



REGIONAL FLAGSHIP TVET INSTITUTE FOR TEXTILE TECHNOLOGY
(RFTITT)

THE KISUMU NATIONAL POLYTECHNIC

**EAST AFRICA SKILLS FOR TRANSFORMATION AND REGIONAL INTEGRATION
PROJECT (EASTRIP)**

TERMS OF REFERENCE (ToR)

**CONSULTANCY FOR DETAILED ENVIRONMENTAL AND SOCIAL SAFEGUARDS
ANALYSIS, ENGINEERING DESIGN, BID DOCUMENT PREPARATION AND
SUPERVISION OF WORKS FOR THE PROPOSED REGIONAL FLAGSHIP TVET
INSTITUTE FOR TEXTILE TECHNOLOGY (RFTITT) AT THE KISUMU NATIONAL
POLYTECHNIC**

1. BACKGROUND

The Kisumu National Polytechnic herein refers to as “TKNP” is a premier National Polytechnic in Kenya situated within the Lake city of Kisumu, around 349Km from Nairobi. TKNP is among the 16 beneficiaries of World Bank funded project, spread across Kenya, Ethiopia and Kenya, under East Africa Skills for Transformation and Regional Integration Project (EASTRIP). The main objective of EASTRIP is to increase the access and improve the quality of TVET programs in selected Regional Flagship TVET Institutes and to support regional integration in East Africa. By improving the capacity of flagship TVET providers and relevant national agencies, and expanding the pool of qualified skilled labor in the growing economic sectors, the project will contribute to the high-level project objective of promoting regional integration through supporting the regional corridors and sector markets and promoting mobility of students, faculty, and graduates. In addition, it will contribute to the



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high-level objectives of poverty alleviation and economic growth for the participating countries and for the East Africa region by developing highly skilled and productive workforce. The Project's proposed development objectives and results will be achieved through activities grouped under three components namely:

Component 1; Strengthening selected Regional Flagship TVET Institutes for high quality skills development in priority sectors;

Component 2; Creating national TVET enabling environments;

Component 3; Enhancing regional collaboration in TVET and project coordination;

TKNP is the Regional Flagship TVET Institute for Textile Technology (RFTITT) under the component of strengthening selected Regional Flagship TVET Institutes for high quality skills development in priority sectors. To achieve this Project Development Objective (PDO), six (6) activities have been identified namely;

- 1) Strengthening governance and management
- 2) Institutionalizing industry links
- 3) Developing market relevant competency based training programs
- 4) Training of TVET managers and teachers
- 5) Upgrading key training facilities and equipment
- 6) Outreach and support for non-project national TVET institutes

This ToR has been developed as one of the key activities necessary for jump starting subcomponent 5 under upgrading key training facilities and equipment.

2. OBJECTIVE AND SCOPE OF THE ASSIGNMENT

1.1. Main Objective



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The overall objective of the assignment is to design and supervise the construction of the Regional Flagship TVET institute for Textile Technology at The Kisumu National Polytechnic

1.2. Specific Objectives

The specific objective of the assignment is to provide consulting services in environmental, health and social impact (EHS) assessment, develop engineering designs and drawings and supervise construction works:

- I. Conduct and prepare EHS impact assessment report
- II. Prepare conceptual design.
- III. Prepare detailed design and drawings
- IV. Prepare of tender documents.
- V. Participate in tendering processes.
- VI. Supervise construction.

1.3. Nature and Scope of the Assignment

1.3.1. Nature:

- I. Carry out Environmental, Health and Social Impact Assessment in accordance with World Bank and NEMA guidelines and regulations.
- II. Carry out extensive site investigation including, but not limited to topographical surveys and mapping and geotechnical surveys.
- III. Obtain all the other relevant data for designing the TKNP RFTITT
- IV. Prepare architectural, structural and services (including electrical, electro-mechanical drawings, plumbing, lift, firefighting, local area networks and security system,) interior design and landscaping designs
- V. Prepare a detailed tender document including, but not limited to specifications and bills of quantities, in collaboration with TKNP representatives for procurement of a qualified contractor to undertake construction works.



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- VI. Seek all the relevant approvals for the construction works to be implemented
- VII. Undertake Project and Contract Management for construction works in liaison with TKNP
- VIII. Supervise the implementation and commissioning of the project and monitor its operation until the end of the Defects Notification Period
- IX. Supervise and track environmental, health, safety and social aspects of the project
- X. Liaise and coordinate with other Consultants in undertaking the works.
- XI. Provide progress and periodical and project close reports to the client

1.3.2. Scope:

The scope of services to be carried out by the Consultant shall involve all architectural work including interior designs and landscaping, engineering and quantity surveying works. The services shall be phased into two distinct phases:

Phase 1 – Conceptual Design, Detailed Design, EHS Report and Preparation of Tendering Documents of the RFTITT; and

Phase 2– Construction Supervision of the RFTITT.

