Republic of Kenya

State Department for Housing and Urban Development

MINISTRY OF LANDS, PUBLIC WORKS, HOUSING AND URBAN DEVELOPMENT.

Second Kenya Informal Settlements Improvement Project (KISIP 2)

Credit No: P6759 -KE

Project ID: P167814

Terms of Reference

For

Consultancy Services for Preparation of Infrastructure Upgrading Plans, Detailed Engineering Designs and Procurement Documents and Construction Supervision of Infrastructure Improvement Works in Selected Informal Settlements in the Counties of Nakuru, Uasin Gishu and Elgeyo Marakwet.

Reference Number: KE-MOTI-438181-CS-QCBS

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Client:

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1) INTRODUCTION

The Government of Kenya has received Credit facility from the International Development Association (IDA) and the Agence Française de Developement (AFD) towards the cost of the Second Kenya Informal Settlements Improvement Project (KISIP 2) and intends to apply part of the credit to procure Consultancy Services for Infrastructure Upgrading Plans, Detailed Engineering Designs and Preparation of Procurement Documents, Resettlement Action Plan (RAP) and Environmental and Social Impact Assessment (ESIA) Reports and Vulnerable and Marginalized Groups Plan (VMGP) where applicable, and Supervision of Construction of Infrastructure Works in Selected Informal Settlements in the Counties of Nakuru, Uasin Gishu and Elgeyo Marakwet.

The overall objective of KISIP 2 is to improve access to basic services and tenure security of residents in participating urban informal settlements and strengthen institutional capacity for slum upgrading in Kenya.

This Project, while concentrating on informal settlements, complements existing and past Urban operations in Kenya which address the Urban infrastructure deficit and Urban institutional challenges. It supports the Governments' affordable housing agenda as it seeks to complement the demand-side and supply-side operations to improve housing affordability. By investing in climate-risk reducing infrastructure and planning, the project contributes to building the resilience of the urban poor to the impacts of climate change.

The project has the following four components:

Component 1: Integrated Settlement Upgrading. This component supports settlement upgrading through two main interventions classified under two sub-components:

Sub-component 1.1: Tenure regularization

Coordinates regularization of tenure for people living on uncontested public lands whose process includes;

(i) Development of a local physical plan for the settlement which lays out land parcels and infrastructure (roads, drainage, walkways, etc.);
(ii) Surveying with physical placement of beacons (pegging) to demarcate the parcels as per the plan;
(iii) Preparation and issuance of letters of allotment based on the survey plan
(iv) Issuance of titles.

Sub-component 1.2: Infrastructure Upgrading

Coordinates infrastructure investment portfolio whose menu includes: roads, bicycle paths, pedestrian walkways, street and security lighting, vending platforms, solid waste collection and settlement sorting, storm water drainage, water and sanitation systems, public parks, and green spaces. It further includes investments related to prevention of crime and violence, including but not limited to community centers.

Component 2: Socio-Economic Inclusion Planning
This component supports community development plans to enhance social and economic inclusion, identifies beneficiaries who fit the eligibility criteria of government programs but are excluded and connects them appropriately, supports participatory crime and violence mapping, monitors the employment of local labor, carries out community capacity building and awareness raising for various project interventions including community-based solid waste management.

Component 3: Institutional Capacity Development for Slum Upgrading
This component supports institutional and policy development at national and county levels; develops a capacity building plan for national and county levels to implement the Strategy and to develop understanding of slum upgrading processes; also supports technical assistance, training, workshops and learning events, experience sharing and peer-learning activities with other counties, and other capacity building activities**.**

Component 4: Program Management and Coordination
This component supports activities of the NPCT and the CPCTs related to national and county-level project management and coordination, including planning, surveying, engineering, fiduciary (financial management and procurement), safeguards compliance and monitoring, monitoring and evaluation (M&E), communication and community development

2) OBJECTIVE OF THE ASSIGNMENT

The main objective of the consulting services assignment is to prepare Infrastructure Upgrading Plans, Detailed Engineering Designs, Procurement Documents, Resettlement Action Plan (RAP) and Environmental and Social Impact Assessment (ESIA) Reports and Supervision of the Construction of Infrastructure works in Selected Informal Settlements.

3) SCOPE OF SERVICES AND SPECIFIC TASKS OF THE ASSIGNMENT

3.1 Scope of Services

The scope of services is limited to selected informal settlements in the three counties.

The scope of services covers the 3 counties of Nakuru, Uasin Gishu and Elgeyo Marakwet. The scope of services is in (7 No.) Informal settlements across three (3No.) counties as per the tables in Annex 1.

The KISIP 2 has prioritized infrastructure investment activities in informal settlements in the counties where processes are underway to facilitate infrastructure improvements. These processes include: (i) mobilization and organization of communities (with the support of local NGOs and CBOs); (ii) planning and survey processes completed; and/or (iii) clarification and/or regularization of land tenure of the settlements completed. The details of the settlements to be covered in this assignment are presented in section 4 of this ToR. The

population and the corresponding areas are estimates only and the successful Consultant is required to establish the actual population, areas of the settlements and the actual tenure regularisation status of the informal settlements.
The scope of services for this assignment is limited to the selected informal settlements as per the table 1 below;

Table 1: List of Selected Informal Settlements

County	Settlements	Population	Area (HA)	Planning status
Elgeyo Marakwet	Milimani (Iten Town)	1,500	12.1	Planned
	Kambi Debe (Iten Town)	2,000	10.5	Planned
Uasin Gishu	Beta Farm (Eldoret Town)	1,500	5.84	Planned
Nakuru	Kiratina (Nakuru Town)	40,000	30	Planned
	Kapkures	3,000	20	Planned
	Tiyari (Molo Town)	5,000	25	Planned
	Mwisho wa Lami (Njoro Town)	10,044	26	Planned

NOTE: The settlement areas and populations are estimates and the Consultant will be required to establish the actual areas and populations.

3.2 Specific Tasks of the Assignment

The assignment will be undertaken in two Stages:

Stage 1: Preparation of Infrastructure Upgrading Plan, Engineering Designs and Procurement Documents.

Stage 1.1: Preparation of Draft Infrastructure Upgrading Plans, Engineering Designs and Procurement Documents: *For each settlement*: (a)Prepare a stakeholder engagement plan based on KISIP's Stakeholder Engagement Framework (SEF) to guide community and stakeholder sensitisation and consultation on the assignment, (b) Conduct community and stakeholder sensitization and consultation on the assignment.(c) draft settlement upgrading plan, including feasibility studies and preliminary designs for the proposed infrastructure investments, including screening for potential environment and social impacts, involuntary resettlement, and impacts on vulnerable and marginalized groups (indigenous persons) as per the screening checklists and guidance provided in the project's Environmental and Social Management Framework (ESMF), Resettlement Policy Framework (RPF), and Vulnerable and Marginalized Groups Framework (VMGF).(d) Conduct Climate risk and vulnerability assessment using a tool developed by KISIP for that purpose (e) Based on the results of the screening and climate risk and vulnerability assessment, prepare Environmental and Social Impact Assessment (ESIA) or , Environmental Management Plans (ESMPs) and Resettlement Action Plan (RAP), and Vulnerable and Marginalized Groups Plans, where applicable.(f) preliminary cost estimates, (g) economic analysis of proposed investments; (h) Resettlement Action Plan (RAP) for the settlements; and Vulnerable and Marginalized Groups Plans, where applicable (i) Draft procurement documents for the each designed infrastructure incorporating at minimum appropriate qualification requirements

{technical and financial qualifications, personnel, financial resources, and equipment}, bills of quantities/scope of works, specification, environmental and social requirements, drawings, conditions of contract and draft construction works programme.

Stage 1.2: Preparation of Final Settlement Upgrading Plans, Engineering Designs and Procurement Documents: *For each settlement:* (a) Detailed engineering design, (b) phasing plan for each county, (c) operations and maintenance manuals for the proposed infrastructure, (d) estimates of the proposed investments and operating costs, and (e) Final procurement documents for the designed infrastructure incorporating at minimum appropriate qualification requirements {technical and financial qualifications, personnel, financial resources, and equipment}, bills of quantities/scope of works, specification, environmental and social requirements, drawings, conditions of contract and draft construction works programme. These procurement documents to be prepared shall be based on applicable World Bank's standard procurements and Procurement Regulations

Stage 2: Construction Supervision: Includes activities for quality control / assurance, time control, cost control and safety control.
The specific tasks to be carried out in each settlement include, but shall not be limited to the following:

Stage 1: Preparation of Infrastructure Upgrading Plans, Engineering Designs and Procurement Documents.

