

TANA WATER WORKS DEVELOPMENT AGENCY



TERMS OF REFERENCE (T.O.R) FOR DESIGN OF TWWDA OFFICE BLOCK, CAR PARK AND PERIMETER WALL

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TERMS OF REFERENCE (T.O.R)

1.0 BACKGROUND

1.1 General

Tana Water Works Development Agency (TWWDA) is one of the nine (9) water Agency under the ministry of Water, Sanitation and Irrigation; mandated to develop water and sanitation infrastructure within its area of jurisdiction; which includes Embu, Kirinyaga, Meru, Nyeri and Tharaka Nithi.

The Agency is currently strained on its office space and parking and is targeting to construct new office block with a car park and perimeter wall for its headquarters offices located in Nyeri town, along Baden Powell road.

The Agency seeks to engage the services of a Consultancy Firm to undertake the Detailed Geotechnical, Architectural and Structural Designs and prepare Tender Documents.

The detailed description of the consulting services to be performed is described in these Terms of Reference (TOR).

1.2 Selection Criteria

The Consultant selected to undertake the Consultancy shall have had extensive experience in architectural, structural as well as electromechanical design in multi storeyed office blocks. The Consultant shall have specific experience in undertaking design and supervision of such contracts.

1.3 Project area Description

The project area is located within the premises of the Agency's main offices at Nyeri town

2.0 PROJECT OBJECTIVES AND SCOPE

2.1 Specific Objective of the Consultancy

The overall objective of this consultancy is to design the office block, car park and perimeter wall for the TWWDA headquarters office in Nyeri.

2.2 Scope of the Consultancy

The consultant is expected to carry out the activities as stipulated here;

- i. Site survey, primary data collection and analysis to obtain parameters prerequisite to the design
- ii. Undertake site geotechnical investigations on the proposed site to establish the ground formations and the ultimate bearing capacity of the soil. The consultant shall submit a detail soil tests and investigation report.
- iii. Prepare architectural designs adhering to the relevant design standards and guidelines in regards to the build envelope and build environment. The designs should include; floor plans, sections, elevations, 3D drawings, working details, door/window schedules and finishes/fittings schedules, as well as building interior and hard/soft landscaping designs, furniture/equipment positioning and accessories
- iv. To undertake structural analysis and designs adhering to the relevant design standards and codes. Provide a detailed bar bending schedule.
- v. Undertake electromechanical designs adhering to the relevant design standards and codes incorporating components of safety, convenience, control, comfort and access etc.
- vi. Prepare detailed un-priced bills of quantities and detailed confidential cost estimates (priced bills of quantities) for the civil works and all other associated works.
- vii. To prepare the specification of the materials and methodologies to be used in construction works incorporating latest economic inventions and innovations
- viii. Complete Environmental and Social Impact Assessment (ESIA) for the project site and obtain NEMA approvals.
- ix. To prepare tender documents
- x. Obtaining all the necessary approvals of the designs for construction of the building from the authorities concerned.
- xi. Final detailed design report

The Consultant shall thoroughly fulfill, to the highest professional standards the objectives and scope of the assignment, Employer's requirements, Specifications and any amendments thereto; and to ensure that so far as is reasonably possible, within the Contract Price and Contract Period allowed under the Contract or any agreed amendments thereto.

3.0 REPORTING REQUIREMENTS AND SCHEDULE OF DELIVERABLES

The consulting firm shall report to the Client. The firm will maintain regular consultations with the client's representative to the project in order to ensure effective provision of necessary information requisite to the designs.

The consulting firm and the Client will agree on the dates for regular meetings.

3.1 Schedule of the deliverables

Sno.	Report	Due Date	Content of Report	No. Of Copies
1.	Inception Supervision Report	3 days after Commencement of the consultancy	Summary of the Consulting firm's work plan, methodology, state of mobilization, perception of the assignment and issues identified requiring the Clients's attention	2 hard copies 1 Soft copy
2.	Progress Report on the execution of the Consultancy	weekly	Describing the progress made on design and environmental assessment services. Narrative and bar charts or other graphic presentation, showing details of the progress and any changes in the assignment schedule, It shall include the problems encountered, if any, and major findings and recommendations.	2hard copies 1 Soft copy
3.	The Draft Project Report	14 days after Commencement of the consultancy	Preliminary ESIA findings	2 hard copies 1 Soft copy
4	Detailed Geo-Technical investigations report	14 days after Commencement of the consultancy	Methodology of investigations Number and distribution of trial pits Results of the tests.	2 hard copies 1 Soft copy
5.	The Draft Detailed Design report	20 days after Commencement of the consultancy	Draft architectural and structural designs	2 hard copies 1 Soft copy
6.	The Final Detailed Design report	1 months after Commencement of the consultancy	Architectural design and detail working drawings for the specific structures' Structural analysis, report and detail structural drawings of the designs. Electromechanical layout drawings	2 hard cover bound copies with inscriptions as directed 1 Soft Copy

