

**THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF WORKS**



TANZANIA TRANSPORT INTERGRATION PROJECT (TanTIP)

**TERMS OF REFERENCE (TOR) FOR CONSULTANCY SERVICES FOR
TANROADS' CAPACITY STRENGTHENING – ENGAGEMENT OF
SOILS/MATERIALS ENGINEER NO. 3 UNDER THE TANZANIA
TRANSPORT INTEGRATION PROJECT (TanTIP)**

SEPTEMBER, 2023

TERMS OF REFERENCE FOR CONSULTANCY SERVICES OF SOILS/MATERIALS ENGINEER NO. 3 TO SUPPORT IMPLEMENTATION OF TANZANIA TRANSPORT INTEGRATION PROJECT (TanTIP)

1. BACKGROUND

The Government of the United Republic of Tanzania has received a credit from the World Bank towards the cost of the Tanzania Transport Integration Project (TanTIP) which comprises of rehabilitation of Mtwara – Mingoyo – Masasi (200 km), Rutukira – Songea (111.1 km), Lusahunga – Rusumo (92 km) and Upgrading of Iringa – Msembe (104 km), Rehabilitation and Improvements of Regional Airports of Tanga, Iringa and Lake Manyara and intends to apply part of the proceeds of this credit to eligible payments under Contract for Individual Consultancy Services of Soils/Materials Engineer to support the Tanzania National Roads Agency (TANROADS).

The TANROADS was established, through the Executive Agency Act, of 1997 as part of the reform process for improving the efficiency of the road sub-sector. The establishment of TANROADS aims to provide cost-effective and sustainable maintenance and development of trunk and regional roads network, approximately 36,000 Km to support the socio-economic development of Tanzania.

TANROADS is the Executing Agency for the Project and is responsible for procurement and management of contracts for development of Tanzania Transport Integration Project (TanTIP) projects.

In order to manage properly the implementation of the project, TANROADS wishes to engage a dynamic, motivated, creative and open-minded Individual Consultant to support management of the Project in the capacity of Soils/Materials Engineer of which, this Terms of Reference refers.

2. OBJECTIVES OF ASSIGNMENT

The objective of the assignment is to support the Tanzania National Roads Agency (TANROADS) in monitoring and adherence to quality control and assurance of materials for construction of roads and airports pavements and associated drainage structures and standard procedures for measurements of works, by both the Consultants and Contractors to enable achieve the objectives of the project and successful execution and completion of implementation of Tanzania Transport Integration Project (TanTIP) within agreed time frame, cost and quality.

3. SCOPE OF SERVICES

The Soils/Materials Engineer shall be responsible for the design review, assessing construction of highway and airports pavement and associated drainage structures, reviewing of project documents in areas related to materials and pavement design,

and monitoring the same for compliance with the Contract Specifications and adherence to Contracts provisions. The Pavement/Soils/Materials Engineer shall also be monitoring standard procedures specified in the Contract Documents and ensuring that only best practice and standard methods of construction practice are observed in the construction for implementation of Tanzania Transport Integration Project (TanTIP) and attending to all issues concerning works that will require TANROADS attention. In particular, the Soils/Materials Engineer will be required to undertake inter alia the following tasks:

- 3.1. Participate in reviewing the design of works and accordingly advice the Highway Engineer and the Project Manager.
- 3.2. Participate in reviewing the Detailed Engineering Design, including all drawings, specifications and supporting calculations and documentation for the Project submitted by the Contractors and Consultants.
- 3.3. Lead the review and approval of the Contractor's proposed quality assurance and quality control systems and procedures for all materials and works, including proposed sampling and testing procedures, laboratory establishment and procedures and reporting of results.
- 3.4. Assess and advice the established schedule, methods and procedures for the construction supervision of all pavement works.
- 3.5. Assess, review and advise the Project Manager on all geotechnical, soils materials and pavement matters during construction.
- 3.6. Participate reviewing of the Contractor's and Consultants proposed geotechnical investigations for pavements and pavement materials.
- 3.7. Liaise with the Contractors and the Consultants Bridge/Structural Engineer on the geotechnical requirements for bridge design and Construction.
- 3.8. Ensuring and Coordinating that the works of the field teams in supervising and certifying construction in accordance with contract conditions including acceptance standards of materials, approval of source supply, establishing QA/QC procedures, setting up laboratories, mix designs and testing procedures.
- 3.9. Assessing and ensuring that survey, setting out and construction of earthworks, pavement works, drainage and appurtenant structures are carried out according to design and conform to the contract provisions.
- 3.10. Making sure that works quality assurance system is fully followed and implemented by both the Contractor and the Consultant.