Stage 1.1 Preparation of Draft Infrastructure Upgrading Plans, Engineering Designs and Procurement Documents.

a) **Project Inception:** The project inception activities are intended to familiarise the consultant with the prevailing situation and baseline regarding the project. The consultant is expected to review available documentation and undertake an initial visit to the project area before preparing a detailed Inception Report. The Inception Report shall be informed by the following activities and shall contain a detailed methodology for carrying out the assignment, and the work plan for implementation of the subsequent phases of the consultancy services. The Inception Report shall also contain a detailed Stakeholder Engagement Plan as guided by the Project's Stakeholder Engagement Framework (SEF). The project inception activities are intended to:
   (i) Inform and sensitise the community on KISIP 2 activities and the consultancy assignments.
   (ii) Assess and give an overview of the current status of existing water, sanitation, hygiene, drainage, energy and transportation infrastructure within the selected informal settlements.
   (iii) Collect relevant information available with the Client (e.g. maps, reports, population, geological, climatic data, etc.) and assess the information gaps that need to be plugged by the proposed study.

(iv) Clearly define, in consultation with the stakeholders, the planning horizon for the proposed project clearly defining the base year as well as short-, medium- and long-term periods for the project. All subsequent analysis is to be based on the agreed planning horizon.

b) Literature Review: The consultant shall review the available information obtained at inception stage and further collected from relevant authorities and other sources in order to compile the following information.

(i) Description of the project area location

(ii) Historical and projected population of the project area, as necessary for estimation of current and future water demand, sanitation, hygiene, drainage, energy and transportation demands and security needs in the selected informal settlements.

(iii) The climatic conditions of the project area, providing details of: rainfall (a monthly distribution and intensity, including rain days per month); temperature (minimum, median, and monthly ranges throughout the year); other climatic features of importance (e.g. wind, erosion and effects of extreme temperatures on the alternative wearing course designs);

(iv) Hydrological data and analyses - a complete description of the hydrological features of the area, including: information about soils drainage along the alignment of the various roads, such as sub-soil absorption, flooding of flat areas, etc.; hydrological basin affecting the roads; characteristics of required water crossings; indicative depth of water table; and investigations and detailed inspection of existing bridges and other drainage structures along the alignment to determine their adequacy and structural integrity.

(v) Topographical description of the terrain traversed by the potential infrastructure improvement project, including the effects of relief on the alignment. A highly accurate topographic survey is not warranted at this stage; nevertheless, the Consultant is expected to survey a corridor of 50 meters where possible, for all roads and drainages to be constructed. A detailed topographic survey is a requirement at the detailed engineering design stage.

(vi) Relevant geological features of the project area including a description of the soils and rocks encountered in the project area and their effect and influence on such factors as route location and design. The influence of geology and the availability of construction materials are of particular importance.

(vii) Description of the type and density of the land use both existing, potential and planned within the project area.

(viii) Existing water consumption patterns to establish current and projected future water demand for domestic, institutional, commercial and other uses; Available water supply sources; critical issue that must be considered and addressed in order to ensure availability, reliability and quality of the supply to meet the projected water demand. Assess water availability against projected demand estimates in relation to climate change and seasonal and diurnal variability

scenarios clearly identifying the thresholds and timelines at which water availability becomes critical. Identify and suggest possible water saving and water demand management measures that can be applied to the settlement.

(ix) Current sanitation technologies in use and approximate coverage rate. Identify gaps, explore, evaluate and recommend options for improving sanitation in the settlement; including on-site sanitation and sewerage.

(x) Previous studies and planning related to the proposed infrastructure improvement projects.

(xi) Applicable design standards and design criteria for proposed infrastructure investment projects, which should be agreed with the Client and stakeholders. The project is responsive to adoptive design initiatives to suit the special circumstances in the settlement. These designs shall be discussed and agreed upon by the key stakeholders.

(xii) The legal and institutional arrangements for the urban infrastructure developments and how these may impact on the potential infrastructure improvement projects in the informal settlements.

(xiii) The existing institutional arrangements for the operation and maintenance of infrastructure facilities in the informal settlements, documenting the current practices and challenges encountered and proposing any solutions to mitigate such challenges where these exist. The Consultant shall determine:

- The number, qualification and experience of existing staff for operation and maintenance of the infrastructures and assess whether the staff establishment can or cannot cope with a new project;
- Suggest the robust appropriate measures necessary to improve operation and maintenance of the infrastructural facilities;
- Investigate available equipment and tools and its condition to operate and maintain the infrastructure services in the informal settlements;
- Suggest and discuss with project partners suitable institutional arrangements for the project implementation, operation and maintenance, including the distribution of responsibilities among the stakeholders;
- Identify and propose accompanying technical assistance measures for the project that are suitable and required to assist the project partners in implementing the infrastructure project as well as improving their services and performance and their relation with the served population;
- Specify and elaborate on the necessary requirements and approvals that need to be complied with before and during project implementation.
- Highlight measures which can be adopted to ensure the prioritized infrastructure is climate - resilient and sustainable.

- Suggest cost effective operation and maintenance mechanisms adopted locally and internationally based on investment specific case studies

c) Carry out socio-economic surveys of the project area to establish economic and social characteristics of the settlements.

d) In each settlement, conduct community level consultations to determine infrastructure investment priorities of residents. Due to budget limitation, the overall investment plan must be agreed upon with MLPWHUD and the respective counties. Residents will have to be informed as to why and how design decisions are being made based on the budget limitations. The Consultant will work with residents to identify, for example, which road and paths will be upgraded, and with what materials (consideration of the cost implications of alternative materials and standards). The maps noted in section (c) will serve as input for this decision-making process. The respective counties and the settlements residents will have to agree with Consultant on the final choice of investments and on design decisions.

e) The Consultant will undertake screening of the chosen investments for potential environmental and social impacts, involuntary resettlement, and impacts on vulnerable and marginalized groups (indigenous persons) using the Screening Checklists and guidance provided in the Project's ESMF, RPF, and VMGF respectively, to determine the scope and nature of impacts and the required level of assessments in accordance with the applicable GoK regulations, and World Bank Safeguard Policies, and ensure that communities are aware of these.

f) In each settlement, conduct a climate risk and vulnerability assessment using a tool developed by KISIP for this purpose and put in place a mechanism to ensure that the designs are climate- smart and resilient.

g) Prepare preliminary settlement upgrading plans, including proposed infrastructure options. Examine feasibility of different infrastructure options, and recommend options that are more viable to the context, are cost-effective, sustainable, convenient to users and likely to be economically justifiable. Possible options should be those which serve the greatest possible number of people, have low operation and maintenance costs as well as minimal impacts on the environment. Estimate the required technical infrastructure for the different infrastructure options paying particular attention to:

(i) Estimation of investment costs

(ii) Estimation of operation and maintenance costs;

(iii) Economic analysis (net present value, internal rate of return and key economic indicators as relevant),

(iv) For water supply and sanitation infrastructures, analyse the impact on the water tariff in the informal settlement considering and building on the findings of the socio-economic assessment [especially the willingness to pay and ability to pay (WTP & ATP)] in the informal settlement.

From the set of possible water supply options, and on the basis of agreed criteria with the stakeholders, select the option that best serves the informal settlement clearly elaborating how the decision has been reached. This option shall be used in all subsequent analysis.

In view of the fact that some indirect economic and social benefits arising from the infrastructure improvements are intangible or difficult to quantify accurately, the consultant shall undertake detailed qualitative analyses of these benefits. Only when such benefits can be firmly demonstrated in quantitative terms shall they be included in the economic analyses. In all other cases these benefits will not be included in the economic evaluation of the project but may be used as secondary justification for project implementation. A detailed write-up must be provided on the project benefit.

h) Based on the results of the environmental and social screening, and climate risk and vulnerability assessment, prepare Environmental and Social Impact Assessment (ESIA) reports to be approved by NEMA. The report should contain (but not limited to):

(i) A concrete description of the project including location

(ii) Activities to be undertaken during project implementation in a step wise manner based on all the interventions prioritized.

