



OPEC FUND FOR INTERNATIONAL DEVELOPMENT

PROJECT ID/CODE 15117P

REQUEST FOR EXPRESSION OF INTEREST FOR PROVISION OF CONSULTANCY SERVICES FOR DESIGN REVIEW, PREPARATION OF BIDDING DOCUMENTS AND WORKS SUPERVISION FOR DEVELOPMENT OF URBAN ROADS IN FIVE COUNTIES IN ARID AND SEMI-ARID AREAS PHASE 1 (CONSTRUCTION OF WAJIR TOWN ROADS)

TENDER NO. KURA/DEV/280/2024-2025

TERMS OF REFERENCE

1. BACKGROUND INFORMATION

1.1. General

The Government of the Republic of Kenya (GoK) has received financing from the OPEC Fund for International Development (OPEC) (the “Bank”) in the form of a “credit” (hereinafter called “credit”) toward the cost of the Development of Urban Roads in Five Counties in North Eastern Project. The first phase of the project entails construction of urban roads in Wajir Town in Wajir County.

The Government of Kenya, through its implementing agency, the Kenya Urban Roads Authority (KURA) shall require the Consultant to render all technical support services which may be deemed relevant to the above work. 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 services shall have had extensive experience in the Design Review and Construction Supervision of urban road projects.

- i. Firm Registration. The firm shall be registered in the field of Civil Engineering and related services as its core business for a period of not less than ten (10) years.
- ii. Firm Experience. The firm should demonstrate capacity and experience in carrying out design and supervision of urban roads for a period not less than seven (7) years
 - Provide information indicating description of experience works undertaken, historical nonperformance, litigation history or pending litigation.

- iii. The firm must have undertaken at least 3 similar assignments in scope and value within the last 5 years
 - Provide documentary evidence for assignments of similar nature indicating their price, location, contracting authority, scope of works and year of completion
 - Certified copies of Award letters and completion certificates issued by the contracting agency/entity.
- iv. Availability of Key Experts. The firm must demonstrate as having the requisite technical and managerial capacity to undertake the assignment.
 - Provide curriculum Vitae of key experts together with academic certificates including experiences, training and expertise details refer section 6.2 of this document)
- v. Interested Consultants should provide information demonstrating that they have the required qualifications, Technical capacity and financial capability to perform the Services.
 - Provide Financial Audited Accounts for the last two accounting years from the date of issuance of EOI

1.3. Project Description

1.3.1. Project Location

The project area is approximately 30Km² located in Wajir County. The proposed project will form a road network connecting Wajir Bor, El Shelali, Galgacha, Wajir town centre and Got-Ade serving a total population of over 800,000.

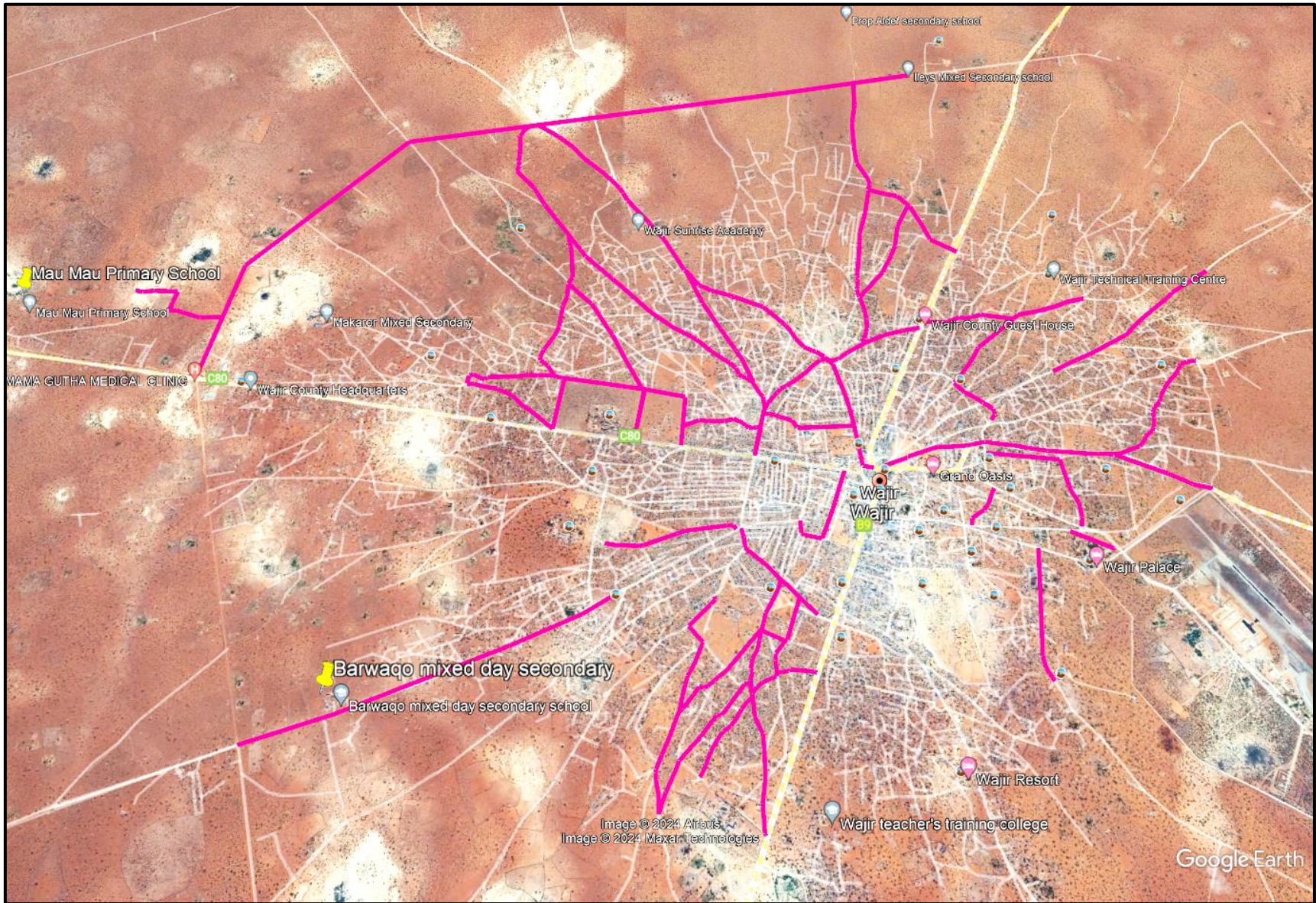
The Project road are within in Wajir Town, located about 110 miles (180 km) northeast of Nairobi at approximately 0.047035 degrees north and 37.649803 degrees east. Phase 1 comprises of 33 No roads/links measuring approximately 65.8Km.

