land use, pavement, and green land
- iv. Information regarding land covers:
 - Topography, geology, soil conditions as the result of soil test, and ground water
 - Winds, earthquake, and environment
- v. Information regarding the user of the building covers:
 - Structure of organization
 - Number of personnel
 - Main activities, supporting activities, and complementary activities
 - Special equipment, types, weight, and dimension
- d) Need of possible changes of room or building function

Needs of building utilities covers:

- i. Water supply and sanitation
 - The current needs and the projection in the future of year 2030
 - Water source, piping networks and its capacity
- ii. Rainfall and drainage
 - Location of city drainage
 - Discharging to outlet of the site
- iii. Wastewater and solid waste
- iv. Electrical network
 - Power
 - Source of power and specifications
 - Power reserved if needed (capacity, specification)
- v. Air condition
- vi. Communication network (telephone, fax, radio, intercom)
 - Needs of speaking points
 - System required
- vii. Fire protection
- viii. Security system
- ix. Information Technology
- x. Telephone system/voice

9.2 Personnel

9.2.1 Key Experts - International

The Consultant should provide personnel who fulfil the requirements to implement the services based on the scope of services or the level of complexity of the works. The personnel required for these design activities should be adequate for the project. The personnel required for this design should consists as follows:

No	Position	Qualifications
I	Team Leader	• At least 15 years of proven international experience in management of laboratory construction design and construction supervision work by team of engineer. • Preferably registered in an internationally recognized professional engineering body. • The Team Leader will have at least minimum 5 years' experience as Team Leader and

		demonstrated ability to manage interdisciplinary team, cultural empathy, and strong organizational, communication and reporting skill. • Previous work experience in Timor-Leste and proficiency in Tetum or Portuguese will be an added advantage.
2	Architect	• At least have a bachelor degree in architecture. • Certified Engineer • At least 10 years of relevant international experience in design of buildings and construction supervision, especially laboratory design. • Proficient in CAD
3	Structural Engineer	• Civil Engineer in Structural Engineering • Certified Engineer • At least 10 years of relevant international experience in design and construction supervision.
4	Geodetic Engineer	• Bachelor degree in Geodetic Engineering. • Minimum 10 years relevant international experience. • Previous work experience in Timor-Leste and proficiency in Tetum or Portuguese will be an added advantage.
5	Geotechnical/Soil Engineer	• Bachelor degree in Civil Engineering with minimum 10 years relevant experience in geotechnical investigation for construction. • Previous work experience in Timor-Leste and proficiency in Tetum or Portuguese will be an added advantage.
6	Water Supply & Sanitation Engineer	• Bachelor degree in water supply engineering with minimum 10 years' experience. • Previous work experience in Timor-Leste and proficiency in Tetum or Portuguese will be an added advantage.
7	Mechanical & Electrical Engineer	• Bachelor degree in mechanical and electrical engineering with minimum 10 years relevant experience. • Previous work experience in Timor-Leste and proficiency in Tetum or Portuguese will be an added advantage.
8	Quantity Surveyor/Cost Engineer	• Bachelor degree in construction management. • Minimum 10 years experience in preparing technical specifications, bill of quantities and cost estimates for building. • Preferably registered in an internationally recognized professional engineering body. • Previous work experience in Timor-Leste and proficiency in Tetum or Portuguese will be an added advantage.

9	Environment Specialist	• Bachelor degree in environmental or relevant field with minimum 10 years international relevant experience. • Previous work experience in Timor-Leste and proficiency in Tetum or Portuguese will be an added advantage.
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9.2.2 Key-Experts National

No	Position	Qualifications
1	Architect	• At least have a bachelor degree in architecture. • At least 5 years of relevant in design of buildings and construction supervision. • Proficient in CAD
2	Structural Engineer	• Civil Engineer in Structural Engineering • At least 5 years of relevant experience in design and construction supervision.
3	Geodetic Engineer	• Bachelor degree in Geodetic Engineering. • Minimum 5 years relevant international experience.
4	Geotechnical Engineer	• Bachelor degree in Civil Engineering with minimum 5 years relevant experience in geotechnical investigation for construction.
5	Water Supply & Sanitation Engineer	• Bachelor degree in relevant field with minimum 5 years' experience in building construction project.
6	Mechanical & Electrical Engineer	• Bachelor degree in mechanical and electrical engineering with minimum 5 years relevant experience in building construction project.
7	Quantity Surveyor/Cost Engineer	• The quantity surveyor should have a degree in relevant field, with minimum 5 years relevant experience for projects in costing and preparing specifications for building construction project.
8	AutoCAD Operator	• Should have a Bachelor degree in relevant field with minimum 5 years relevant experience in applying AutoCAD to Building Design.

9.2.3 Person-Month Requirement

The person-months of key experts will be required as tabulated below:

NO.	KEY EXPERTS	UNIT	QUANTITY	
			Personnel	Duration
A	INTERNATIONAL			
1	Team Leader (Project Management/Architect)	Month	1	4
2	Architect	Month	1	3
3	Structural Specialist	Month	1	2

4	Geodetic Specialist	Month	1	1
5	Geotechnical Specialist	Month	1	1
6	Water Supply & Sanitation Specialist	Month	1	1
7	Mechanical & Electrical Specialist	Month	1	2
8	Information Technology Specialist	Month	1	1
9	Quantity Surveyor/Cost Engineer	Month	1	3
10	Environment Specialist	Month	1	1
B	NATIONAL			
1	Architect	Month	1	3
2	Geodetic Engineer	Month	1	1
3	Structural Engineer	Month	1	2
4	Mechanical & Electrical Engineer	Month	1	2
5	Geotechnical Engineer	Month	1	1
6	Water Supply & Sanitation Engineer	Month	1	1
7	AutoCAD Operator	Month	1	4
8	Quantity Surveyor	Month	1	3
TOTAL			18	36

Annex – Location Map

Coordinates:

Lat 8°33'45.61"S

Long 125°34'27.69"E