The Consultant is required to clearly indicate costs for the two phases separately in the Financial Proposal as the conditions of payment and timing for the two phases are different. Whereas the services described under Phase 1 will be executed using Lump-sum Contract form of contract whereby payments are linked with deliverable/outputs while those under Phase 2 will be executed using Time Based Contract whereby the payments are linked with time inputs of the Key Experts in the assignment.

The client and consultant will sign contract for Phase 1 – Conceptual Design, Detailed Design, EHS report and Preparation of Bidding Documents and initiate the contract for



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Phase 2 – Construction Supervision. Signing of contract for Phase 2 shall be subject to successful completion of Phase 1 contract as per the terms and conditions of the signed contract.

In order to achieve the assignment’s objective, the consultant shall carry out assignment shown in both phases and shall include but not limited to the following:-

3.2.1. Phase I – Preliminaries/ Conceptual, Schematic and Detailed Designs, structural and service Drawings, EHS Impact Report and Bill of Quantities.

3.2.1.1. Data Collection and Conceptual Design

The Consultant shall visit and examine the project site where his/her services shall be provided and obtain all information necessary for preparation of project sketch/conceptual design for submission and approval by the Client. The Consultant shall prepare conceptual design and check the viability of the Client's budget as related to the scope of work. Specifically the consultant is expected to perform the following tasks but not limited to:

- a) Carry out comprehensive analysis of the Client requirements, this will entail discussing with the client and ensure that the objectives of the project are captured in the design and implementation of the project;
- b) Analyze the requirements of office accommodation and business for different stakeholders and potential users;
- c) Drawings showing general arrangement of the building and layout of the spaces;
- d) Elevations, perspectives, walk-through and mock-ups to appropriate scales;
- e) Environmental impact statement of the proposed developments including socio-economic and political aspects;
- f) The performance characteristics of the proposed building and its elements and components such as: sound levels, light levels, heat levels;
- g) Preliminary project cost estimates;



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- h) Life cycle cost analysis
- i) An implementation program

3.2.1.2. Preliminary Design

Based on the selected concept design approved by TKNP and the final agreed design brief, the Consultant shall:-

- a) Prepare a site plan for the whole site;
- b) Develop a scheme design including plans elevations and perspectives in an appropriate scale
- c) Prepare preliminary project construction implementation programme;
- d) Incorporate inputs from planning and building control authorities and fire authorities;
- e) Seek full planning permission from local authorities
- f) Prepare schedules of the proposed building finishes, schedules of fixed and moveable equipment and furniture;
- g) Prepare draft specifications for all architectural and engineering proposals;
- h) Prepare draft bills of quantities;
- i) Prepare schedule of rates for each item of the BOQ; and
- j) Prepare tentative cost estimates.

The Consultant shall be required to submit Preliminary Design Report. Preliminary Design Report shall incorporate inputs from all the different professionals on the project team and covering (a) – (j) above describing the following:-

- a) The structural system;
- b) Internal and external finishes, including proposals for alternatives and resultant impact on costs; Internal fittings;
- c) Proposed sun shading and ventilation methods;
- d) Electrical, and IT installations proposed including comparisons



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- and recommendations related to electricity supply and voltage regulation;
- e) External works and landscaping;
 - f) Water supply and waste water management
 - g) Fire prevention proposals;
 - h) Access road and pedestrian facilities;
 - i) Statement on the durability and low cost maintenance aspects incorporated in the design of the buildings and services;
 - j) Program for completion of designs, draft tender documents and the project implementation schedule;
 - k) Project cost estimates including cost control plan.

The Consultant must further check the cost of each constituent part of the project as the design is developed against the detailed cost plan, give advice on such areas where costs may exceed the allowances, advice on the cost implications of Client's changes, and assist with the identification of more economical design solutions.

3.2.1.3. Detailed Design/structural and service Drawings and BOQ

3.2.1.3.1. Detailed Architectural Designs:

Once the conceptual design meets the requirements and approved by TKNP the Consultant shall be required to prepare comprehensive operational descriptions layout and detailed architectural designs to be built the RFTITT of TKNP. Specifically the Consultant shall:-

- a) Collect necessary data to enable detailed design of the project;
- b) Topographical surveys for taking levels for building/civil works;
- c) Soil investigations to get the properties of the soil, including its load bearing capacity



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- d) Conduct field survey and market survey for the cost estimates;
- e) Analyze the office space requirement and other facilities and develop an architect brief that will cover (but not limited to) spatial requirements of TKNP proposal for the project;
- f) Develop detailed designs/drawings from the approved scheme design. These designs shall cover all Architectural, Electrical/Mechanical Engineering, Civil/ Structural Engineering, Services Engineering, and Surveying aspects.
- g) Ensure inputs by various Consultants professionals are incorporated
- h) Prepare all Architectural and Engineering specifications for the building and civil works
- i) Revise the schedules of the building finishes, fixed and movable equipment and furniture;
- j) Seek approvals of the local authority for the building plans as required by statutory laws;
- k) Prepare all specifications;
- l) Structural design of buildings, giving the required strength of masonry, concrete, timber-work, Ferro cement as well as other building materials, bar bending schedules, etc;
- m) Preparation of realistic confidential cost estimates,
- n) Preparation of detailed and realistic Bills of Quantities for the project including external works;
- o) Prepare 3-D and model for the completed structure and site layout showing all features within the plot,
- p) Provide architectural (i.e. rendering in 4 elevations and 3-D images or model for completed structure), structural and services designs (including electrical, plumbing, lift design, firefighting, local area network and security system), interior design and landscaping, site layout showing all features within the plot,



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- q) Prepare schedules of rates and/or quantities for tendering purposes;

The detailed architectural designs shall result in the preparations of detailed working drawings at appropriate scale as agreed by TKNP including Environmental, social and assembly information, Health and Safety Strategic Plan. Also Consultant shall prepare a design risk assessment checklist.