7.	Tender Documents	1 months after Commencement of the consultancy	Complete set of Tender documents, BOQs including measurement sheet (Excel File) and associated detailed technical and material specifications separately for all proposed infrastructure services and facilities mentioned in the scope of service described above.	2hard copies 1 Soft copy
8	Final ESIA Report	As required	<p>Assessment of environmental issues of the proposed project on the surrounding environment, in parallel with the detailed engineering design in an iterative and interactive manner so that the design eventually incorporates mitigation measures and results in the most cost-effective option.</p> <p>Determination of Potential Impacts - Identify and describe all potential major environmental impacts from the project which will be significant over the long-term. Apply an appropriate consultation approach given the scale of the project and the nature of possible affected parties.</p> <p>Development of Management Plan to Mitigate Negative Impacts - Recommend feasible and cost-effective measures to prevent or reduce significant negative impacts to acceptable levels. Indicate the impacts and costs of those measures, and of the institutional and training requirements to implement</p>	2 approved by NEMA hard copies 1 Soft copy

The detailed format of each of the above reports will be agreed on between the firm and TWWDA during the inception phase.

The Consulting firm will also submit to TWWDA copies of minutes of all site meetings with the client.

4.0 STAFF REQUIREMENT

The Consultant shall provide the following staff required for the performance of the duties described above:

S/No	Description	General Experience Years	Staff No
1	Lead Architect (Project Manager)	5	1
2	Structural/Civil Engineer	5	1
3	Mechanical Engineer	3	1
4	Electrical Engineer	3	1
5	Quantity Surveyor	3	1
6	Geo-Technical Engineer/Geologist	3	1
7	CAD Technician	3	1
8	Surveyor	3	1
9	ESIA Expert	2	1
		Total	9

4.1 Required Experience, Qualifications and Competences

TWWDA will consider firms with the following minimum experience, qualifications and competencies:

Firm's Experience:

- The Consulting firm shall have successfully completed similar projects within the set time frames;
- The Consulting firm shall have in-depth understanding of the building sector with a minimum of 5 years' practical experience in design and supervision of building works;
- The Consulting firm shall provide a brief summary of proven experience and capabilities in design, supervision and quality control of at-least 2 projects of a similar nature, size and scope.

Ideally, all 2 projects will have been carried out within the last 5 years.

Team Qualifications and Competencies:

a) Lead Architect (Project Manager)

(i) Qualifications and skills

Must possess University Degree BSc (Architecture) or equivalent and be a Registered Architect with BORAQS.

(ii) General and specific Professional experience

A minimum of 5 years' practical post-qualification experience and 3 years on similar assignments

b) Structural Engineer

(i) Qualifications and skills

Must possess University Degree BSc (Civil & Structural Engineering) or equivalent and be a registered engineer with Engineers Board of Kenya or equivalent.

(ii) General and specific professional experience

A minimum of 5 years' practical post-qualification experience and 3 years on similar assignments

c) Electrical Engineer

(i) Qualifications and skills

Must possess University Degree (BSc Electrical Engineering) or equivalent and be registered with Engineers Board of Kenya or equivalent.

(ii) General and specific professional experience

Must have extensive and broad experience planning, design and construction of electrical works in building projects for at least three (3) years and 2 years on similar assignments

d) Mechanical Engineer

(i) Qualifications and skills

Must possess University Degree (BSc Mechanical Engineering) or equivalent and be registered with Engineers Board of Kenya or equivalent.

(ii) General and specific professional experience

Must have extensive and broad experience planning, design and construction of mechanical works in building projects for at least three (3) years and 2 years on similar assignments

e) Quantity Surveyor

(i) Qualifications and skills

Must possess a Bachelor's degree in Quantity Surveying or Building Economics; and be registered Quantity Surveyor with respective Professional Body.

(ii) General and specific Professional Experience:

Must have at least 3 years of post-registration experience and 2 years on similar assignments

f) Geo-Technical Engineer/Geologist

(i) Qualifications and skills

Must possess University Degree (BSc Geo-Technical Engineering/ Geology) or equivalent and be registered with Engineers Board of Kenya or relevant equivalent.

(ii) General and Specific professional experience

Must have at least 3 years of extensive and broad experience in undertaking geotechnical investigations and analysis and 2 years on similar assignments

g) Surveyor

(i) Qualifications and skills

Must possess BSc. Degree or equivalent in Survey & Photogrammetry or related field and must be a Registered with Institute of Surveyors of Kenya or equivalent.

(ii) General and specific professional experience

A minimum of 3 years' practical post-qualification experience and 2 years on similar assignments

h) Environment Expert

(i) Qualifications and skills

Must possess a Degree in Environmental Management or related discipline and must be registered as Lead Expert (NEMA) or equivalent.

(ii) General professional experience

Must have minimum of two (2) years of practical post qualification experience in environmental studies of infrastructural projects and 1 year on similar assignments

i) CAD Technician

(i) Qualifications and skills

Must possess certificate in CAD Applications or equivalent

(ii) General professional experience

A minimum of 3 years' practical post-qualification experience and 2 years on similar assignments

5.0 WORK SCHEDULE

The Consultant shall propose a schedule of activities and submit together with the technical proposal. This schedule, together with a comprehensive statement justifying the proposed deployment will be incorporated in the methodology statement.