(iii) Materials to be used, products, by-products, waste to be generated and how the waste will be managed;

(iv) Baseline environmental, cultural and socio-economic information of the project area and neighbourhood;

(v) Climate risk and vulnerability assessment

(vi) A description of applicable policy, legal and institutional framework as guided by the ESMF;

(vii) Potential environmental and social impacts together with an analysis of the magnitude and significance of the impacts;

(viii) Analysis of the project alternatives; alternative project site, alternative project designs, alternative project technologies, alternative project processes and no project alternatives and reasons for advocating for the said alternatives.

(ix) Proposed mitigation measures to manage foreseeable negative impacts and options for enhancing positive impacts during construction and operation of the projects;

(x) Measures to mitigate the project's carbon foot-print and enhance climate resiliency and adaptive capacity of the communities, based on the settlement risk and vulnerability;

(xi) An Environmental and Social Management Plan (ESMP) and a monitoring plan;

Recommendations for including mitigation measures into detailed designs, bills of quantities, and contract documents; and

(xii) Stakeholder consultations on potential impacts and mitigation measures;

i) Develop Environmental and social Management Plans (ESMPs) and guidelines, where applicable, to manage identified impacts during implementation;

j) Prepare in consultation with the respective county governments and Community, Resettlement Action Plans (RAPs) in accordance with the Resettlement Policy Framework (RPF). The final RAPs should inform and be informed by detailed engineering designs.

k) If screening determines that the project will impact vulnerable and marginalized groups (indigenous persons), the consultant shall prepare in consultation with the Counties and communities, a Vulnerable and Marginalized Groups Plan (VMGP) to mitigate any negative impacts and enhance positive impacts while ensuring full participation and prior informed consent of the group.

l) Prepare cost estimates, based on the preliminary designs and proposal for packaging of works contracts in consultation with the MLPWHUD and respective counties.

m) Using data from the preliminary settlement upgrading plan, prepare a report of the findings.

n) Overall, this stage will result in the preparation of a draft settlement upgrading plan (SUP), in close consultation with the community and respective county officers. This document should include an assessment of: (a) the technical feasibility of the upgrading plan and the proposed infrastructure options including those intended to increase the sense of safety and climate resiliency; (b) the socio-economic feasibility of upgrading in that settlement (for example, whether the community is interested in the project; are there major land/tenure disputes; is the location acceptable, and the like); (c) the economic justification of investment; (d) nature and magnitude of environment and social issues pertaining to the identified activities, and proposed mitigation measures.

Stage 1.2: Preparation of Final Infrastructure Upgrading Plans, Engineering Designs and Procurement Documents.

a) Detailed engineering surveys, investigations and analyses including geotechnical investigations and analyses, material investigations and analyses, topographical surveys, hydrological data analysis (e.g. design floods), traffic surveys, analyses and forecast (manual classified traffic counts, Annual Average Daily Traffic (AADT), CSAL, etc);

b) Develop detailed engineering design of prioritized infrastructures based on approved survey plans/Registry Index Maps and satellite imagery maps; these need to include investment-specific mitigation measures contained in the ESMPs prepared as a result of the ESIA. The detailed designs should also be informed by the RAPs to minimize potential involuntary resettlement/displacement to the greatest extent possible.

c) Prepare a phasing plan for implementation in each county and/or settlement.

d) Prepare Operations and Maintenance Manuals of the proposed infrastructures, including the Community Engagement Management Plan (CEMP) (indicating community and County roles).
e) Prepare engineer's cost estimate /confidential cost estimates; the ESMP and RAP cost estimates.
f) Final procurement documents for the designed infrastructure incorporating at minimum appropriate qualification requirements {technical and financial qualifications, personnel, financial resources, and equipment}, bills of quantities/scope of works, specification, environmental and social requirements, drawings, conditions of contract and draft construction works programme. The procurement documents need to include construction stage elements of the ESMP, specifying works to be carried out by the contractor. Guidelines to include ESMPs in procurement and contract documents as provided in the ESMF.
g) Submit (on behalf of the Client) the detailed infrastructure engineering drawings for approval to the relevant authorities.
h) Assist the counties in providing responses to clarifications sought by bidders during procurement process and participate in scheduled pre-bid meetings.
i) Together with KISIP NPCT, the Consultant shall provide technical assistance to respective counties during bids evaluation and during contracts negotiations with the successful bidder or any other bidder who subsequently is invited to negotiate a contract on the request of the county's procurement officer.

For each stage above, it is expected that some activities may be undertaken concurrently.

Stage 2: Construction Supervision

Stage 2:1. General

The consultant will assist the respective counties in the role of the Engineer's Representative (ER). The Chief Officer in charge of Housing and Urban Development in respective counties, pursuant to Sub-clauses 1.1.31 and 2 of the General Conditions of the Contract (FIDIC Red Book, 2nd ed. 2017) shall be the Employer. The Employer shall appoint the Engineer pursuant to Sub-Clause 3.1 (FIDIC Red Book, 2nd ed. 2017). Each respective County must nominate a person to the Engineer or Project Manager role under each respective works contract. The person shall be a professional engineer having suitable qualifications, experience and competence acceptable to the Bank to act as the Engineer under the [works] Contract. As a minimum, the Engineer shall have a degree in the relevant engineering discipline and be registered with the Engineers Registration Board of Kenya and of good standing with the Institution of Engineers of Kenya. In addition, the person nominated has to have 5 years post registration experience in a similar position.

The Consultant pursuant to Sub-Clause 3.3 (FIDIC Red Book, 2nd ed., 2017), and upon to Stage 2 Contract becoming effective shall assume the responsibilities of the Engineer's Representative.

The appointed Engineer for each County will subsequently appoint the selected Consultant as the Engineer's Representative specifically for each county and delegate to the Consultant adequate authority necessary to act on the Engineer's behalf at the site.

For a County which is unable to nominate a person meeting the required qualifications, due to exceptional circumstances, the Project Operation Manual (POM) provides that NPCT may appoint the Engineer / Project Manager at the request of the County.

Stage 2: 2. Effectiveness

Both the Stage 1 contract (lump-sum) and Stage 2 contract (time-based) will be awarded and signed at the same time at the beginning of the services. However, the effectiveness of the Stage 2 Contract shall be contingent upon satisfactory completion of Stage 1. It is expected that when the Consultant submits a satisfactory final design report and procurement documents, that are expected 12 months after the beginning of Stage 1, then the Client will issue the Client's notification to the Consultant of the Client's satisfaction of the performance of the Consultant under Stage 1 Contract. This statement on contract effectiveness will form part of the special conditions of the contract.

Should the Client not be able to issue a written notice of the Client's satisfaction with the performance of the Consultant under the Stage 1 Contract by 12 months after beginning Stage 1, then the Stage 2 contract would be terminated.

Stage 2:3- Specific Tasks

(a) May at the request of the County, assist the County during bids evaluation and during contracts negotiations with the successful bidder or any other bidder who subsequently is invited to negotiate a contract on the request of the county's procurement officer;

(b) Assist the County Project Coordinating Team (CPCT) in the preparation and issuance of right of access to and possession of all parts of site to the successful Contractor within the specified time frame.

(c) Ensure (in conjunction with CPCT) that environmental protection measures and social measures in the project's ESMP are implemented to mitigate any negative impact of construction.

(d) Ensure (in conjunction with the CPCT) all pertinent licenses, certificates and permits are obtained by the requisite personnel/ stakeholder before commencement of works.

(e) Ensure (in conjunction CPCT) that NEMA License conditions for approval and any other license conditions are adhered to.

(f) Carry out the engineer's representative duties and exercise authority as delegated by the Engineer, until completion of the works, including defects notification period;

(g) Review designs; prepare detailed construction quality control plan and setting out data ready for issuance to the Contractors.

(h) During the construction period, the consultant will prepare final construction designs and data and issue the Contractor with any design information and/or drawing

required by the Contractor(s) subject to Engineer's approval. The task shall include any designs and/or tests, major and/or minor; to be undertaken by the supervision consultant before commencement and/or during implementation of works.

(i) Assist / advise the Engineer on issuance to the Contractors the order to commence works in accordance with the provisions of the works contract.