3.2.1.3.2. Detailed Engineering Designs:

The Consultant shall be required to prepare detailed engineering designs including specifications of material to be used. The engineering design shall cover civil works, structural, electrical, plumbing/water installation and sanitations, lift design, firefighting, modern local area network and security system. The detailed engineering designs shall result in the preparation of detailed working drawings at appropriate scale as agreed by TKNP including Environmental, Social, assembly information and Health and Safety Strategic Plan and project program/schedule. Also Consultant shall prepare a design risk assessment checklist.

3.2.1.3.3. Quantity Surveying Work:

The Consultant shall be required to perform the following but not limited to:

- a) Rechecking the cost of each constituent part of the building as the design is developed against the detailed cost plan;
- b) Providing a pre bid estimate once the design work is complete;
- c) Assessing the Client's requirements relating to program and budget in order to recommend the most suitable contracting solution;
- d) Participate in preparing bid documents containing contractual particulars, specification of materials and Bills of Quantities detailing the work; and
- e) Prepare a project risk assessment checklist.



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3.2.1.3.4. Preparation of Tendering Documents

After completion of detailed design, consultant shall prepare bidding documents in line with the standard bidding documents issued by the World Bank. The guidelines and standard bidding documents can be accessed through the World Bank's website: www.worldbank.org/en/projects-operations/products-and-services/brief/procurement-standard-documents-archive. Likewise, during tendering processes the Consultant shall assist client in attending to clarification and participation during evaluation.

3.2.1.4. Building Permit

The Consultant shall assist the Client to obtain Building Permit from relevant authority.

3.2.1.5. Assist TKNP in Administration of Bidding Processes

The consultant will assist TKNP in bidding administration. In particular, consultant shall:

- a) Assist TKNP to clarify/answer Bidders' queries during bidding and pre-bid site meetings
- b) Assist TKNP to prepare minutes of the pre-bid site meeting; and
- c) Participate in the evaluation of submitted bids as deemed fit by TKNP.
- d) Participate in the pre-contract negotiations as deemed fit by TKNP;
- e) Assist TKNP to prepare minutes of the contract negotiations; and
- f) Assist TKNP to compile contract document up to the point contract signature.

3.2.2. Phase II – Supervision of Construction Works and Defect Liability Period

The Consultant will ensure that the works are executed according to the schedule,



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specifications and within the budgets. Also, the Consultant will supervise all Contractors' activities at all stages of project implementation. At this stage, the Consultant shall perform the following activities:-

3.2.2.1. Mobilization of Contractor

The Consultant shall assist the Client in ensuring that the chosen contractors mobilize promptly. Consultant will supervise the following elements of the project:

- a) The site set-up and compound to be used by the contractors.
- b) The agreement with the contractors on strict adherence to the construction programme.
- c) Control the contractor's and sub-contractors' site personnel at all grades for suitability for the construction of the works;
- d) Check and approve the site installations, equipment plants that are to be used by the contractor to execute the works and safety;
- e) Check and approve the materials testing laboratories that will be used during the construction;
- f) Check the suitability of sub-contractors as they arrive on site;
- g) Check materials and equipment for conformity with the tender specifications by physical inspection and by gathering the manufacturer's and suppliers' certificates of conformance;
- h) Verify the contractor's purchasing schedules so that materials and equipment necessary for the swift advancement of the works are available when needed, thus ensuring the work keeps to the establishment programme.

3.2.2.2. Equipment for Supervision and Testing Works;



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The consultant shall use equipment, soil testing equipment/apparatus and testing equipment to be provided by the Contractors at site or to be performed to an outside reputable laboratories with recognized and reputable staffs either locally or internationally to carry out such tests in order to ensure that works executed conform to standards and specifications stipulated in the contract.

3.2.2.3. Supervision of the Physical Elements

3.2.2.4. Check the setting-out of the works to line and level before any construction takes place for the operatives to follow.

- a) Check construction materials and equipment for quality and proper installation.
- b) During supervision of the works, the Consultant will carry out the following:

I. For building/civil works -check and ensure appropriateness of:

- i. Construction method
- ii. Site set up for contractor facilities on site
- iii. Setting-out
- iv. Depth and extent of excavations
- v. Quality and compaction of fill materials
- vi. Reinforcement (design standards, cover, spacing, diameter, cleanliness)
- vii. Formwork (line, finish, structural solidity, adequacy of shuttering oil)
- viii. Concrete work (design standards, mix composition, pouring sequence, vibration, finishing, protection of curing)
- ix. Structural steel works (length and size of sections, connections for protection for interior steelworks, corrosion protection for external steelworks)



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x. High quality level of workmanship including colour schemes (interior and exterior).

