



**Solomon Islands National University**

**Term of Reference (TOR)**

**For**

**Consultant Services for Design and  
Documentation for Proposed FST Complex**

# Term of Reference (TOR)

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## **TITLE**

Consultant Services for Design and Documentation for Proposed Faculty of Science and Technology (FST) Complex.

## **I. BACKGROUND**

The Proposed FST Complex will be located at the Site at Kukum campus (Refer to Map attached).

The proposed building is required by FST for training and research. The required functional areas are labs, classrooms, staff offices, mini lecture theater, study rooms, light workshop, and Kiosks/cafeteria. It is anticipated that the proposed building will be at least a minimum of two storeys high. It should be simple but aesthetically outstanding and should be environmentally friendly and also cater for people with special needs.

Part of this phase for the project will involve the architectural and engineering designs for the proposed building and thus the need to engage a consultant.

The consultant will be required to provide Architectural, Engineering and Quantity Surveying and other necessary services for this project.

## **II. SCOPE OF WORK**

### **A. Pre- Design Work**

#### **A.1. Site Surveys and Investigations**

1. Under this phase, the Consultants will perform the following tasks:
  - Confirm and validate the technical description shown in the land survey against the boundary markings on – site including identification of easements and covenants affecting the site;
  - Undertake topographical survey;
  - Undertake geotechnical survey; and

- Show access to site and traffic flow;
2. Accordingly, the Consultants 'output for this task is a report titled, “**Site Surveys and Investigations**”, (**key Milestone Deliverable #1**) including survey results and results of soil investigation and testing, in A4 size white bond paper, font Ariel, font size 11, single –spaced, properly bound with cover, in three (3) hard copies and electronic copies stored in flash drive, if necessary, drawings, if any, may be shown in A3 size white bond paper.

## **A.2. Design Options**

3. The Consultants will arrange for stakeholders 'consulting meeting to discuss internal layouts, architectural expression, and the structural philosophy of the building. For the purpose of this meeting, 'stakeholders' including representative from Client, SINU Faculties & Departments. Based on the results of this stakeholders; consultation meeting , and on the basis of information/data to be provided by the Client on current and projected number of staff members and students to be accommodated in the building and the Clients guidelines for design including prescribed building codes to be used , the Consultants will prepare two alternative *Sketch design concepts* complete with schematics and preliminary cost estimates for discussion and Clients consideration and final selection.
4. Accordingly, the Consultants output for this task is a report titled, “**Sketch Design Concepts**,” (**key Milestone Deliverable #2**) , in A4 white bond paper, font Ariel , Font size 11, single –spaced , properly bound with cover , in three (3) hard copies and electronic copies stored in flash drive. If necessary, drawings, if any, may be shown in A3 size white bond paper.
5. Based on the design option selected by the Client, the Consultants will prepare a final schematic design to provide detailed planning arrangements, furniture layouts, architectural elevations, structural and engineered service options, proposed schedule of finishes, and an updated project cost estimates for final approval / sign –off by Client before proceeding to detailed documentations.
6. Accordingly, the Consultants, output for this is report titled “**Schematic Design**” (**key Milestone Engineering Plans #3**), in A4 size white bond paper, Ariel font, font size 11, single –spaced, properly bound with cover, in three (3) hard copies and electronic copies stored in flash drive. Drawings shall be shown A3 size, white bond paper.

## **B. Detailed Engineering**

### **B.1. Tender Documentations**

7. This phase includes the preparation of the following tender documentations:

- Detailed structural, civil and mechanical engineering, architectural and other engineered services plans including mechanical, electrical, data and hydraulic plans.
  - Detailed technical specification of design disciplines, including schedules of materials and finishes,
  - building codes and standards to be used referenced for each trade section of the plans; and
  - detail cost estimates.
8. Accordingly, the Consultants output for this task is a report titled, “**Detailed Architectural and Engineering Plans**” (**Key Milestone Deliverable #4**), in A4 size white bond paper, Ariel font, font size 11, single-spaced, properly bound with cover, in three (3) hard copies and electronic copies stored in flash drive. Drawings shall be shown in A3 size white bond.
  9. All pages of the finally accepted building plans and supporting details must bear the signature of the Consultants team – i.e., the principal architect, structural engineer, electrical engineer and sanitary and sewerage engineer, and the Client authorized signatory, which the Vice Chancellor, showing their respective professional, administrative, and legal accountabilities.
  10. This phase also includes the preparation of plans and approaches for safeguarding and protecting: (i) the environment surrounding the lot boundaries and premises, (ii) people structure, Utilities and facilities to be affected by the construction works; and (iii) health and safety of construction workers. For this particular task, the consultant’s output is a report title; “**Employer’s Required – Supplementary Information “(Key Milestone Deliverable #5)”**”, in A4 size white bond paper, Ariel font, font size 11, single –spaced, properly bound with cover, in three (3) hard copies and electronic copies stored in flash drive. If necessary, drawings may be shown in A3 size white bond paper under separate bound cover.