Table 1: Project Roads

S/no	Road Name (Start- End)	Length (Km)	Surface type	Area covered
1	Fast Oil- Baraka Park link	1	Earth	Urban
2	Shikuku – Furaha Link	0.35	Earth	Urban
3	Halane- Liban link 1	1.9	gravel	Peri urban
4	Halane – Liban link 2	1.4	gravel	Peri Urban
5	B9 (Liban) – Ring Road link	3.5	gravel	Peri Urban
6	Sunrise – Ring Road link	2.5	Earth	Peri Urban
7	Bulla Jogoo- Barwaqo	3.2	Gravel	Peri Urban
8	Afgoye- Ring Road link	4.2	Gravel	Urban/Peri Urban
9	Northern Ring Road (Part)	8.4	Earth	Peri Urban
10	Airport road- Bulla Hothan link	1.1	Gravel	Urban
11	Furaha- Manyalo- Jogbaru primary link	4	Gravel	Urban
12	Manyalo- Stadium link	0.4	Gravel	Urban
13	Furaha Primary – Stadium link	1.7	Gravel	Urban
14	Wajir Girls Link 1	3.7	Gravel	Urban
15	Wajir Girls link 2	0.55	Gravel	Urban
16	Wajir Girls Link 3	0.54	Gravel	Urban
17	C80- Eldas road – Post office loop	5.1	Gravel	Urban
18	Afgoye- Power Substation	0.9	Gravel	Urban

S/no	Road Name (Start- End)	Length (Km)	Surface type	Area covered
19	Afgoye- Wajir County Guest	1.8	Gravel	Urban
20	Airport road- Police Canteen link	0.5	Gravel	Urban
21	Public Works- Airport link	1.3	Earth	Urban
22	Qorahey Wells-Catholic Road	2.7	Gravel	Urban/Peri Urban
23	Qajaja Link	1.7	Gravel	Peri Urban
24	Bulla Jogoo- Furaha Mosque- Heller Link	3.2	Gravel	Urban
25	Ama Primary- Furaha Primary Link	1	Gravel	Urban
26	Ama Primary- red cross link	0.2	Gravel	Urban
27	Wajir Girls- El noor road link	2.1	Gravel	Peri Urban
28	Airport- Wajir palace link	0.4	Earth	Urban
29	ICF Cemetry- Afgoye link	1	Gravel	Urban
30	Wair Girls- Al masjid Mosque- Mokoror	1.1	Gravel	Peri Urban
31	Catholic – Volunteer school link	1.5	Gravel	Peri Urban
32	LMD Police -Wagberi – Wajir Technical Link	2.1	Gravel	Urban
33	Wajir County Guest - Faulu Sec Link	0.8	Gravel	Urban
	Total	65.84		

A location map of the project roads is here below:



1. CONTRACT OBJECTIVES

The overall objective of the project is to support the Kenya's North Eastern region to achieve its full economic potential and improve the socio-economic status of the population. More specifically, the project shall create job opportunities because of the transportation options and possibilities, improved access to markets and other social amenities and the possibility of labour migration to the region. The project shall enhance the economic development and attract investors as a result of the reduction in travel time and costs.

Other benefits include enhanced road safety, security and reduction of dust within the project area.

The Consultant will be appointed as the Engineer's Representative and shall provide services to include but not be limited to the following:

- The Consultant shall carry out a review of the survey data, materials investigations and the geometric design including preparation of engineering cost estimates for the entire project network alignments and any additional link roads
- Prepare land acquisition (where very necessary) and utility map drawings and develop the cost estimates for the same.
- Prepare the works tender documents for the project.
- Ensure the project road is constructed to the required standard, and within the contract sum.
- Approve work programme and working drawings prepared by the Contractor.
- Review and approve the Contractor's Traffic Management Plan.
- Review the Environmental and Social Impact Study for the project and update reports on the same, and obtain the NEMA licence for the project.
- Carry out Environmental Audit and monitoring in accordance with the environmental management plans
- Supervise all construction works.
- Enforce environmental mitigation measures.
- Check and forward interim and final payment certificates for approval by the Engineer.
- Evaluate contractual claims and forward recommendations to the Engineer
- Prepare monthly and adhoc progress as well as end of project reports.
- Conduct project cost appraisals and advice the Client.
- Provide training to Client's personnel.
- Prepare As-built drawings.
- Prepare final completion report.