II. For equipment: the major elements to be checked are:

- i. Specifications and installation sequence of the equipment
- ii. Adherence to suppliers' installation instructions
- iii. Supervision of the installation and testing of the equipment;
- iv. Transport, storage and protection of the equipment once installed
- v. Protective measures against over voltage, under voltage, dry run etc.
- vi. High level of workmanship.

3.2.1.2. Testing, Commissioning and Operational Acceptance

- a) The Consultant shall approve all the testing of materials used throughout the construction.
- b) The Consultant will recommend and supervise any remedial works that may be necessary to bring the construction to the required standard.
- c) The Consultant shall certify that the construction material brought at site by the contractor(s) is in accordance with the specifications and it had been tested as per standard practices.
- d) The Consultant shall certify that works are executed as per approved design, drawings, and standard specifications, technically sanctioned and within the provisions of contract agreement.
- e) The Contractor shall submit the certified work record and drawings of works executed
- f) The Consultant shall issue a Certificate of Completion to the Contractor verifying the outstanding defects which the Contractor shall rectify before operational acceptance



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- g) The Consultant shall arrange the operational acceptance and handover of the completed works from the Contractor to TKNP upon satisfactory rectification of all the defects notified to the Contractor.

3.2.2.5. General Contract Management

During contract management, the Consultant shall monitor the progress of works with respect to time, quantity and quality as per the terms and conditions of contract. In particular with respect to contract management, the consultant shall:-

- a) Administer the contract from commencement to completion of works including during the defects liability period until issuance of final completion certificate;
- b) Prepare cash flow forecast of the project;
- c) Conduct regular site inspections and produce minutes and/or reports thereafter;
- d) Prepare project physical and financial progress reports;
- e) Quality control of materials, and workmanship on site.
- f) Inspect and approve materials delivered to site. As appropriate take/ instruct the contractor to take samples and carry out tests of materials, components, techniques and workmanship and examine and approve the conduct and results of such tests whether on or off site.
- g) Where necessary, instruct the opening up of completed work to determine that it is in accordance with the contract specifications.
- h) Where appropriately inspect the extraction, or fabrication, or assembly of materials and components to affirm quality of such materials/workmanship before delivery to site.
- i) Direct and control the activities of the site staff.
- j) Monitor the progress of the works against the Contractor's program and advice the Client appropriately.



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- k) Prepare valuations of work carried out and completed and issue Interim payment Certificates.
- l) Prepare practical completion certificate and commissioning of the building and take-over by the Client.
- m) Inform the Client and subsequently resolve any important problems concerning the advancement of the works due to technical or, other constraints, which would have an incidence on the cost or program of the work.
- n) Certify the contractor's running payments clearly indicating that the quality of work executed is according to the specifications, design, drawings, and technically sanctioned estimate and contract agreement and make recommendations for payment to the contractor along with test reports. The Consultant shall further be responsible for quality and quantity of works.
- o) Assist in the settling of any disputes or differences which may arise between the Client and the contractor including advising the Client on issues requiring arbitration;
- p) Maintain site records and determine estimates for the costs and advancement of works so that interim payments are based on monthly statements/works progress from the Contractor. Payment certificates will subsequently be issued for the approval of the Client.
- q) Arrange Site Management Meeting as per the contract between the client and contractor and prepare the minutes and submit them to the Client.
- r) Modify certain components of the design, which will become apparent during the course of the construction that needs modification either by the instruction of the client or in the course of execution. Any modifications will be defined by the Consultant together with the required specifications and submitted to the Client for approval.
- s) Prepare addenda that have been reviewed and approval by the client. All addenda and change orders relating to modifications to the original contract sum issued to the Contractor shall be based upon unit rates in the contract between client and contractor.



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3.2.2.6. Supervision during Defects Liability Period, the consultant shall;

- a) Prepare a schedule of defects and maintenance schedule guide the contractor during the Defects Liability Period;
- b) Prepare a schedule of inspections and testing to determine the nature of defects arising in the completed works during the Defects Liability Period;
- c) Undertake periodic tests and inspections to monitor the state of the completed works in order to identify and assign liability for defects during the Defects Liability Period.
- d) Advise TKNP of any defects found during the defects liability period and recommend action needed to correct them.
- e) Prepare a defects report after at the end of each inspection and testing period with full details of the cost and nature of the defects and the corrections thereof.
- f) Conduct a final inspection of the works after the correction of all defects. This inspection shall be carried out jointly with the representatives of TKNP.
- g) Finalize all the work and the records thereof including drawings, as built, operation and maintenance manuals and records of defect corrections during the Defects Liability Period.
- h) Finalize evaluation all the outstanding claims from the Contractor and prepare the final payment certificate.
- i) Prepare and issue the Final Completion to the Contractor.
- j) Prepare the project final account;
- k) Compile a final Construction Completion Report.