## **B.2. Phasing of Construction**

11. If in the consultant’s view, the construction will continue into 2024, the Consultants will prepare alternative “two –year construction phasing” with the end in view that a completed phase will be operational and ready for occupancy and use by the Client.
12. The phasing scheme will be used by the Client in obtaining 2024 budget funds for building if need be.
13. The Client will provide the Consultants a realistic forecast of “two-year funding” for the building construction for the financial years 2023 -2024 which will serve as basis for developing the phasing of construction.

14. Accordingly, the consultant's output for this task is a report titled, "**Proposed Phasing of Construction**" (**Key Milestone Deliverable #6**), in A4 size white bond paper, Ariel font, font size 11, and single –spaced, properly bound with cover, in three (3) hard copies and electronic copies stored in flash drive. Drawings may be shown in A3 size white bond paper.

### **B.3. Technical Support to Clients Tendering Process**

15. The Consultants will prepare a set of draft tender documents for works, including draft invitation for tender, in accordance with SINU's *Procurement Policy or an approved* standard format for client's submission to the Tender Board for review. Upon receipt of the Tenders Board's comments, the Consultant will finalize the draft tender documents for submission to the tender Board for final approval.
16. Accordingly, the Consultants outputs for this task are (1) "**Draft Tender Documents for Works**" (**Key Milestone Deliverable #7**), in A4 size white bond paper, Ariel font, font size 11, single-spaced, properly bound with cover, in three (3) hard copies and electronic copies stored in flash drive.
17. The Consultant will prepare the response to queries from prospective tenderers.
18. The Consultants will serve as technical resources person during pre-tender meetings and during the evolution of tenders; in addition, the Consultants will prepare the evaluation report following SIG prescribed format. Accordingly, the consultant's output for this task is a report titled, "**Tender Evaluation Report**" (**Key Milestone Deliverable #8**), in A4 size white bond paper, Ariel font, font size 11, and single –spaced, properly bound with cover, in three (3) hard copies and electronic copies stored in flash drive.

### **C. Construction Supervision (Optional)**

19. On behalf of the Client, the Consultants will supervise the work of the contractors during construction. Construction is the principal responsibility of the contractor; therefore, the term "supervise" does not mean direct supervision or superintendence by the Consultants of the work of the contractor. Specifically, this task includes;
- Inspecting and expediting the work of contractor/s against approved plans, drawings, specifications and programs of work.
  - Monitoring progress of work against approved construction schedule, submission to client the necessary red flags or alerts for significant time slippages, verifying and recommending approval of necessary "catch up programs"

- Reviewing and verifying statements of physical accomplishments and recommending approval of claims for progress payments.
  - Issuance of instructions for corrections of defects on the works;
  - Verifying contractor’s request for variation and their implications to contract price and construction request schedule; in connection with this, issuing the necessary instructions for execution of variation orders; and
20. Accordingly, the Consultants’ outputs for this task are monthly reports, organized on quarterly basis, titled, “**Quarterly Supervision Reports** “(**Key Milestone Deliverable #9** up to a number corresponding to the duration of construction), in A4 size white bond paper, Ariel font, font size 11, single – spaced, properly bound with cover, in three (3) hard copies and electronic copies stored in flash drive. (**Key Milestone Deliverable – Final**).
21. The Consultants will assist the client in obtaining Construction permits. Permits fees will be paid by the Client.
22. The Client will be responsible for obtaining exemptions from duties and taxes for materials and equipment to be imported by contractors during construction.

### III. WORKPLAN AND SCHEDULE

23. The design work portion of the assignment will be completed in maximum of three (3) months.
24. The duration of the construction supervision portion of the assignment will depend on the duration of construction.

### IV. INFORMATION/DATA TO BE PROVIDED BY CLIENT TO THE CONSULTANTS

Within seven (7) calendar days after signing of contract, the Client will provide the Consultants the following technical, legal and administrative documents as key references that will aid Consultants in performing their tasks and services and producing their outputs / deliverables;

- Land survey with technical description and drawing of the boundaries of the lot;
- Source of funding for construction forecast of yearly funding for the construction; a detailed comprehensive guideline for the design (Design Brief).

## V. CONSULTANT'S PERSONNEL

### Experts Required for Performing the Services

(The contractor should use the personnel named in their technical proposal. If there is a change to the personnel, it has to be approved by the Client)

#### 1. Experts required:

- Principle architect, to serve also as team leader;
- Civil / structural engineer;
- Quantity surveyor and cost estimator;
- Service Engineer – Electrical, Mechanical, and Hydraulic / Sanitary Engineer.

2. The time inputs of the above experts will be shown in the tenderers' technical proposal.

3. The required qualification and experience of the above key experts are as follows;

#### 3.1. Principle Architect/ team leader:

- Completed a university degree in architectural or relevant field;
- A licensed architect from a recognized professional organization;
- Has successfully completed two similar assignment's in Solomon Islands or in any Pacific countries region in the last 3 years;

#### 3.2. Structural engineer

- Completed a university degree in structural engineer or relevant field;
- A licensed structural engineer from recognized professional organization;
- Has successfully completed a similar assignment in Solomon Islands or in any Pacific countries region in the last 3 years.