2. SCOPE OF THE WORK

3.1 General

The Consultant shall diligently fulfil, to the highest professional standards, the role of the Engineer's Representative to supervise the construction of the works and to ensure that they are executed in accordance with the Conditions of Contract, Specifications and Contract Drawings or 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;

The Consultancy services detailed in this document are for the Design Review and Construction Supervision of Development of Urban Roads in Five Counties in Arid and Semi-Arid Areas Phase 1 – (Construction of Wajir Town Roads) Project, including any other work as shall be directed by the Engineer.

3.2 Location and Extent of Contract

The project roads are situated in Wajir County within the jurisdiction of the North Eastern Region of the Kenya Urban Roads Authority.

The site of the works shall be the area within the road reserve boundary and any other places as may be designated in the Contract. These works involve construction to Bitumen Standards of Wajir Town Roads which measures approximately 65.8 Km Road network as detailed in **Table 1: Project Roads**.

3.3 Scope of Work

The scope of the works shall be as identified in the contract.

3.3.1 Specific Activities

The responsibilities delegated to the Consultant will call for the services listed below, without, however, being necessarily and strictly restricted to the items listed: The Consultant shall be expected to act with utmost integrity adhering to the required professional ethics.

Phase 1: Design Review

- Review of the existing data on the proposed project roads and the social and economic activities in the project study area
- Collection of relevant social, environmental, and physical data that is necessary to assist in the design review and implementation of the project;
- Relevant geological studies to inform on the ground conditions of the existing alignments (where necessary).
- Review the Materials Investigations and Pavement Design reports,
- Review Engineering survey and design review work for the optimum alignment, including any service lanes, link roads, bus-bays and accesses.
- Review the hydrological pattern of the project area to assess the adequacy of the proposed drainage structures.

- Review the environmental and social impact assessment study of the project area in relation to the proposed project, including obtaining the NEMA licence for the project.
- Prepare preliminary costs estimates and works implementation schedule;

Note: Consultant is expected to facilitate the Design Review phase of the project before the Contractor comes on board for construction works and any cost implications to arise from this phase to be included in the financial proposals.

Phase II: Works Supervision

- Review of the Contractor's work programmes and monitoring, on a day-to-day basis, of the Contractor's adherence to these programmes.
- Approval of the Contractor's proposed materials sites.
- Review and approval of the Contractor's traffic management plan
- Issuance of Site Instructions.
- Verification of quality of executed works and materials used.
- Verification of measurements and issuance of interim payment certificates.
- Monitoring contractor's work progress, Preparation of Progress Reports and advising the Engineer accordingly.
- Advising the Engineer on problems arising during the execution of the works.
- Arranging for the relocation of services.
- Monitoring of sound use of resources and protection of the environment.
- Requesting for assistance in HIV/AIDS and SEA awareness campaigns from the Ministry of Health.
- Co-coordinating with third parties, e.g. public utilities, traffic police.
- Analysis of any claims submitted by the contractor.
- Services at Taking Over of the works.

Phase III: Services during Defects Liability Period

- Inspection of defect rectification works and maintenance.
- Services at End of Defects Liability of the works.
- Preparation of Final Completion Report, Final Accounts and As-built drawings.

3.4 Detailed Description of the Services

3.4.1 Phase I: Design Review

The detailed Engineering Design Review work shall include (but not be limited to):

- 3.4.1.1 Undertake a detailed review of the Drawings to be furnished by the Employer along with supporting data, including the detailed design, design worksheets and computations, geo-technical and hydrological investigations (where necessary), characteristics of materials from borrow areas and quarry sites, topographical surveys and traffic surveys. The Consultant shall complete such review and send its comments/observations to the Employer within 28 (Twenty- eight) days of receipt of such Drawings. In particular, such comments shall specify the conformity or otherwise of such Drawings with the Kenyan standards and specifications for road and bridges design.

- 3.4.1.2 Review/modify any part of the works as shall be agreed by the Director (Urban Roads planning and Design). Any revised/modified Drawings or supporting Documents must be sent to the Employer within 14 (Fourteen) days.
- 3.4.1.3 Assess the services along the road corridors that require relocation, the Consultant shall liaise with the relevant service provider and prepare a schedule for relocation of the same.
- 3.4.1.4 In case that the Drawings will be such that Additional Land needs to be acquired, the Consultant shall review the designs and submit the detailed information to the Employer.
- 3.4.1.5 The Consultant shall prepare a Design Review Report for the project, complete with cost estimates on the basis of standards agreed upon with the Director (Urban Roads planning and Design) within the stipulated timelines.

3.4.2 Phase II: Works Supervision

- 3.4.2.1 Review of work programs and monitoring of the adherence to these programmes.

The Consultant will scrutinize the Contractor's work programme, schedule of plant and cash-flow projections. Where appropriate he will request clarification without, however, imposing any modifications on the Contractor. The Consultant has, however, the right to reject a works programme that is either unrealistic, will simply unacceptable obstruction of the normal traffic flows or is unacceptable for other major considerations to be indicated by the Consultant with reference to the stipulations of the contract. Once the work programme(s) is (are) approved, a parallel schedule of services to be rendered by third parties (public utilities, Traffic Police Department, etc.) will be submitted by the Contractor for approval by the Consultant.

The Consultant will inspect the Contractor's proposed materials sites and conduct necessary confirmatory testing before approving them for acquisition and use on the works.