- 3.11. Assess and monitor measurements of Road Works items on site for compliance with standard procedures for Measurements prior to certification of the same for payment.
- 3.12. Assess Contractor's Work methodology in line with Contract specifications and bring up shortfalls that may result to poor quality of Works for timely intervention pursuant to the Contract provisions.
- 3.13. Conduct site visits and inspect the works for conformity with Contract provisions and identify problem areas and reporting the same to the Project Manager / Employer with advice on remedial measures.
- 3.14. Attending regular site meetings and ensuring that the proceedings are adequately recorded.
- 3.15. Ensuring that design review of Works including take off-sheets is done and submitted as scheduled.
- 3.16. Ensuring that as-built drawings for Works are done continuously throughout the construction time
- 3.17. Review Works progress reports and other ad hoc reports related to soil and Materials submitted by Consultants and Contractors.
- 3.18. Coordinate with other project technical experts to ensure that all issues are addressed effectively for the successful completion of the project.
- 3.19. Advising the Project Manager in all construction materials related issues
- 3.20. Capacity building of TANROADS engineering materials experts linked to the project.

4. Qualifications and Experience

The desired attributes for the position are as follows: -

a) Education:

- (i) The Soils/Materials Engineer must be a registered Civil Engineer with a degree in Civil/ Geotechnical Engineering
- (ii) Master's Degree in geotechnical or pavement and materials engineering will be added advantage.

b) Working experience:

- (i) She/he must have a minimum of ten (10) years' cumulative experience

related to construction supervision of roadworks/Airports.

- (ii) She/he must have served as Soils/Materials Engineer in at least three (3) road/airport construction projects. He/She should have experience of at least one airport project.
- (iii) experience on the Mechanistic-Empirical pavement design method should be added advantage
- (iv) The candidate should be eligible and have no Conflict of Interest as per Bank's Procurement Regulations
- (v) Must be a person of proven honesty and integrity with no criminal record, result oriented and proactive.

c) Language and regional experience:

- (i) Must have a working experience of at least three (3) years in developing countries and
- (ii) Proficiency in written and spoken English is mandatory.

5. FACILITIES TO BE PROVIDED BY TANROADS

5.1. TANROADS will provide the Consultant with facilities that will enable him/her to perform her/his duties in an efficient manner. These include but not limited to a fully furnished shared office, IT facilities and connections (computer, printer, facsimile, internet connection). In case the Materials Engineer is assigned activities outside Dar es Salaam, TANROADS will bear the cost of transport and per diem allowances using Government rates.

5.2. TANROADS shall also facilitate liaison with other institutions in order to introduce the Consultant to them as it may require, obtaining relevant information and documents necessary for proper execution of the assignment.

6. DURATION, PERFORMANCE REVIEW AND TERMINATION

6.1. Duration

Duration of assignment will be 12 Months with possible extension to the maximum of 36 months if need arises.

6.2. Performance Review

Notwithstanding Sub-Section 6.1 above, succession of the Services from one year (12 months) to another will be subject to satisfactory performance of the Consultant.

To enable decision making under Sub-Section 6.2 above, TANROADS will undertake a transparent performance review of the Consultant at the end of every one-year (12 months).

6.3. Termination

Notwithstanding Sub-Section 6.2 above, the Contract may be terminated before expiry of the duration of the assignment, in accordance with provisions of the Contract.

7. OBLIGATIONS OF CONSULTANT

The Soils/Materials Engineer shall be responsible for the following:

- 7.1. All information, data and reports obtained from shall be treated as confidential.
- 7.2. All plans, drawings, specifications, designs, reports, other documents and software prepared by the Consultant for TANROADS under this Contract shall become and remain the property of TANROADS, and the Consultant shall, not later than upon termination or expiration of this Contract, deliver all such documents to TANROADS.
- 7.3. Arranging and paying for his own accommodation.

8. REPORTING

- 8.1. The Soils/Materials Engineer shall report to the Project Manager responsible for implementation of Tanzania Transport Integration Project (TAnTIP) projects under the Director of Projects.
- 8.2. The Soils/Materials Engineer shall be required to provide inputs on progress of Works and all technical issues in relation to Civil Engineering Materials, to regular and ad hoc reports prepared by TANROADS.
- 8.3. The Soils/Materials Engineer shall prepare a monthly report, describing activities performed by him/her on daily basis; the report shall be in a format to be agreed by the Project Manager.

9. LEAVE AND WORKING HOURS

9.1. Leave

The Soils/Materials Engineer will be entitled to twenty-eight (28) days paid annual leave during the assignment.

9.2. Working Hours

- (i) Ordinary working hours period starts from 8:00 AM to 4:30 PM commencing Monday to Friday excluding public holidays;
- (ii) The Consultant will be expected to work on reasonable extra time when need arises at no additional payment; the Consultant's remuneration shall be deemed to cover for such overtime.

10. PAYMENT TERMS

- (i). The Consultant's remuneration is negotiable but will not be more than the estimated value per month. A monthly lump sum amount of remuneration per month will include all his overheads, social charges and other associated costs including local transportation within Dar es Salaam and insurance premium costs.
- (ii). The Consultant shall be responsible for all taxes and duties applicable as per Government of Tanzania rules and regulations.
- (iii). In case of travel requirements outside TANROADS HQ and within Tanzania for project-related assignments, the Consultant shall be paid travel expenses in line with the Government rules and procedures.
- (iv). Payment to the expert in respect of remuneration will not be adjusted for inflation for the duration of assignment.

11. DUTY STATION

Dar es Salaam (TANROADS HQ offices), Tanzania with field visit as per requirement. (There is a possibility of TANROADS HQ Offices to move to Dodoma mid-way the Contract).