#### 3.3. Civil engineer / Geo tech Engineer

- Completed a university degree in electrical engineering or relevant field;
- A licensed electrical engineer from a recognized professional organization;

- Has successfully completed a similar assignment in Solomon Islands or in any Pacific countries region in the last 3 years;

#### **3.4. Electrical engineer**

- Complete a university degree in electrical engineering or relevant field;
- A licensed electrical engineer from a recognized professional organization ;
- Has successfully completed a similar assignment in Solomon Islands or in any Pacific countries region in the last 3 years;

#### **3.5. Mechanical engineer**

- Complete a university degree in mechanical engineering or relevant field;
- A licensed electrical mechanical engineer from a recognized professional organization ;
- Has successfully completed a similar assignment in Solomon Islands or in any Pacific countries region in the last 3 years;

#### **3.6. Sanitary engineer**

- Completed a university degree in sanitary engineering or relevant field;
- A licensed sanitary engineer from a recognized professional organization;
- Has successfully completed a similar assignment in Solomon Islands or in a Pacific Countries region in the last 3 years.

#### **3.7. Others**

Other Consultants deemed to be required will at least have a bachelor’s degree in the relevant field and or a diploma with more than 5 years of work experience.

## **VI. CONSULTANTS REPORTING OBLIGATIONS**

### Consultants Reporting Obligation

#### **1. Site Surveys and Investigations**

The consultants output for this task is a report titled, ” **Site Surveys and Investigations**” including survey results and results of soil investigation and testing (**Key Milestone Deliverable #1**), in A4 size white bond paper , font Ariel, font size 11 , single –spaced , properly bound with cover , in three (3) hard copies and electronic copies stored in flash drive. If necessary drawings, if any, may be shown in A3 size white bond paper.

#### **2. Design Options**

The consultants ‘ output for this task is a report titled “ **Sketch Design Concepts** “ (**Key Milestone Deliverable #2**) , in A4 size white bond paper , font Ariel ,font size 11 , single spaced and properly bound with cover , in three (3) hard copies and electronic copies stored in flash drive. If necessary, drawings, if any, may be shown in A3 size white bond paper.



### 3. Schematic Design

The consultant output for this task is a report titled, “**Schematic Design**” (**Key Milestone Deliverable #3**), in A4 size white bond paper, Ariel font, font size 11, single –spaced, properly bound with cover, in three (3) hard copies and electronic copies stored in flash drive. Drawings shall be shown in A3 size, white bond paper.

### 4. Detailed Engineering

The consultants “output for this task is a report titled “**Detailed Architectural and Engineering Plans** “(**Key Milestone Deliverable #4**) , in A4 size white bond paper , Ariel font size 11 , single –spaced , properly bound with cover , in three (3) hard copies and electronic copies stored in A3 white bond paper .

### 5. Employers Requirements – Supplementary Information

The consulting’s output is a report title, “**Employer’s Requirement – supplementary Information** “(**Key Milestone Deliverable #5**) , in A4 size white bond paper , Ariel font , font size 11 , single –spaced , properly bound with cover , in three (3) hard copies and electronic copies stored in flash drive. If necessary, drawings may be shown in A3 size white bond paper under separate bound cover.

### 6. Phasing of Construction

The consultant ‘output for this task is a report titled, “**Proposed Phasing of Construction**”( **Key Milestone Deliverable #6**) , in A4 size white bond paper , Ariel font , font size 11 , single spaced , properly bound with cover , in three (3) hard copies and electronic copies stored in flash drive. Drawings may be shown in A3 size white bond paper.

### 7. Technical Support to Clients Tendering process (Optional)

The consultants ‘output for this task are (1) “**Drafts Tender Documents for Works**” (**Key Milestone Deliverable #7**) , in A4 size white bond paper , Ariel font , font size 11 , single –spaced , properly bound with cover , in three (3)hard copies and electronic copies stored flash drive. Drawings may be shown in A3 size white bond paper, and (2) “**Tender Evaluation Report**” (**Key Milestone Deliverable #8**) in A4 white bond paper , Ariel font , font size 11, single-spaced , properly bound with cover , in three (3) hard copies and electronic copies stored in flash drive.

### 8. Construction Supervision (Optional)

The consultant; outputs for this task are monthly reports, organized on quarterly basis, titled, “**Quarterly Supervision Reports**” (**Key Milestone Deliverable #9**) up to number corresponding to the duration of construction), in A4 size white bond paper, Ariel font, font size 11, single – spaced, properly bound with cover, in three (3) hard copies and electronic copies stored in flash drive (**Key Milestone Deliverable – Final**)

## **VII. COST AND PAYMENT**

The costing to be in lump sum for each activity.

The Contractor may make progress claims or one-off claim once the work is fully completed.

## PROPOSED LOCATION



Project Site at Kukum Campus Solomon Islands National University