The Consultant will review the measures for traffic management proposed by the Contractor with respect to traffic diversions and passage of traffic through the works in order to ensure minimal disruption of normal traffic flows and further to ensure that the measures proposed will in no case compromise the safety of the road users.

Consultant will issue the final setting out data and finished road levels by way of site instructions to the Contractor to allow him to proceed with the detailed setting out of works.

The Consultant will be responsible for identifying those items requiring the approval of the Engineer and bring these items to his attention. The Consultant will be responsible for informing the Contractor clearly and unambiguously on decisions made by the Engineer on these and all other issues of relevance to the proper execution of the Contract.

The Consultant shall organize monthly progress site meetings and shall monitor the progress of the works and shall report on these issues to all parties concerned in his Monthly Progress Reports.

The Contractor is responsible for the construction and handing over of the works in accordance with the Contract. The Consultant shall ensure that any modification/variation to the Contract is approved in accordance with the provisions in the Conditions of Contract.

The Consultant shall ensure that an adequate record of measurements is kept for the purpose of establishing accurate as-built drawings and that a sufficient number of fixed monuments be established as permanent reference of coordinates.

3.4.2.2 Verification of Quality of Works

The Consultant shall verify that all works are carried out in conformity with the Standard and Special specifications. He shall direct the Contractor to issue written method statements for each field activity and shall ensure that the agreed work methods are strictly adhered to.

3.4.2.3 Verification of Quantity of Executed Works

The Consultant shall verify the accuracy of the primary setting out of works in accordance with the new approved design. The Consultant shall ensure that adequate references will be established for the verification of quantities to be brought into the works.

The Consultant shall ensure that an adequate record of measurements is kept for the purpose of establishing accurate as-built drawings and that a sufficient number of fixed monuments be consolidated as a permanent reference of coordinates. Particular attention will be given to the establishment of stable reference points in areas where settlements are to be expected.

3.4.2.4 Verification of Quality of Materials Used

The Contractor will test all materials to be used for the works prior to incorporating them in the works. The Consultant will check the quality of these materials in accordance with the Conditions of Contract for compliance with the Standard and Special Specifications.

The Consultant shall in principal, carry out these tests on site in a site laboratory to be provided through the works contract. A Senior Laboratory Technologist and a Laboratory Technologist are to be supplied by the Consultant, while lab attendants to assist him will be provided under the Works Contract.

Tests for which the site laboratory does not have the equipment required may be carried out in third party laboratories under the relevant stipulations of the conditions of the works contract and shall be paid through the works contract.

3.4.2.5 Verification of Measurements and Issuance of Interim Payment Certificates

The Consultant and the Contractor shall measure jointly all works completed, using mutually agreed methods and frequencies. Wherever the Consultant finds necessary, additional verifications of the measurements shall be undertaken.

In addition, the Consultant and the Contractor shall estimate jointly and on a weekly basis the progress of the works. Towards the end of each month, these

estimates will serve to establish the quantities payable to the Contractor's interim payment certificate for that period.

The Consultant shall finalize at regular intervals all measurements taken and agreed with the Contractor for completed sections of the road and shall take off quantities on which basis the final accounts will be elaborated in draft after the Taking over Certificate is issued and in final after the Defects Liability Period. The draft accounts shall be established during the month following Taking Over of the works and shall be analysed in the Final Project Completion Report.

3.4.2.6 Compilation of Progress Reports

The Consultant shall prepare Monthly Progress Reports to inform all parties concerned in a transparent and concise way about the progress of works (including critical path analysis and progress photographs), the financial situation of the project and about possible difficulties encountered. The Consultant shall prepare Quarterly Progress Reports at the end of every quarter of the financial year.

The Consultant shall maintain documentary and photographic records. The documentary records shall include a daily Site Diary and details of all contractual correspondence and data; all work stoppages or delays; accidents on site; official visitors to site; weather records; details of all daily site activities showing the start and end time and full details of the personnel and equipment or resources employed per activity. It shall contain detailed records of the Contractor's equipment on site and its date of manufacture, previous hours worked and condition, its precise date of arrival or removal from site, the date commissioned to commence work, its availability and utilization. Equipment availability figures for each category of equipment shall be established.

In respect of photographic data, the Consultant shall maintain a record of digital progress photographs (using a digital camera to be provided under the Works Contract) taken throughout the Contract period at set locations and of any construction activity of technical or contractual interest at any time. Each photograph is to be captioned with; reference number, time, date, precise location, subject and points of particular note. These digital data shall be stored on a flash-disk together with the captions and shall be made available to the Engineer on a monthly basis.

3.4.2.7 Advice on Problems Arising during the Execution of the Works

In the event problems of engineering nature arise during the execution of the works, the Consultant will address these problems and suggest solutions. In the event the nature of these problems will justify so, they will be subject to a special report to the Engineer. Any instruction to the Contractor providing a clarification of or a variation to specifications and/or drawings will be given in writing.

Variation Orders shall be issued in respect of variations to specifications and/or drawings. These Variation Orders will need prior approval of the Engineer and the Employer in the event they will give rise to additional expenditure and/or an extension of the Contract period.

Problems of non-engineering nature shall be brought to the attention of the Engineer, who will decide whether these problems can best be analysed on site by the Consultant or referred to other competent bodies. The Consultant shall bring to the attention of the Client any problems regarding land acquisition, right of way and damage to third party property and shall play a coordinating role with respect to problems regarding public utilities and traffic management outside the construction site, unless these problems relate to the Contractor's deviation roads.