(j) Organizing and directing execution of the works, by defining compliance with programmes and relations between stakeholders like Contractors, Suppliers and third parties amongst others. Coordination will be ensured mainly by holding regular meetings on site and monthly site meetings, with managers of the Contractors and the Engineer and/or Employer or their representatives.

(k) Maintaining a Site Diary and detailed record of the Contractor's manpower, materials, plant and equipment on site, together with analysis of its adequacy, deployment, availability and utilization, while also recording the weather and any other pertinent factors that relate to the implementation of the works and the progress thereof.

(l) Monitor progress of the Works, identify causes, or potential causes, of any delay and advise the Engineer of suitable corrective actions in a timely manner.

(m) Review and approve Contractor(s) proposed personnel for positions nominated in the Contract; this should include a Community Liaison Officer.

(n) Advise and assist the Engineer consistent with General Conditions of Contract GCC, sub-clause 3.7, sub-clause 21.3 FIDIC Red Book Second Edition 2017 with respect to consultations, agreement, determination, avoidance of disputes, adjudication, amicable settlement, arbitration, the appeal of arbitration or litigation relating to the works, whenever required. In the event of any Dispute Avoidance/Adjudication Board Arbitral proceedings, the ER will be one of the witnesses in chief.

(o) Ensure that the construction methods as proposed by the Contractor for carrying out the works are compliant, with particular reference to the technical requirements of sound environmental standards, inspection of Contractor's construction equipment, safety of the works, property, personnel, and general public.

(p) Review, comment and submit to the Engineer (with a copy to the NPCT) for approval settlement specific Contractor ESMPs (C-ESMPs), Stakeholder Engagement Plan (SEP), Incident Management Plan, Climate Change Adaptation and Mitigation Plan, Gender Inclusion Plan and any other plans that may be required to ensure the safeguard requirements are mainstreamed throughout the entire Construction phase before commencement of works.

(q) Ensure all environmental and social management plans prepared i.e. climate change adaptation and mitigation plans and gender inclusion plans are implemented.

(r) Submit monthly reports on the implementation of the contractor's ESMPs and any other instructions issued by the supervising engineer to address specific safeguard issues.

(s) Review and approve contractor demobilization checklist which will among others ensure that all complaints and grievances submitted against/to the contractor have

been timely and transparently addressed and closed, opened borrow pits and quarries have been rehabilitated and approved by NEMA, the project site has been revegetated where possible and all the ESMP actions have been fulfilled.

(t) Review and collate, as part of the quarterly reports, grievance logs from contractors and other stakeholders.

(u) Review, comment and submit to the Engineer (with a copy to the NPCT) all incidences irrespective of their magnitude, near misses and mishap reports, notifications and reports on Root Cause Analysis (RCA) reports, and Safeguards Corrective Action Plans (SCAP).

Stage 2:4. Construction supervision

(a) Assist/advise Engineer on actions required to be taken for handing over of site and in achieving various milestones for completion of works within schedule;

(b) Assist the Engineer in proper monitoring and tracking of the progress of works. The Consultant will develop a contract performance plan (system).

(c) Assess the minimum construction equipment, plant and machinery requirements by type, and specification and issue instructions to the Contractor to fulfil the resources required whenever there is a need.

(d) Monitor regularly to ensure the adequacy of deployment of the Contractors equipment, plant and machinery. Approve and monitor the contractor's resources mobilization program.

(e) Review and recommend for Engineer's approval or otherwise, resourced Contractor's Work Program including activity scheduling and resource programming with cash flow schedule. Review and recommend for the Engineer's approval or otherwise the updated resource-based work program of the contractor whenever there is a shortfall of progress against time elapsed of 10% and above.

(f) Verify and approve working drawings of the contractors and approve the setting out of the works by the contractor. Check the Contractor(s) setting out for compliance with the approved drawings.

(g) Check and approve, or otherwise, Contractor(s) proposed designs/drawings for temporary works.

(h) Inspect at regular intervals, the Contractor(s) plant and facilities, for both construction work and workers' accommodation, to ensure that they conform to both the conditions of the contract contained in the FIDIC Conditions of Contract and all government regulations.

(i) Inspect all the Contractor(s) safety measures, including labour welfare and notify immediately both the Engineer and the Contractor of any infringement or violation of Kenyan labour laws and labour management practices.

(j) Maintain records such as test data, details of variations, correspondences and diaries in the formats approved/specified by the Engineer.

(k) Inspect the Works or any part of the Works, on Substantial Completion and advise the Engineer of any outstanding work, including defects to be remedied, to be completed

during the Defects Notification Period. This inspection is to be performed before any part of the Works is accepted as Substantially Complete.

(l) Inspect the works at appropriate intervals during the Defect Notification Period;

(m) At the completion of the contract verify the "as-built drawings" as true record of the works as constructed.

(n) Assist Engineer in coordination work with different agencies responsible for the implementation of the proposed infrastructures and hold meetings for proper and timely implementation of the Project.

(o) Liaise and coordinate with relevant authorities e.g. Kenya Power, Local Water and sanitation Companies among others to remove all obstacles and encumbrances from the project site, including utility relocation and tree cutting, as required.

(p) When required or as advised by the Engineer, liaise with the Consultant retained by the Client for Implementation Support.

(q) Review any Variations and advice the Engineer accordingly.

(r) Review with recommendations to the Engineer, any request for extension of time by the Contractor(s).

(s) Review any Contractor's financial claims and advise the Engineer on the admissibility and veracity of the claims.

(t) Without relieving the Contractors of their obligations under the contract, review and approve the work areas (including work site, plant site and contractor operated quarry locations) safety plan and ensure compliance.

(u) Closely coordinate with the Safety Officers of the Contractors and Formulate site safety guidelines & prepare checklist for safety auditing by field supervision team on day-to-day basis and; carryout routine safety audit during the construction period.

(v) Mobilise the site supervision team prior to commencement of works in order to monitor mobilization activities of the Contractor and set up contract administration systems.

(w) Review and recommend for Engineer's approval or otherwise Contractor's Environmental and Social Management Plan and ensure it conforms with the approved with ESIA/CPR report and World Bank's Environmental, Health and Safety Management Plan Guidelines (EHSMP).

(x) Review and recommend for Engineers approval or otherwise site specific Environmental and Social Management Plans informed by the magnitude and significance of the impacts.

(y) Monitor and report on the performance of the implementation of the ESMP by the contractor and promptly initiate corrective action in case of non-compliance of new issues not anticipated arise.

Stage 2:5. Quality Control:

(a) Develop a system of Quality Control and Assurance for works, including, but not limited to establishing material testing, testing frequencies and acceptance criteria for

all construction activities based on best international codes and practice. Under this role, the consultant shall carryout confirmatory tests necessary for quality of permanent works and; where corrective actions are required, issue to the Contractors with the appropriate instructions. Further, the Consultant shall Review, approve and supervise Contractor's Site Quality Management Systems. The Consultant shall keep and submit to the Engineer, all materials test and site quality management records at the end of the consultancy assignment.

(b) Inspect the performance of the work with regard to workmanship, compliance with the specifications, approved drawings, standards, agreed programme, and good engineering practice and all necessary testing required for acceptance of any part of work.

(c) Review and approve drawings, materials and proposed construction methods statement submitted by the Contractor to ensure compliance with the contract requirements. The Consultant will review and verify any proposed construction methodology by the Contractor(s), giving particular attention to the compliance with specifications and design criteria.

(d) Assess and check the laboratory and field tests carried out by the Contractors, and carry out independent confirmatory tests.

(e) Issue instructions to the Contractor(s) to remove or make good any work which is found to be:
   (i) Not in accordance with the drawings.
   (ii) Not in accordance with the specifications in terms of either work method or materials specification.
   (iii) Covered work which has not been inspected for acceptance or rejected as unacceptable.

(f) Maintain records of all testing work, including cross-referencing to items of work to which each test refers and location from which any samples were obtained for testing. The material tests records shall be submitted to the Engineer at the end of the consultancy assignment.

<u>Stage 2: 6. Project Cost Control</u>

(a) Develop a works specific contract-specific plan for project cost control based on the billed quantities vis-a-vis premeasured quantities of work accomplished by the Contractor.

(b) Carry out comprehensive quarterly project financial appraisal and advice, with recommendations, to the Engineer accordingly.