3. DUTIES AND RESPONSIBILITIES OF THE CONSULTANT

- i. Quality management of the output of the design and construction of the project is the responsibility of the Consultant;



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- ii. Accurate collection of data and relevant information and shall be responsible for any costs thereof;
- iii. Pay taxes and duties payable in accordance to the Laws of the Republic of Kenya;
- iv. Provide office accommodation and facilities, local transportation and communication while undertaking the assignment;
- v. The consultant shall be responsible for payment of any allowances of his personnel as well as all counterpart staff nominated by him/her;
- vi. The consultant shall prepare and submit detail design, costs, and all necessary documentations for client's approval;
- vii. The consultant shall submit project execution plan and project performance management plan;
- viii. Consultant will be involved in procurement processes of contractors, other consultants, suppliers and/or manufacturer as the case may be;
- ix. Consultant shall be responsible for obtaining work permit (if applicable) and cover for all necessary costs for his/her expatriates and any other necessary consent from relevant statutory bodies;
- x. The Consultant shall incorporate, define and elaborate client requirement into design solution;
- xi. Provide information necessary for marketing purposes;
- xii. Provide frequent progress reports as agreed by employer;
- xiii. Provide designers risk assessment in accordance with Environmental, Health and Safety policies and BSI guidelines;
- xiv. Undertaking Value management/Value Engineering (VM/VE) workshops with the client;
- xv. Design and access statement for the project/proposal;
- xvi. Approve contractor's working drawings;
- xvii. Participate in site meetings during construction; and
- xviii. Supervision of the works contract to ensure that works comply with the approved



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design, drawings, specifications, conditions of contract and sound engineering practice.

1. DUTIES, DATA, SERVICES AND FACILITIES OF CLIENT/TKNP

1.1. Duties and responsibilities of the TKNP

- i. The Client will oversee supervision of the project, but shall not be liable for poor quality of work. This shall be the entire responsibility of the Consultant;
- ii. The client will avail necessary literature and documents relevant to the assignment;
- iii. To provide competent counterpart staff only when required by the Consultant;
- iv. Assist the consultant to have access into the project site;
- v. Monitor timely delivery and the quality of services offered by the Consultant;
- vi. To undertake all procurement procedures in the appointment of contractor for construction works;
- vii. The client shall not be responsible for payments of taxes and levies but may assist the consultant to obtain relevant information from Kenya Revenue Authority; and
- viii. Client will provide project requirements for incorporation in the design.

2. COUNTERPART STAFF AND ITS ROLE

Counterpart staff may be assigned by TKNP. The payment and allowances of the counterpart staff shall be borne by the Client.

3. PROJECT IMPLEMENTATION SCHEDULE

The consultancy services are expected to be provided within a period of 28 months from the date of signing the contract. It is anticipated that within this period all design works and



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construction works will be completed. The defects liability period is previewed to be covered within the same period for 12 months.

The tentative estimated time in months for every activity shall be as follows:

<u>Activity</u>	<u>Tentative estimated time (In months)</u>
Inception report	- 2 weeks
Conceptual designs	- 4 weeks
EHS Report and Schematic designs/drawings	- 4 weeks
Detailed designs/drawings	- 4 weeks
Detailed Bills of Quantities	- 1 week
Tender documentation	- 1 week
Tender Administration	- 8 weeks
Supervision of Construction works	- 40 weeks
Defects liability period and final account report	- 48 weeks

4. **SITE MEETINGS**

The site meetings to discuss project progress shall be held on monthly basis and shall be conducted at the project site. The Consultant's Team Leader shall chair the meeting. The Consultant shall be responsible for the preparation of minutes of each meeting and submit a copy to TKNP.

5. **CONSULTANT'S REPORTING OBLIGATION**

5.1. **Phase I: Preliminaries/ Conceptual, EHS Report, Schematic and Detailed Designs, Working Drawings and Bill of Quantities**



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The consultant shall prepare and submit the following reports in hard and soft copies to the client on the format prepared by the consultants and as approved by the client.

10.1.1. Inception Report

The consultant shall prepare and submit to the client three (3) well-bounded copies of the inception report. This report shall be submitted 2 (Two) weeks after the date of commencement of the assignment. The report shall outline the consultant's organization and program of works, methodology, approach and the schedule of man power, all revised to reflect the result of contract negotiations and Consultant's initial finding. The client shall review and submit his comments to the consultant within a period of two (2) weeks. Final reports corrected after taking into account any comments shall be submitted within one (1) week after expiration of the deadline for submission of comments.

10.1.2. Conceptual design Report

Based on the concept the consultant shall develop and prepare final project brief with options for client to select and approve before adoption. The consultant shall prepare and submit to the client three (3) well-bounded copies. This report shall be submitted one (1) months after the date of commencement of the assignment. The report shall outline all aspects detailed in this Terms of Reference. The client shall review and submit his comments to the consultant within a period of one (1) week. Final reports corrected after taking into account any comments shall be submitted within one (1) week after expiration of the deadline for submission of comments.