3.4.2.8 Monitoring of Sound Use of Resources and Protection of the Environment

The Consultant shall monitor human and material resources mobilized by the Contractor and keep a comprehensive record of these resources and the use made thereof. In his periodic reporting the Consultant shall relate resources mobilised and works performed. Unbalanced resources or discrepancies between projected outputs and works performed will be brought to the attention of the Contractor. The Consultant shall monitor the environmental impact of the works and issue the necessary instructions to the Contractor whenever avoidable damage to the environment occurs or is likely to occur. In particular, the Consultant shall monitor the full respect of the following recommendations for environmental protection during implementation of the project:

Advise on proper location of Contractor's campsites to an area so as to minimize disruption to local population, fauna and flora and watercourses; provision of adequate drainage facilities and treatment of sewage and waste disposals and ensure that camp areas are dismantled and rehabilitated once construction is completed.

- Minimize water and soil pollution as a result of the works;
- Minimize noise and dust levels.
- Shape and landscape all borrow pit and quarry sites.
- Minimize the risk of soil erosion, stabilize bridge sites and the inlets and outlets of culverts on erosive soils with gabions or stone pitching.

3.4.2.9 HIV/AIDS Awareness and Sexual Abuse/Sexual abuse and Harassment

In this respect, the Consultant shall organize with the local Ministry of Health HIV/ Aids Coordinator to guide on structured and regular HIV/AIDS awareness campaigns to target the workers and staff on the project and put in put mechanisms of handling workers and/ or community sexual Abuse and Harassment in line with the laid down procedures in labour laws.

3.4.2.10 Coordination with Third Parties

The Consultant shall ensure that all parties involved in the works will be informed about the developments on site relevant to their respective competences. Representative of public utility firms, traffic police, local government and water management bodies shall be invited from time to time to site whenever necessary to hold special coordination meetings.

3.4.2.11 Analysis of Contractor's Claims

Any claims submitted by the contractor during the course of the works will be analysed by the Consultant and appropriate advice will be given to the Engineer

on their validity. These services are deemed to be part of the responsibilities of the consultant and do not entitle him to any additional fees.

3.4.2.12 As-built drawings

The Consultant shall keep a precise record of all modifications to the plans ordered to the Contractor and enter these modifications in electronic format in the relevant drawings. At End of Defects Liability Period of the works, the Consultant shall submit all “As built drawings” to the Employer and the Engineer in electronic format and hard copy.

3.4.2.13 Substantial Completion of the works

When the works are nearing substantial completion, the consultant shall inspect the works jointly with the contractor and shall establish lists specifying the remaining works. These works may concern corrections to work already done or completion of outstanding works. The Consultant shall notify the Engineer that the works are substantially complete and may be inspected for handing over to the Employer.

The Consultant shall prepare a Taking over Certificate to be signed by the parties concerned after the Substantial Completion inspection. A list of outstanding works and any defects noted during the inspection will be appended to the certificate, specifying the time within which these works are to be completed or when defects have to be corrected.

3.4.3 Phase III: Services during the Defects Liability Period

Two man-months input each is foreseen for the Resident Engineer, Materials Technologist, Draughtsman and a Site Inspector during the maintenance period which should be utilized on intermittent basis as deemed appropriate for the following services (without being limited to):

- Inspection of designated outstanding works and correction of defects.
- Drawing the attention of the Contractor to any defects as soon as such defects are noticed on the road and supervision of the subsequent repairs.
- Assisting in the Defects Liability inspection and preparing the Defects Liability Certificate.
- Finalizing the final As-built Drawings within 30 days after Substantial Completion Inspection.
- Documentation of contractual matters pertaining to the works and completion of the Final Project Completion Report, Final Accounts.

The Consultant shall give necessary instructions to the Contractor to avail those specific site facilities that shall be required during the maintenance period with respect to the site office, laboratory, houses and equipment and vehicles.

At the end of the maintenance period, and provided that all defects shall have been completed to his satisfaction, the Consultant shall notify the Engineer that the Contractor has completed all outstanding works and has remedied all defects at the end of the defects liability period for an inspection to be carried out.

4 PROJECT MANAGEMENT, CONTRACTUAL FRAMEWORK AND RESPONSIBILITIES

- 4.1 The Employer for both works and supervision contracts will be the Director General, Kenya Urban Roads Authority (KURA) whereas the Engineer will be the Director (Urban Roads planning and Design), KURA.
- 4.2 The Consultant selected for the supervision of the works, hereinafter called the Consultant, will be the Engineer's Representative for the works contract. The Engineer will delegate certain of his responsibilities for the implementation of the works contract to the Engineer's Representative within the framework of the FIDIC Conditions of Contract.
- 4.3 Responsibilities that the Engineer will retain with respect to the works contract will include all legal and financial issues arising from claims and disputes by third parties relating to land tenure, national planning, damage caused to commercial interests and issues of similar nature. The Engineer will also retain the responsibilities for the project budget and the management of the financial allocations to the contracts, conclusion of these contracts and issuing of commencement orders and variation orders. In these matters he will closely liaise with the Engineer.
- 4.4 The Engineer shall identify a Project Engineer, who will facilitate decision making in matters pertaining to the supervision and the works contracts that are either not covered by the delegation of powers to the Consultant or that need a decision by the Engineer once the Consultant has fulfilled all his obligations under these Terms of Reference. The Project Engineer will be the Consultant's day-to-day contact person in the Kenya Urban Roads Authority. The Consultant will keep the Project Engineer informed in a detailed way of all developments on site. The Project Engineer will visit the site regularly and will attend all site meetings.