(c) Review each application for interim/final payment and associated valuation of the Works and supporting documents submitted by the Contractor and; after making any necessary corrections, prepare Interim Payment Certificate and sign as a recommendation for payment and submit to the Engineer for determination and certification for payment by the Employer. All such Payment Certificates shall include contractual and statutory deductions where and when applicable.

(d) Where design alterations resulting into variation is proposed, prior concurrence of the Engineer and written approval of the Employer shall be obtained.

(e) Where, in the opinion of the Consultant, an emergency affecting the safety of life or the works or of adjoining property occurs, the Consultant may without relieving the Contractor of any of his obligations under the contract, instruct the Contractor to execute all such work or to do all such thing as may, in the opinion of the Consultant, be necessary to abate or reduce the risk. The Consultant shall thereafter inform the Engineer, within 24 hours, of such instruction issued without the prior approval, which would result in additional cost to the Client and shall provide the Engineer with fully substantiated justification for the instruction(s) with the associated costs, and the reason for not requesting the prior approval of the Engineer.

(f) Evaluation of claims including making recommendation to the Engineer and other matters concerning the contract and assistance in the settlement of disputes. The Consultant's recommendations on the claim shall not constitute approval of the same. Such approvals shall be the prerogative of the Engineer in consultation with Employer following Engineer's determination.

Stage 2:7. Occupational, Health, Safety, Environmental, Social and cultural Management

a) Review and approve settlement level Contractor's Environmental and Social Management Plan (C-ESMP) and ensure it is compliant with the approved ESIA report and World Bank's Environmental and Social Standards (ESS). The consultant will monitor and enforce implementation of the C-ESMP and other site specific environmental and social management plan and recommend remedial measures to be implemented by the contractor in case of non-compliance.

b) Make periodic reports to the Engineer/ Employer on status of implementation and compliance with the Contractor's environmental and social management plan.

c) Ensure that the construction methods, technologies and materials proposed by the Contractor for carrying out the works are of sound environmental and social standards.

d) Inspect at regular intervals, the Contractor(s) plant and facilities, to ensure that they conform to both the conditions of contract, Conditions for NEMA License approval and both World bank and government of Kenya regulations. The consultant shall also assess the Contractor's compliance to occupational health and safety standards, including labour management practices and notify immediately both the Engineer and the Contractor of any infringement or violation and issue corrective actions.

e) Open and maintain complaints and grievances logs for recording of complaints and grievances including regular updating, timely response, resolving and closing as necessary. The consultant will be expected to review and collate, as part of the quarterly reports, grievance logs from contractors and other grievance pathways.

f) Closely coordinate with the contractor's Safety Officers and formulate site safety guidelines & prepare checklist for safety auditing by field supervision team on day-to-day basis and carryout routine safety audit during the construction period.
g) Review, comment and submit all incidences recorded irrespective of their magnitude, mishaps and near misses, conducted root cause analysis, and reports on Safeguards Corrective Action Plan (SCAP).
h) Adhere to chance find procedures and Banks OP 4.11 Physical and cultural provisions in case the contractor comes across materials of cultural importance i.e. grave sites and sacred places
i) Ensure the prepared site-specific Climate change adaptation and mitigation plans and gender inclusion plans among other plans are implemented to the latter.

Stage 2:8. Works commissioning

The Consultant will implement works commissioning including:

(a) Supervising the acceptance tests and preparing the **Draft Certificate of Completion (Taking Over and Performance Certificates).**

(b) Preparing the **completion report for the works** which will be based on the records maintained during construction design and work supervision phases. It will include the environmental completion report which will be submitted to NEMA for compliance with initial recommendations for environmental mitigation measures.

(c) **Prepare 'as-built drawings'**: The Consultant will ensure the preparation of 'as-built drawings' by the Contractor during the construction of works. On completion of the Works, the Consultant will check, approve and submit to the Engineer for the Client's custody, five (5) complete sets of all detailed drawings and two (2) electronic CD-ROM copy and computations in accordance with revisions made during the construction.

(d) **Prepare Operation and Maintenance manuals**: Based on the information and booklets received from the Contractors, Manufacturers, and Suppliers and his own experience, the Consultant will ensure the preparation and submission of the Operation and Maintenance Manuals by the Contractor. He will ensure the manuals are complete with the O&M recommendations identified during construction. Operation and maintenance manuals will be submitted in four (4) printed copies and two (2) electronic CD-ROM.

Stage 2:9 Performance Control during the Defects Liability Period

The Consultant will carry out quarterly inspections during the Defects Notification Period and instruct the Contractor with regard to outstanding works and defects. The Consultant will ensure preparation of the Final Statement (Account) by the Contractor as per the works contract and submission to the Engineer for final determination and certification.

Stage 2:10 Other Services

(a) Prepare and submit Monthly and Quarterly Progress Reports based on actual situation on site and data submitted by the Contractor in accordance with the contract indicating

any outstanding issues that require the actions of the Engineer and the Employer. A copy of the report shall be shared DIRECTLY with the National Project Coordination Team.

(b) Review and recommend for approval by Engineer the Contractors' As-Built Drawings. Where the Contractor fails to prepare and submit the As-Built drawings at the end of the Defects Notification Period, the Consultant will prepare the same at a cost to the concerned Contractor.

(c) Hand over to the Engineer complete set of As-Built drawings (both hard copies and in electronic form), a complete set of contemporaneous records, reports, photographs of construction and correspondences after the closure of consultancy services.

(d) Assist the Engineer in providing responses to observations made in respect of works, from time to time, by the Auditor General, authorised Government of Kenya Officials and the World Bank up to and until end of Defects Notification Period.

(e) Assist the Engineer in preparation of presentations required in relation to the works.

(f) Assist the Client and Engineer during Dispute Avoidance/Adjudication Board Meetings, Arbitration Proceedings and any other hearings held by statutory and legal body by providing required information and/or site documents and as a witness in chief.

4) Duration of the Assignment

The assignment shall be performed in two stages; Stage 1 will involve the preparation of Infrastructure Upgrading Plans Detailed Engineering Designs and Preparation of Procurement Documents and is required to be completed within 8 months (this is inclusive of 2 months period for the procurement of works) from contract commencement date; Stage 2 is the construction supervision phase and is estimated to take 12 months for completion of the construction works and a further 12 months for Defects Notification Period and 2 months for preparation of Final Report and contract closure. The contract shall be discharged on submission of the Final Completion Report at the end of the Defects Notification Period.

5) Reporting Requirements and Timelines for Deliverables/Outputs

The State Department for Housing and Urban Development in the Ministry of Lands, Public Works, Housing and Urban Development is the Client for the services. The Client is represented by the Principal Secretary. The Principal Secretary has appointed the KISIP National Coordinator as the authorized representative, to whom the Consultant will report on contractual and technical matters. The Client will be responsible for all payments to the consultants once the deliverables are accepted and cleared for payment by the KISIP Head of Sub-Component 1.2.

The Consultants will report on technical matters to the Component Head for Sub-Component 1.2, for the Design phase and to the Engineer appointed by the respective counties during the construction phase. The Consultant shall work with county KISIP Teams to resolve any field related issues relating to the selected settlements and the prioritized infrastructure designs.

The Consultant will work closely with County KISIP Coordinators and the settlement executive Committees and Grievance Redress Committees in the participating Counties from the commencement of the services to completion. In particular, the consultant will involve the Counties in the identification of the facilities, selection of priorities, adoption of the final designs and preparation of the Operations and Maintenance manuals. Final reports will be shared with the County teams for their input before submission to KISIP National coordinator. The Consultant will obtain concurrence from the respective counties on all the deliverables prior to submission for approval by the KISIP National Team. The Outputs and deliverables shall be as listed below:

Stage 1: Preparation of Infrastructure Upgrading Plan, Engineering Designs and Procurement Documents.