10.1.3. Preliminary design Report and EHS Report



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The Consultant shall be required to submit Preliminary Design Report and EHS impact assessment report three (3) months after the date of commencement of the assignment. Preliminary Design Report shall incorporate inputs from all the different professionals on the project team and covering all aspects as stipulated in this Terms of Reference. The consultant shall prepare and submit to the client three (3) well bounded copies. The client shall review and submit his comments to the consultant within a period of two (2) weeks. Final reports corrected after taking into account any comments shall be submitted within two (2) weeks after expiration of the deadline for submission of comments.

10.1.4. Detailed Design Report

The Consultant shall submit Detailed Design Report four (4) months after the date of commencement of the assignment. The consultant shall prepare and submit to the client three (3) well-bounded copies. Detailed Design Report shall cover all aspects as stipulated under architectural design, structural designs, services and preliminary cost estimates of this Terms of Reference and shall comprise of:-

- a) Detailed design report in A4 format covering all aspects of this Terms of Reference;
- b) Detailed working Architectural drawings/designs showing plans, sections, elevations, perspectives, models, in appropriate scales and the drawings to be in A0 format and bound properly with water proof cover;
- c) Detailed confidential cost estimates; and
- d) Plans (two sets).



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10.1.5. Final Design Report

The report shall be presented at the end of the design period five (5) months from the date of commencement of the assignment. The consultant shall submit the final report after incorporating client's comments on the draft detailed design report. The consultant shall prepare and submit to the client three (3) well-bounded copies. It shall comprise a detailed description of the proposed project works as well as detailed designs of the same. All assumptions, design criteria and standards as well as design calculations shall be clearly presented in the form of annexes. Consultant's cost estimates broken down into the various components as well as expenditure schedules shall be shown.

10.1.6. Tender Documentation

The Consultant shall prepare and submit the bidding documents six (6) months from the date of commencement of the assignment. The Consultant shall submit Bidding Documents in three (3) copies. The main document shall be in A4 format and the related drawings shall be photo reduced to A3 format. In addition to the hard copies, A CD-ROM containing the electronic version of every report/document shall be submitted to TKNP. Bidding documents shall contain all documents which will be used to invite tenders from the prospective bidders. The client shall review and submit his comments to the consultant within a period of two (2) weeks. Final Bidding Documents corrected after taking into account any comments shall be submitted within two (2) weeks after expiration of the deadline for submission of comments.

10.1.7. Assist the Client in Tendering Administration



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Since bidding process will be administered by the Client, the Consultant shall play advisory role by providing assistance. In particular, the consultant shall assist Client in performing activities in this Terms of Reference. In this case, the consultant shall produce the reports as per the directive of the Client. The report shall be submitted nine (9) months from the date of commencement of the assignment accounting activities assisted/performed during bidding administration.

5.2. Phase II: Construction Supervision and Defect Liability Period

10.2.1. Inception Report

This report shall include results of the review of the contractor's work program, any modifications thereto, status of the consultant and contractor's mobilization and any other matter requiring the Client's action. This report shall be submitted in 3 copies to TKNP one month after commencement of works' contract.

10.2.2. Monthly Progress Reports

10.2.2.1. Supervision Stage Reports

Monthly progress reports shall contain a summary of the work accomplished in the proceeding one month, an outline of work expected to be carried out and completed during the next reporting period and the Consultant's comments and recommendation on any unforeseen condition that affect the progress or quality of work. In general, the report shall include work in progress and completed, status of progress against agreed implementation schedule, financial progress against the budget, change of quantities compared to the original Bills of Quantities, estimated percent of work completed by task, briefs of any



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meeting conducted and list of any problems that may cause or be causing delays including proposed measures to correct the problems. Reports shall also include a financial summary indicating the amount claimed, approved and paid.

10.2.2.2. Testing and Commissioning Reports

The Consultant shall submit all testing and commissioning reports at all stages.

10.2.2.3. Completion Report

At completion of construction works, the Consultant shall prepare and issue a draft practical completion report. The draft completion report shall include the pre - final inspection report and handing over certificates in accordance with the provisions of the contract and shall be submitted to TKNP for review and comments in four (4) weeks' time before completion of construction works. TKNP comments and reviews will be sent to the Consultant within one (1) week after confirmation of receipt. The final completion report shall be submitted within one (1) week upon receipt of comments from the Client. The final completion report shall be deemed to have included TKNP comments and reviews.

10.2.2.4. Final Statement of Account

Before the end of defects liability period, the Consultant shall prepare and issue a Defects Liability Certificate. The Defects Liability Certificate will include the final inspection report, as built drawings, commissioning reports, operating and maintenance manuals and final payment certificate (Final Account) that is due to the contractor and shall be submitted to TKNP within four (4) weeks before the expiry of defects liability period.