5 LOGISTICS AND TIMING

5.1 Project location

The project location is as already described in Section 1.3 herein.

5.2 Project period:

The Contract period shall be Thirty-Nine (39) months, including; -

Phase I: Design Review and Tender documentation- 3 Months.

***Note to Consultants:** Consultants are informed that Design Review component deliverables are independent of the supervision component. Consultants are expected to include in their Financial Proposal cost related all activities required to undertaken Design Review and Tender documentation component of the project.*

Phase II: Works supervision - 24 months

Phase III: Defects Liability Period (DLP) - 12 months, the Consultant will only be engaged as follows:

- 6 months for Resident Engineer (spread over the 12 months' period)
- 3 months Site Inspectors with approval of the Employer.
- 2 months for Deputy Resident Engineer (spread over the 12 months' Period)
- 2 months for Materials Engineer (spread over the 12 months' period)
- 3 months for Draughtsman (spread over the 12 months' period)

6 REQUIREMENTS

6.1 Eligibility

The establishment of the shortlist and the selection procedure shall be in accordance to the public procurement and Asset Disposal Act, 2015 and OPEC procurement guidelines. The Employer is under no obligation to shortlist any firm who expresses interest

6.2 Staff Required

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

No.	Description	Effective Man Months	
		Constructio	DLP
1.	Project Director, BSc (Civil Eng.)	5	-
2.	Resident Engineer, BSc (Civil Eng.)	2	6
3.	Deputy Resident Engineer, BSc (Civil Eng.)	2	2
4.	Materials Engineer, BSc (Civil Eng.)	2	2
5.	Structural/Drainage Engineer, BSc (Civil Eng.)	4	-
6.	Electrical Engineer BSc (Elec Eng.)	4	2
7.	Architect (BSc. Architectural Studies)	4	
8.	Environmentalist: BSc or BA and must have undertaken Environmental Studies on roads projects	1 2	-
9.	Sociologist	1 2	-
10.	Surveyor: BSc (Survey & Photogrammetry)	2	-
11.	Senior Materials Technologist	2	-
12.	Senior Road Inspectors (6No.) for earthworks, structures and asphalt works respectively)	1 4 4	3
13.	Materials Technologist	2 4	
14.	Assistant Surveyor: BSc (Survey & Photogrammetry)	2 4	-

15.	Draughtsman	2 4	3
	Total	3	18

Bidders are advised to spread man-months for key experts adequately to cover the construction period.

The works contract shall provide for the attendance to the Resident Engineer only in the categories of labourers, chainmen and office messengers/assistants.

Remuneration for all other Support Staff such as Survey Assistants, Laboratory Technicians and a Secretary and any other expenses required for proper functioning of the site supervision or backstopping shall be factored in the rates for listed staff.

Note: There may be need to engage the services of the following experts, who are not included in the list of proposed staff, where applicable;

- Road Safety Audit Expert
- Electrical Superintendent

All the above listed experts shall possess relevant university degrees and have minimum general experience of 8 years and 6 years of experience in the specific areas of expertise. Bidders are advised to have the key staff sign their CVs.

The profiles of the key experts to be provided by the Consultant for this contract are as follows:

Key Expert 1: Project Director

(i) Qualifications and skills

Must possess University Degree BSc (Civil Engineering) or equivalent and be a Registered Engineer and Registered Consulting Engineer with Engineers Registration Board of Kenya (*Valid Practicing License*) or equivalent such as Member of the Institution of Civil Engineers (U.K.) etc. A Master's Degree will be an added advantage.

(ii) General professional experience

A minimum of 15 years practical post-qualification experience

(iii) Specific professional experience

Must have extensive broad experience in highway and urban roads design works contract administration, evaluation of contractor's claims for at least 10 years and more specifically have recent service as a Project Engineer on at least two urban road construction contracts of comparable magnitude. Knowledge of FIDIC contract procedure is mandatory. Previous experience on road projects in East Africa will be an advantage.

Key expert 2: Resident Engineer

(i) Qualifications and skills

Must possess University Degree BSc (Civil Engineering) or equivalent and be a registered engineer with Engineers Registration Board of Kenya (*Valid Practicing License*) or equivalent such as Member of the Institution of Civil Engineers (U.K.) etc. A Master's Degree will be an added advantage.

(ii) General professional experience

A minimum of 15 years practical post-qualification experience

(iii) Specific professional experience

Must have extensive broad experience in highway design works contract administration, evaluation of contractor's claims for at least 10 years and more specifically have recent service as a resident engineer on at least one urban road construction contract of comparable magnitude. Knowledge of FIDIC contract procedure is mandatory. Previous experience on road projects in East Africa will be an advantage.

Key expert 3: Deputy Resident Engineer/ Highway Design Engineer

(i) Qualifications and skills

Must possess University Degree BSc (Civil Engineering) or equivalent and be registered with Engineers Registration Board of Kenya (*Valid Practicing License*) or equivalent such as Member of the Institution of Civil Engineers (U.K.) etc. A Master's Degree will be an added advantage.

(ii) General professional experience

A minimum of 10 years practical post-qualification experience in road projects.

(iii) Specific professional experience

Must have previous relevant experience of at least 8 years as a measurement engineer or resident engineer gained on road construction contracts with particular experience in urban roads design, estimation of quantities, writing specifications and contract administration, and measurement of works. Must be familiar with latest road design computer applications. Knowledge of FIDIC contract procedures is desirable.