Stage 1.1: Draft Infrastructure Upgrading Plan, Engineering Designs and Procurement Documents which will include the following for each settlement:

a) Report on Community sensitization and consultation (minutes of all consultation meetings, photos taken during engagement process and signed attendance registers will be attached).
b) Participatory GIS maps on crime and violence and focus groups reports.
c) Inputs from the Consultancy Services for Development of Strategies, Guidelines and Tools to Mainstream Climate Resilience and Low Carbon Development in the Second Kenya Informal Settlement Improvement Program (KISIP2). The Consultant will extensively demonstrate the extent to which the proposed designs are Climate Change smart and Climate Resilience and adaptive.
d) Input from the Consultancy Services for a Gender Mainstreaming Action Plan for Second Kenya Informal Settlement Improvement Project (KISIP2). The consultant will extensively demonstrate the extent to which the proposed designs are Gender and Disability Mainstreaming compliant.
e) Where applicable, input from the separate Consultancy Services for Development of Settlement Level Community Development Plans Including Sub-Action Plans on Socio-Economic Inclusion, Investment Selection prioritization, Crime and Violence Prevention, Disaster Risk Management and Sustainable Solid Waste Management in selected Informal Settlements.
f) The consultant will demonstrate the extent to which the findings and recommendation of the above three consultancies have been incorporated into the proposed designs.
g) Report on socioeconomic survey.
h) Report on priorities identified by the community and design decisions taken as a result of consultations with the stakeholders in the identified Counties and Settlements. The Report will include a section on outcomes of consultations per guidelines provided in the ESMF. This will include participatory crime and violence mapping using GIS techniques.

i) Preliminary design and cost estimate for the prioritized infrastructure improvement options.
j) Draft procurement documents for each designed infrastructure incorporating at minimum appropriate qualification requirements {technical and financial qualifications, personnel, financial resources, and equipment}, bills of quantities/scope of works, specification, environmental and social requirements, drawings, conditions of contract and draft construction works programme.
k) Report and presentation on proposal for design criteria and packaging of works contract; in consultation with MLPWHUD and the respective county governments.
l) Environment and Social Screening Reports; Environmental and Social Impact Assessment (ESIA)/Comprehensive Project reports approved by NEMA.
m) Environmental and Social Management Plans (ESMPs), i.e. Intensive Climate change adaptation and mitigation plans and gender inclusion plans amongst other plans; (inclusive of contract clauses to be included in the procurement documents).
n) Resettlement Action Plans for settlements.
o) Vulnerable and Marginalized Groups Plans (VMGP) where applicable.

Stage 1.2: Final Infrastructure Upgrading Plan, Detailed Engineering Designs and Preparation of Procurement Documents *for each settlement,* which will include a final geo-referenced detailed design of prioritized infrastructure. The following should be included as annexes to the main report:

1. Design Report comprising properly serialized and referenced design calculations and assumptions for all facilities. At the minimum these shall include coordinates of control points and setting out data for all the proposed infrastructures; traffic survey report, materials investigation report, alignments soil condition survey findings and recommendations, cross-sections for road infrastructure as well as what is relevant for street and security lighting; water and sanitation infrastructure and any other data and information relating to the planning and design of infrastructural facilities and as shall be specified by the client.
2. Proposed phasing of works. All proposed infrastructures must be connected to the existing trunk at most 0.6km from the settlement or the cost of connection to a nearby trunk not greater than 0.6km is not greater than 15% of the estimated cost of the particular infrastructure.
3. Final procurement documents for the designed infrastructure incorporating at minimum appropriate qualification requirements {technical and financial qualifications, personnel, financial resources, and equipment}, bills of quantities/scope of works, specification, environmental and social requirements, drawings, conditions of contract and draft construction works programme. These procurement documents to be prepared shall be based on applicable World Bank's standard procurements and Procurement Regulations.
4. Engineer's estimate /confidential cost estimates.

All the outputs shall be for every settlement and must be approved at the respective counties prior to submission for approval by the KISIP 2 National Team.

Stage 2: Construction Supervision Stage

1. Monthly and quarterly progress reports,
2. Signed minutes, photos and signed attendance registers of monthly progress meetings and other technical meetings,
3. Quarterly project financial/cost appraisal reports,
4. Reviewed and approved As-Built drawings prepared by the Contractors,
5. Operations and Maintenance Manuals, including the Community Engagement Management Plan (CEMP) (indicating community and County roles),
6. Final project implementation (completion) reports and,
7. Any other reports as would be required from time to time.

The consultant shall submit the following reports. The specified copies of each of the listed reports shall be sent to the client at the following address:

Principal Secretary
State Department for Housing and Urban Development
Attn: KISIP2 National Coordinator
P.O Box 30119-00100
6th Floor, Ardhi House
1st Ngong Avenue
Nairobi, Kenya
Telephone: +254-020-2729200
Email: kisip2.procurement@housingandurban.go.ke.

Attn: KISIP National Coordinator
Second Kenya Informal Settlement Improvement Project

Table 2: Reporting Schedule and Requirements

Deliverable / Reports	Timeline for submission of report after contract commencement (month)	Number and format of reports presentation
Stage 1: Preparation of Infrastructure Upgrading Plans		
Stage 1.1 Draft Documents		
Inception Report Summarizing the consultant's state of mobilization, stakeholder's engagement plan, preliminary site visits.	1	1 hard copy and 1 CD
(a) Participatory GIS maps on crime and violence and focus groups discussions; and community sensitisation Report.	2	1 hard copy and 1 CD

Deliverable / Reports	Timeline for submission of report after contract commencement (month)	Number and format of reports presentation
(b) Environmental and social screening baseline & community consultation on priority infrastructures. (c) Settlement climate risk and vulnerability status report.		
(a) Draft conceptual design based on consultations and costing report Environment and Social Screening Report. (b) Draft Settlements Upgrading Plan containing proposal for design Criteria, proposal for packaging of works Contract. (c) Drafts Environmental and Social Impact Assessment, Resettlement Action Plan, and Vulnerable and Marginalized Groups Plan where applicable.	3	1 hard copy and 1 CD
Stage 1.2: Final Documents		
Final Detailed design report, Procurement documents including technical specifications, geo-referenced detailed engineering drawings, Bills of Quantities. This should include topographical survey data and detailed engineering design assumptions, calculations necessary for setting out and checking designs as detailed under Phase 2 scope of services. Final Settlement Upgrading Plans Containing: General layout of the settlements in relation to existing infrastructures, Signed engineering drawings, Technical specifications, Engineers cost estimate, Resettlement Action Plan Report NEMA approved ESIAs/ESMPs	6	1 hard copy and 1 CD
Bid Evaluation Report	8	1 hard copy and 1 CD
Stage 2: Construction Supervision and Defects Liability Period		
Minutes of the monthly site meetings	Within 7 days after the monthly meeting	1 set of attendance list and signed minutes
Monthly Progress Reports	Within 7 days after the end of the reporting month	1 hard copy and 1 CD
Quarterly Progress and Financial Appraisal Reports	Within 7 days after the end of the reporting Quarter	1 hard copy and 1 CD
As – built drawings	Within one month of substantial completion and Taking-Over of the Works or Sections	1 hard copy and 1 CD
Operations and Maintenance Manuals including the Community Engagement Management Plan (CEMP) (indicating county and community role)	Within one month of substantial completion and Taking-Over of the Works or Sections.	1 hard copy and 1 CD
Substantial Construction Completion Report including draft Taking Over Certificate	Within one month of Substantial Completion and Taking Over of the whole of the works	1 hard copy and 1 CD
Quarterly Defects Notification Report	Within two weeks of the reporting quarter	1 hard copy and 1 CD

Deliverable / Reports	Timeline for submission of report after contract commencement (month)	Number and format of reports presentation
Quarterly Progress and Financial Appraisal Reports	Within 7 days after the end of the reporting Quarter	1 hard copy and 1 CD
Final Completion Report at End of Defects Notification Period	Within 30 days following of end of Defects Notification Period of the whole of the Works, settlement of the Contractor's Final Statement and issuance by the Engineer of the Performance Certificate.	1 hard copy and 1 CD

Note: All engineering drawing will be geo-referenced and printed on A1 paper. The soft copies must be delivered in CD-ROM in Microsoft Word and PDF file for text document and in Auto CAD file for all drawings.