10.2.2.5. Format of the Report



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The format of the report shall include the following deliverables shown below:-

S/N	Design Stage	Report Format and type of Report Submission	No. of Copies		Approval Processes
			Hard Copies	Soft Copies	
1	Concept design	Elaboration of design brief in an A4 book (MS Word)	3	1	
		Power point presentations	0	1	
		Concept design in A3 (Arch CAD, Auto CAD, PDF)	3	1	
		Preliminary cost estimate (MS Excel)	1	1	
2a	Schematic design	Detailed design brief	1	1	
		Outline business case (MS Word)	1	1	
		Facility area schedules (MS Excel)	3	1	
		Schematic design - A3 (Arch CAD, Auto CAD, PDF)	1	1	
		Advanced specifications (MS Word)	1	1	
		Cost estimates (MS Excel format)	1	1	
2b	EHS impact Assessment Report	Elaboration of Environmental, Health and Safety Concerns and Mitigation Plan (MS Word)	3	1	
		Power point presentations	0	1	
3	Detailed design	Detailed design report	1	1	
		Facility area schedules (MS Excel)	1	1	



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		Detailed design - A3 (Arch CAD, Auto CAD, PDF)	3	1	
		Project specifications (MS Word)	3	1	
		Bills of Quantities - blank (MS Excel)	1	1	
		Project execution plan (MS Word and others)	1	1	
		Project performance management plan (MS Word and others)	1	1	
		Cash flow (MS Excel)	1	1	
4	Tender documents	Submission of drawings in A3 (Arch CAD, Auto CAD, PDF)	1	1	
		Specifications (MS Word)	1	1	
		Blank BOQs in (excel)	1	1	
		* All documents to be dully stamped and signed on each page			
5		Site meeting reports (MS Word)	1	1	
		Inspection reports and test results (MS Word, PDF, Excel)	1	1	
	Supervision general or monthly progress reports	Valuations and certificates (MS Excel, Word)	1	1	
		Works' status reports, challenges, and recommendations	1	1	
		Pre final inspection report (MS Excel, Word)	1	1	
		* Format for the reports shall be agreed between TKNP and the consultants			
6	Testing and commissioning	Copies of warranties, guarantees in their original format	1	0	
		Collection, reviews and submission of as built drawings	1	1	



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		Collection, reviews and submission of operation and maintenance manual	1	1	
		Consultants' reports about the project (overall and lessons learned)	3	1	
7	Close out report	Final account dully signed and stamped	3	1	
		Defects liability certificates	1	1	
		Practical completion and handing over certificates	3	0	

6. QUALIFICATION AND EXPERIENCE OF CONSULTANTS

The Consulting Firm should have at least five (5) years experiences in execution of the works of similar nature and should be registered with recognized Professional Body. The consultant team shall comprise at least the following key personnel with the specialization and experience indicated below.

6.1. Proposed Key Staff

11.1.1. Team Leader

The Team Leader shall have a minimum Bachelor degree in Architecture with at least ten (10) years of practical working experience in design, construction, project management, supervision of construction projects, and contract management. Five (5) of which shall have been as Project Manager or Team Leader on at least Three (3) assignments of similar size and complexity with proven success. He/she should be registered as a Consulting Architect by the Architects and Quantity Surveyors Registration Board or relevant professional body. The Team Leader must have



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excellent communication skills, fluent in written and spoken English languages and should be registered with recognized Professional Board.

11.1.2. Project Architect

The Architect must possess a minimum of Bachelor degree in Architecture or equivalent and with at least in Five (5) years of practical working experience in design of buildings construction and the construction industry as a whole after registration as an architect. He/she should be registered as a Consulting Architect by the Architects and Quantity Surveyors Registration Board or relevant professional body. The Architect should have proven ability to lead the design team and conversant with all aspects of architectural design and Computer Aided Designs (CAD). Furthermore, shall have undertaken at least two (2) assignments of similar nature and complexity. The architect must have excellent communication skills, fluency in written and spoken English language and should be registered with recognized Professional Board.

11.1.3. Civil/Structural Engineer

The civil or structural engineer must possess a minimum Bachelor degree in civil engineering with at least Five (5) years of practical working experience in design and supervision of construction works. Furthermore, shall have undertaken at least two (2) assignments of similar nature and complexity. He/she should be registered as Consulting Engineer by the Engineers Registration Board. The civil/structural engineer must have excellent communication skills, fluent in written and spoken English language and should be registered with recognized Professional Board.

11.1.4. Quantity Surveyor

The Quantity Surveyor must possess a minimum Bachelor degree in Building/Land Economics with at least Five (5) years of practical working experience in preparation of



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cost estimate for buildings works, project management, construction management and contract management. He/She should be registered as Consulting Quantity surveyor by the Architects and Quantity Surveyors Registration Board or relevant professional body. Furthermore, shall have undertaken at least two (2) assignments of similar nature and complexity. The Quantity Surveyor must be conversant with preparation of tender documents and Bills of Quantities (BOQ). The Quantity Surveyor must have excellent communication skills, fluency in written and spoken English language and should be registered with recognized Professional Board.

11.1.5. Geotechnical/Foundation Engineer

He/she should be a Geotechnical Engineer possessing at least a Bachelor of Science in Civil Engineering with minimum of Five (5) years working experience in building works especially in geotechnical and has undertaken at least five (5) similar assignments. He / She should be registered as professional Engineer by Engineers Registration Board or relevant professional body. He / She should be fluent in English Language.