Key expert 4: Materials Engineer

(i) Qualifications and skills

Must possess University Degree BSc (Civil Engineering) or equivalent and be registered with Engineers Registration Board of Kenya (*Valid Practicing License*) or equivalent such as the Institution of Civil Engineers (U.K.) etc. A Master's Degree will be an added advantage.

(ii) General professional experience

A minimum of 10 years practical post-qualification experience in road projects

(iii) Specific professional experience

Must have 8 years relevant experienced in soils and materials sampling and testing for large road construction contracts. Experience in bituminous materials testing and quality control is mandatory.

Experience with analytical pavement evaluation methods is desirable. Previous experience on road projects in East Africa will be an advantage.

Key expert 5: Structural /Drainage Engineer (short term input)

(i) Qualifications and skills

Must possess University Degree BSc (Civil Engineering) or equivalent and be a registered engineer with Engineers Registration Board of Kenya (*Valid Practicing License*) or equivalent, such as Member of the Institution of Civil Engineers (U.K.) etc. A Master's Degree will be an added advantage.

(ii) General professional experience

A minimum of 10 years practical post-qualification experience

(iii) Specific professional experience

At least 6 years' experience in structural analysis and design and construction of bridges and minor road drainage structures including urban drainage systems. Should be familiar with the latest Computer Aided Design applications.

Key expert 6: Electrical Engineer (short term input)

(i) Qualifications and skills

Must possess at least a Bachelor's Degree in Electrical Engineering or equivalent from a recognized university and is a Registered Engineer with Engineers Board of Kenya or equivalent

(ii) General professional experience

A minimum of 10 years practical post-qualification experience in electrical engineering projects.

(iii) Specific professional experience

At least 5 years of recent experience in electrical engineering projects for street lightings using the latest analysis computer applications and modern software. Experience on road projects in East Africa will be an advantage.

iii) Specific Professional experience

Must have relevant previous experience as an Architect gained on an infrastructure project, especially in East Africa. Previous work done on urban road project would be an added advantage.

Key Expert 8: Environmentalist

(i) Qualifications and skills

Must possess a university degree or equivalent and be registered as Lead Expert (NEMA).

(ii) General Professional Experience

A minimum of 10 years of practical post qualification experience in environmental studies of infrastructural projects.

(iii) Specific Professional experience

Must have relevant previous experience as an environmentalist gained on an infrastructure project, especially in East Africa. Previous work done on highway project would be an added advantage.

Key Expert 9: Senior Sociologist

(i) Qualifications and skills

B.A. in Sociology or relevant social Science

(ii) General Professional Experience

A minimum of 8 years of practical qualification experience in infrastructural projects.

(iii) Specific Professional experience

Must have broad experience in social studies of at least one road construction project and one urban road design project of comparable magnitude. Previous experience on road projects in East Africa will be an added advantage.

Key expert 10: Senior Surveyor

(i) Qualifications and skills

Must possess University Degree of BSc (Survey & Photogrammetry) or equivalent and be registered with the Institute of Surveyors of Kenya or equivalent such as Chartered Surveyor of the Royal Institute of Chartered Surveyors (U.K.) etc.

(ii) General professional experience

A minimum of 8 years practical post-qualification experience in road projects.

(iii) Specific professional experience

At least 6 years of recent experience in carrying out topographic survey and mapping of large road projects using the latest electronic survey equipment including GPS, Total Stations and associated computer applications. Experience on road projects in East Africa will be an advantage.

Key expert 11: Senior Materials Technologist

(i) Qualifications and skills

Must possess a Higher National Diploma in Civil Engineering from Kenya Polytechnic or equivalent.

(ii) General professional experience

A minimum of 8 years practical post-qualification experience on road projects.

(iii) Specific professional experience

Must be experienced on soils and materials sampling and testing for large road construction contracts. Particular experience with laboratory testing of stabilized mixes, bituminous mixes and surface dressing is essential.

Key expert 12-17: Senior Roads Inspector (6 No.)

(i) Qualifications and skills

Must possess a KNEC Diploma in Civil Engineering from Kenya Polytechnic or its equivalent.

(ii) General professional experience

A minimum of 6 years practical post-qualification experience

(iii) Specific professional experience

Must be experienced on-site inspection and works measurement of large road construction contracts. Familiarity with electronic survey equipment will be an advantage.

Key expert 18: Materials Technologist

(i) Qualifications and skills

Must possess an Ordinary Diploma in Civil Engineering from Kenya Polytechnic or equivalent.

(ii) General professional experience

A minimum of 6 years practical post-qualification experience on road projects

(iii) Specific professional experience

Must be experienced on soils and materials sampling and testing for large road construction contracts. Particular experience with laboratory testing of stabilized mixes, bituminous mixes is essential.

Key expert 19: Draughtsman (CAD Expert)

(i) Qualifications and skills

Must possess an Ordinary Diploma in Civil Engineering or Cartography from Kenya Polytechnic or equivalent.

(ii) General professional experience

A minimum of 4 years practical post-qualification experience.

(iii) Specific professional experience

Must be experienced on production of office and site production of drawings and site construction details using CAD or any other equivalent.

Key expert 20: Assistant Surveyor

(i) Qualifications and skills

Must possess University Degree of BSc (Survey & Photogrammetry) or equivalent and be registered with the Institute of Surveyors of Kenya or equivalent such as Chartered Surveyor of the Royal Institute of Chartered Surveyors (U.K.) etc.

(ii) General professional experience

A minimum of 4 years practical post-qualification experience in road projects.

(iii) Specific professional experience

At least 4 years of recent experience in carrying out topographic survey and mapping of large road projects using the latest electronic survey equipment including GPS, Total Stations and associated computer applications. Experience on road projects in East Africa will be an advantage.