a. The **Inception Report** shall include: full details of the Consultant's mobilization status. Details shall also be recorded of the date of payment of the advance payment, (if any), and thereby the Date of Effectiveness and commencement of the consultancy contract; the situation on-Site/in-country as compared to that envisaged in the Consultant's proposal and any changes proposed to the Terms of Reference as a result of the Consultant's findings; an updated work plan (including actual dates for submission of deliverables). In addition, the inception report shall contain a detailed Stakeholder Engagement Plan (SEP) during the consultancy as guided by the Project's Stakeholder Engagement Framework (SEF).
b. The **Draft and Final Infrastructure Upgrading** Reports with the content as described in Section 5.
c. The **Monthly Progress Reports** shall contain all the data necessary to serve as a formal record document of the monthly status of the works and Consultant's contract, including but not limited to: the contract base data; the detailed status of all aspects of the works; progress against/compared to agreed program; color progress photographs with detailed captions; typical test results against the specification criteria, plus all test results which do not meet specification and the action taken by the Consultant; details of the Site record keeping system established and available for audit; equipment mobilization/demobilization data against the agreed equipment list; equipment availability records; key professional staffing bar chart for the Contractor, by position, name and duration/days of deployment; interim valuation of the works; payment status of both the Contractor and the Consultant; and full details of all claims, delays, requests for Extensions of Time and any other information the Consultants may consider necessary to include in the report.

d. The **Quarterly Report** shall be a combination of the monthly reports, including an overall financial appraisal of the project and a risk management section.
e. **The Final Completion Report** (FCR): The FCR shall be submitted to the Engineer within one month following Project Completion and Taking Over of the construction works.
   The FCR will form a comprehensive record of the Construction Work including:
   - Details of the handing over of all the ER's Facilities and Resources to the Engineer and
   - Details of the handing over to the Engineer of all Contractor's Records, as specified in the works contracts, with a detailed text on how each of the records have been catalogued and referenced, and to whom they were handed over, to facilitate future use of the record data.

The Consultant shall submit the above-mentioned Reports to the Engineer duly bound in sequential manner with table of contents upfront and cover titles on the front cover. The As-Built drawings should be prepared in A-1 size hard copy as well as in Computer - aided design (CAD) files specified by the Client. Specification of CAD shall be agreed with Client.

All the reports shall be ORIGINAL submitted in A4 format, except only the Detailed Engineering Drawings which shall be presented in both A3 and A1 bound sets plus originals. Two electronic CD-R copies (plus one for the Funding Agency) shall also be provided along with hard copies of Schedule of Deliverables. All the deliverables shall be suitable for monochrome photocopying, i.e. figures and charts should not use colour alone for identification purposes. All reports shall include a signed and dated Submission Letter, a Table of Contents and an Executive Summary, in addition to the report text.

6) Payment Schedule

The proposed payment schedules based on satisfactory performance of the contract which will be negotiated with the successful consultant will be as presented in Table 3 below.

Table 3: Proposed payment schedule for Phase I

S. No	Deliverable/Report	Time from date of Commencement of the assignment (month)	Percentage of Payment for Lump Sum Contract (Phase I- Design)
1	Upon Submission and Approval of Inception Report Summarizing the consultant's state of mobilization, stakeholder's engagement plan, preliminary site visits.	1	15%
2	Upon Submission and Approval of (a) Participatory GIS maps on crime and violence and focus groups discussions; and community sensitization Report. (b) Environmental and social screening baseline & community consultation on priority infrastructures. (c) Settlement climate risk and vulnerability status report.	2	30%
3	Upon Submission and Acceptance of (a) Draft conceptual design based on consultations and costing report Environment and Social Screening Report. (b) Draft Settlements Upgrading Plan containing proposal for design Criteria, proposal for packaging of works Contract. (c) Drafts Environmental and Social Impact Assessment, Resettlement Action Plan, and Vulnerable and Marginalized Groups Plan where applicable.	3	20%

S. No	Deliverable/Report	Time from date of Commencement of the assignment (month)	Percentage of Payment for Lump Sum Contract (Phase I- Design)
4	Upon Submission and Acceptance of Final Detailed design report, Procurement documents including technical specifications, geo-referenced detailed engineering drawings, Bills of Quantities. This should include topographical survey data and detailed engineering design assumptions, calculations necessary for setting out and checking designs as detailed under Phase 2 scope of services. -Final Settlement Upgrading Plans Containing: -General layout of the settlements in relation to existing infrastructures, -Signed engineering drawings, -Technical specifications, -Engineers cost estimate, -Resettlement Action Plan Report -NEMA approved ESIAs/ESMPs	6	35%

Proposed Payment schedule for Phase II

The Client shall pay to the Consultant (i) remuneration that shall be determined based on time actually spent by each Expert in the performance of the Services after the date of commencing of Services or such other date as the Parties shall agree in writing; and (ii) reimbursable expenses that are actually and reasonably incurred by the Consultant in the performance of the Services.

As soon as practicable and not later than fourteen (14) days after the end of each calendar month during the period of the Services, or after the end of each time interval otherwise negotiated and agreed, the Consultant shall submit to the Client, in duplicate, itemized invoices, accompanied by the receipts or other appropriate supporting documents, of the amounts payable under the contract for such monthly interval, or any other negotiated and agreed period indicated in the contract.

All Payments shall be made 100% in Kenya Shillings.

7) Minimum Consultant's Qualifications and Experience Requirements

The shortlisting criteria are:

a) **Core business and years in business:** The firm shall be registered/incorporated as a consulting firm with core business in engineering or related field for a period of at least ten (10) years.

b) **Relevant experience:** The firm shall demonstrate as having successfully executed and completed at least two assignments of similar nature and scope in similar operating environments in the last ten (10) years. Details of similar assignments-Name and address of the client, scope, value, and period should be provided and submitted with an Expression of Interest (EoI).

c) **Technical and managerial capability of the firm:** The firm shall demonstrate as having the requisite technical capacity including relevant equipment, tools, software etc. and managerial capacity to undertake the assignment in the submitted company profile(s).

8) Team Composition and Minimum Qualification and Experience Requirements for the Key Experts

The Consultants shall have well-qualified and experienced professionals as required and appropriate for the completion of the exercise. They should possess the necessary resources to undertake services of such nature including equipment and software required to execute the assignment. The key professionals/expert shall personally carry out (with the assistance of other non-key experts and staff deemed appropriate) the services as described in this TOR. The following are the proposed experts for the assignment for Stage 1 and Stage 2.

S/No	Key Experts and Support Staff
	Stage 1 – Preparation of Settlement Upgrading Plan, Engineering Designs and Procurement Documents
1	Team Leader
2	Roads Engineer
3	Water and Sanitation Engineer
4	Materials Engineer
5	Electrical Engineer
6	Surveyor
7	Environmental Expert
8	Sociologist/ Community/Resettlement Expert
9	Socio-Economist
10	Procurement and Contract Management Expert
	Stage 2– Construction Supervision and Defects Notification Period
1	Team Leader
2	Resident Engineer
3	Assistant Resident Engineer
4	Roads Engineer
5	Water and Sanitation Engineer
6	Materials Engineer
7	Electrical Engineer
8	Surveyor
9	Environmental Expert
10	Sociologist/ Community/Resettlement Expert
11	Procurement and Contract Management Expert
	NON-KEY STAFF
12	Works Inspector
13	CAD Technician
14	Laboratory Technicians
15	Office Administrator
16	Chainmen

The key experts to be provided by the Consultants for this assignment are as follows: -

I. Team Leader

a) A minimum of BSc./B.Tech in Civil & Structural Engineering or Water Engineering or related field from an institution/university recognized in Kenya,
b) At least 15 years of general experience in handling construction contracts, and be conversant with conditions of Informal Settlements,
c) Must be a registered Professional Engineer or be a registered Consulting Engineer with 5 years of post-registration experience with the Engineers Board of Kenya (EBK) or its equivalent, with a valid practicing license,
d) At least 5 years' specific experience as a team leader working in Government and Donor Funded projects of similar nature and conditions. Experience in World Bank Funded Projects will be an added advantage,
e) Post-graduate training in Contract Management, Construction Claims Management or equivalent, and experience in handling construction contract claims will be an added advantage, otherwise proven experience will be sufficient,
f) Must be versed with computer aided contract/project management software (Ms Project).