11.1.6. Services Engineers.

The Services engineers must possess a minimum of Bachelor degree in Mechanical or Electrical Engineering or computer or ICT from any recognized university or similar institution with at least Five (5) years of practical working experience in the relevant field. The services engineers must have excellent communication skills, fluency in written and spoken English language and should be registered with recognized Professional Board as follows:-

11.1.7. Electrical Engineer

The electrical/ electromechanical engineer must possess a minimum Bachelor degree in electrical/ Electromechanical engineering with at least Five (5) years of practical working experience in design of electrical installation system and construction. He / She should be



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registered as Consulting Engineer by the Engineers Registration Board or relevant professional body. The electrical engineer must be conversant with all aspects of design of electrical system in office/public buildings and supply main connection. Furthermore, shall have undertaken at least two (2) assignments of similar nature and complexity. The electrical engineer must have excellent communication skills, fluency in written and spoken English language and should be registered with recognized Professional Board.

11.1.7.1.Mechanical Engineer.

Should possess at least a first degree in Mechanical, Electrical Engineering from a University or similar institution and must be registered with the relevant professional bodies; and must have at least Five (5) years' experience in HVAC (Heating, Ventilation and Air Condition), Lift, Generator or other related works. Furthermore, shall have undertaken at least two (2) assignments of similar nature and complexity. He / She should be registered as Consulting Engineer by the Engineers Registration Board or relevant professional body He / She should be fluent in English Language.

11.1.7.2.Network Engineer.

Should possess at least a first degree in Computer Engineering/ Telecommunication/Computer Science or IT-engineering from a University or similar institution with possession of CISCO or CCNA Certification and must have at least Five (5) years' experience in Networking, Software, Security system and any other related works. Furthermore, shall have undertaken at least two (2) assignments of similar nature and complexity. He / She should be fluent in English Language.

11.1.7.3.Land Surveyor

The Land Surveyor should possess a minimum of BSc. in Land Survey with minimum Five (5) years working experience; out of which (3) years must have been on similar assignments with proven success. Furthermore, shall have undertaken at least two (2)



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assignments of similar nature and complexity. Should be register by relevant professional Board.

11.1.7.4.Environmentalist

The Environmentalist must have at least bachelor degree in environmental studies and must have at least Five (5) years working experience in building projects. S/he must also be registered with National Environmental Management Authority (NEMA) as a Lead Consultant. Furthermore, shall have undertaken at least two (2) assignments of similar nature and complexity.

2. INSTITUTIONAL ARRANGEMENT

TKNP will contract one consultants who will work to undertake the assignment as described in this ToR. The consultants will report to The Principal, The Kisumu National Polytechnic. The consultant will spearhead the assignment and will be responsible for the submission of the deliverables as requested. All deliverables submitted by the consultants should be approved by the relevant government agencies involved such as National Environmental Authority (NEMA), National Construction Authority, County Government of Kisumu and any other relevant agency.

3. DUTY STATION

The duty station of the work while will be TKNP. During Phase 2 Consulting firm should ensure provide at least two key staff Civil/Structural Engineers and Quantity Surveyors for constant and full time supervision during entire period of construction

4. PAYMENT MODALITIES

As it has been explained, the assignment is divided into two phases; Phase 1- Conceptual Design, Preliminary and Detailed Design and Preparation of Tendering Documents and Phase 2 - Construction Supervision and Defect Liability Period. The Consultant should



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clearly indicate the fee for consultant services separate in each phase when submitting their financial proposals. Payments to the consultant will be made by milestone of each activity. Milestone for payments shall be effected after submission and obtaining approval of the under mentioned activities with the associated reports/documents. The terms and conditions of payment shall be as follows:-

Item	Description /Stage of Work	For Payable
Phase I	Preliminaries/ Conceptual, Schematic and Detailed Designs, Working Drawings and Bill of Quantities	100%
	a) Submission of Acceptable Inception Report	10%
	b) Submission of Acceptable Conceptual Design	20%
	c) Submission of Acceptable Preliminary Design and EHS report	20%
	d) Submission of Acceptable Detailed Design	30%
	e) Submission of Acceptable Bidding Documents	15%
	f) Signing of Construction works' contracts	5%
Phase II	Construction Supervision and Defect Liability Period	100%
	During this phase, all remunerations to the consultant shall be time based as per terms and conditions of time based contracts. The professionals to be deployed on supervision works as mentioned under paragraph 11 of this TOR shall be allocated with their person months expected and compute their fees resulting thereof. The fees rates shall be fixed over the entire period of the contract.	



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	Total	100%
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7. DURATION OF THE ASSIGNMENT

This assignment for duration of Twenty Eight (28) months. However the commencement of the assignment will start immediately after the award of the contract, that is to say:-

- a) The consulting firm shall complete the services of design “Work” within Six (6) months immediately after contract signing;
- b) The supervision of construction work should be completed within Ten (10) calendar months; and
- c) The Defect Liability Period shall be within Twelve (12) calendar months.