6.1 Work Schedule

The Consultant shall propose a schedule of activities and corresponding deployment of manpower, which will ensure that all duties entrusted to him, will be adequately performed. This schedule, together with a comprehensive statement justifying the proposed deployment will be incorporated in the methodology statement.

6.2 Facilities to Be Provided by the Employer

Under the Terms and Conditions of the Works Contracts, the Consultant shall be provided with:

- Fully furnished and equipped site office.
- Fully equipped site laboratory.
- Furnished site housing accommodation.
- Site transport in the form of supervisory vehicles and
- Other site facilities, survey and drawing office equipment, computers and utilities necessary for the execution of the services, including office consumables, and office operating expenses.

It shall be the responsibility of the Consultant to supervise the supply, provision and maintenance of the said buildings, furniture, equipment and vehicles by the Works Contractor in accordance with the works contract. The Consultant shall ensure that any items designated to revert to the Employer after completion of the Works Contract are officially handed over to the Employer in good condition as soon as they are no longer required on the Works Contract.

7 REPORTS

The Consultant shall prepare and submit the design review report for the entire project network within three (3) months of the commencement of their services. As such, the Consultant will be required to submit every month, a design review equalling at least a third (1/3) of the entire road length to the Engineer for approval. After the completion of the Design review, the Consultant shall prepare an Appraisal of the entire project to the Engineer. The Engineering design review shall consist wholesomely of the following documents:

1. The Engineering Report
2. The Book of drawings
3. Environmental and Social Impact Assessment Study Report
4. Engineer's Estimate
5. Land Acquisition Plans
6. Utilities relocation plan
7. Communication and Stakeholders engagement plan
8. Quality Assurance plan
9. Occupation Health and Safety Plan

The above reports should be submitted to the address below:

To:

**Director (Urban Roads Planning and Design)
Kenya Urban Roads Authority
P.O. Box 41727-00100
NAIROBI**

Additionally, the Consultant shall prepare Monthly Progress Reports during the period of execution of the works contract, and submit them within 7 days after the end of the reporting month. Quarterly Summary Reports shall be prepared every quarter of the financial year and submitted within 7 days after the end of the reporting period. The Provisional Completion Report including Provisional Accounts is to be submitted within 7 days after the Provisional Acceptance of the last section of the works. The Final Project Completion Report, Final Accounts are to be submitted within 7 days after the Defects Liability Certificate of the works to the address below:

To:

**Director (Urban Roads Planning and Design)
Kenya Urban Roads Authority
P.O. Box 41727-00100
NAIROBI**

The reports shall be written in English, and shall be submitted in the number of copies tabulated below.

The Final Project Completion Report shall comprehensively evaluate the project with regard to both the works contract and the supervision service contract, include a summary of the

principle difficulties encountered during construction and the means employed to overcome them, changes made in the original designs, modifications to the technical specifications and conditions of contract, all variation orders, utilization of provisional sums, variation of prices, utilization of contingency amounts, cumulative monthly payments to the contractor designated by dates and a similar schedule for the supervision contract. The report shall contain all observations or recommendations that the Consultant wishes to draw to the attention of the Engineer and the Employer as regards the works contract or the service contract.

In their Methodology Statement, the Consultant shall provide a fixed layout for these reports. The reports shall be submitted as follows:-

Report to be submitted during Design, Construction and Defects Liability Period:

Report	No. of Hard Copies	No of Soft Copies
Engineering Design Review Reports	2	5
Monthly Progress Reports	1	5
Quarterly Progress Summary Reports	1	5
Provisional Completion Report	1	5
Provisional Accounts (at project closure)	1	5
Final Project Completion Report	1	5
As build drawings (hard and soft copies)	1	5

8 MONITORING AND EVALUATION

8.1 Definition of Indicators

In his Technical Proposal (Organization and Methodology), the Consultant shall propose relevant key indicators for monitoring project progress, results, activities and assumptions and show how these will be monitored.

As a minimum, the Consultant will regularly review the physical work progress in terms of number of km of road construction and completed to various levels in compliance with the drawings and specifications in relation to the Contractor's approved work programme and cash flow projections, schedule of plant and manpower resources.

The Consultant will regularly appraise this information in his Progress Reports and in Site Meetings and discuss them with the Contractor and the Engineer.

8.2 Reviews and Evaluations

Project reviews and evaluation applying monitoring indicators will be presented in the regular progress reports and the Final Project Completion Report will contain an overall assessment.

9 TECHNOLOGY TRANSFER AND TRAINING OF CLIENT'S STAFF

The Client will second engineers and other personnel to work with the Consultant's and Contractor's team and they will work closely with the Consultant in the Work phases of design review, construction, and other related project works in order to make use of the opportunity for technology transfer.

These Counterpart Personnel will work under the supervision and management of the Consultant. The administrative matters and the payments of the Counterpart Personnel is the responsibility of the Consultant. In their financial submission, the bidders are therefore required to include;

Component	Amount (Kshs.)
Allow a Lump Sum for Training of PIU staff as part of capacity building.	Kshs. 10,000,000.00
Allocation for Conference, Seminars, & Lectures.	Kshs. 10,000,000.00

Each seconded trainee is required to be attached to the project for a period not exceeding 12Months.

The above Lump Sum for Training will be expended subject to approval of training programme by the Employer.

The Consultant is also required to have provision as shown above for conference, seminars and lectures to the Client staff as will be directed by the Engineer.