II. Resident Engineer

a) A minimum of BSc./B.Tech in Civil, Roads or Water and Sanitation Engineering or related field from an institution/university recognized in Kenya
b) Registered Engineer in the category of Professional Engineer with Engineers Board of Kenya (EBK) or its equivalent; with a valid practicing license,
c) At least 10 years general experience in Civil, Roads or Water and Sanitation Engineering Designs and Supervision, including 5 years in the design and supervision of urban Roads or Water and Sanitation infrastructure as appropriate
d) At least 5 years' specific experience as a resident engineer in Roads or Water Sanitation construction projects as appropriate of similar nature and conversant with conditions of Informal Settlements,
e) Experience in Project Management/Contract Administration and handling of Construction Claims,
f) Must be versed with computer aided contract/project management software (Ms Project).

III. Assistant Resident Engineer:

a) A minimum of BSc./B.Tech in Civil, Roads or Water and Sanitation Engineering or related field from an institution/university recognized in Kenya,
b) Registered Engineer in the category of Professional Engineer with Engineers Board of Kenya (EBK) or its equivalent; with a valid practicing license,
c) At least 7 years general experience in Civil, Roads or Water and Sanitation Engineering Designs and Supervision, including 3 years in the design and supervision of urban Roads or Water and Sanitation infrastructure as appropriate,
d) At least 3 years' specific experience as an assistant resident engineer in Roads or Water Sanitation construction projects as appropriate of similar nature and conversant with conditions of Informal Settlements,

e) Experience in Project Management/Contract Administration and handling of Construction Claims,
f) Must be versed with computer aided contract/project management software (M.s. Project).

IV. Roads Engineer

a) A minimum of BSc./B.Tech in Civil and Structural Engineering or related field from an institution/university recognized in Kenya,
b) Registered Engineer in the category of Professional Engineer with Engineers Board of Kenya (EBK) or its equivalent; with a valid practicing license,
c) At least 10 years general experience in Roads designs and supervision, including 5 years specific in the design and supervision of Urban Roads projects, and be conversant with conditions of Informal Settlements,
d) Experience in Project Management/Contract Administration and handling of Construction Claims,
e) Must be versed with computer aided contract/project management software (M.s. Project)

V. Water & Sanitation Engineer

a) A minimum of BSc./B.Tech in Civil or Water Engineering or related field from an institution/university recognized in Kenya.
b) Registered Engineer in the category of Professional Engineer with Engineers Board of Kenya (EBK) or its equivalent; with a valid practicing license,
c) At least 10 years general experience in Water and Sanitation projects Designs and Supervision, including 5 years specific experience in the design and supervision of Urban Water and Sanitation projects, and be conversant with conditions of Informal Settlements
d) Experience in Project Management/Contract Administration and handling of Construction Claims,
e) Must be versed with computer aided contract/project management software (M.s. Project).

VI. Materials Engineer

a) A minimum of BSc./B.Tech in Civil & Structural or Material Engineering or related field from an institution/university recognized in Kenya
b) Registered Professional Engineer with EBK or equivalent with a valid practicing license.
c) At least 10 years general experience in Civil and Roads/Highway Engineering projects,
d) At least 5 years specific experience as Materials Engineer in Civil and Roads/Highway Engineering projects.

VII Electrical Engineer

a) A minimum of BSc./B.Tech in Electrical Engineering or related field from an institution/university recognized in Kenya

b) Registered Professional Engineer with EBK or equivalent with a valid practicing license.
c) At least 10 years general experience in Electrical Engineering projects,
d) At least 5 years' specific experience in Design & supervision of Electrical Engineering projects, preferably projects involving installation of high mast flood lights.

VIII Surveyor

a) A minimum of BSc. Surveying or Geomatic/Geospatial Engineering or related field from an institution/university recognized in Kenya
b) Must be registered with a recognized Board(s)of Surveyors
c) At least 10 years general experience in Surveying works,
d) At least 5 years specific field experience in Engineering Surveying, and be conversant with conditions of Informal Settlements.

IX Environmental Expert

a) A minimum of BSc. Environmental Science or equivalent or related field from an institution/university recognized in Kenya
b) At least 10 years general experience in Environmental Impact Assessment and Audit,
c) At least 8 years specific field experience in conducting ESIA, EA, SEA and Climate change adaptation and mitigation integration in construction projects and donor funded projects of similar nature and conversant with conditions of Informal Settlements,
d) Must be registered with the relevant professional body with a valid practicing license

X Sociologist/Community/Resettlement Expert

a) A minimum of BA. Sociology or equivalent or related field from an institution/university recognized in Kenya
b) At least 10 years general experience as a Sociologist,
c) At least 8 years specific field experience in conducting ESIA, SEA, RAPs and Gender Based Violence (GBV) in construction projects and donor funded projects of similar nature and conversant with conditions of Informal Settlements,
d) Must be registered with the relevant professional body with a valid practicing license.

XI Socio Economist

a) A minimum of a bachelor's degree in business and management, economics or related field from an institution/university recognized in Kenya
b) At least 8 years specific field experience in conducting socioeconomic surveys and be conversant with conditions of Informal Settlements.
c) Specific experience in at least one similar assignment in the last five (5) years.

XII Procurement and Contract Management Expert

a) A minimum of Bachelor's degree in Engineering, Procurement/Supply Chain Management, Commerce, Business Administration or related field from an institution/university recognized in Kenya
b) At least 10 years general experience in procurement and contract management,

c) At least 5 years specific experience in public procurement management and contract administration including preparation of procurement documents, bid evaluation, preparation of contracts, reviewing contract variations, claims and contractual disputes resolution,
d) Must be registered with the relevant professional body, Kenya Institute of Supplies Management or equivalent, with a valid practicing license.

In addition to the proposed Key Staff, the Consultant is expected to provide non-key staff including works inspectors to supervise construction works during the construction period. The Consultant will be responsible for their office support staff on site and head office. The cost of any support staff not highlighted in the list but which the consultant considers necessary will be deemed to have been included in the Consultant's Financial Proposal. The CVs of the Non-Key Staff Shall Not be evaluated.

9) Estimated Time Inputs for Key Experts

The number of key experts and the estimated time input for each key staff for Stage 1 and Stage 2 are provided in Table 2 below.

Table 2: Staff Estimated Time Input

S/No	Key Experts and Support Staff	No.	Input (staff months)
	Stage 1 (Lumpsum) – Preparation of Settlement Upgrading Plan, Engineering Designs and Procurement Documents		
1	Team Leader	1	5
2	Roads Engineer	1	6
3	Water and Sanitation Engineer	1	3
4	Materials Engineer	1	3
5	Electrical Engineer	1	2
6	Surveyor	3	9
7	Environmental Expert	1	4
8	Sociologist/ Community/Resettlement Expert	1	4
9	Socio-Economist	1	4
10	Procurement and Contract Management Expert	1	0.5
	Subtotal for key staff		**40.5**
Sub-total Stage 1			**40.5**
	Stage 2 (Time Based) – Construction Supervision and Defects Notification Period		
1	Team Leader	1	6
2	Resident Engineer	2	36
3	Assistant Resident Engineer	3	54
4	Roads Engineer	1	8
5	Water and Sanitation Engineer	1	4
6	Materials Engineer	1	6
7	Electrical Engineer	1	4
8	Surveyor	3	36
9	Environmental Expert	1	8
10	Sociologist/ Community/Resettlement Expert	1	6
11	Procurement and Contract Management Expert	1	0.5

S/No	Key Experts and Support Staff	No.	Input (staff months)
	Subtotal for key staff		**168.5**
Sub-total Stage 2			**168.5**
Total Stage 1 and Stage 2			**209**

10) Responsibilities of the Client

The Client will:

(a) Provide the Consultant with available data, maps and reports relevant to the project and collaborate in obtaining additional required information;

(b) Facilitate the Consultant's access to Government entities and respective County Governments;

(c) Services to be provided under the Bill 1 of the works contracts during works execution under Stage 2 Assignment;

   i. Fully furnished material testing Laboratory or alternative from an approved materials laboratory service provider approved by the Resident Engineer.

The Client will also facilitate the Consultant's access to Government Departments.

11) Responsibilities of the Consultant

The Consultant shall be responsible for the provision of all the necessary resources to carry out the services including appropriate qualified staff and shall make the arrangements for the establishment of fully functional office (during design (Stage 1) and site office (Stage 2)), support staff, supporting office equipment and furniture, vehicles, subsistence allowances, accommodation, utilities, communications, insurance and any other required resources and procurement of all maps required for the designs. The Consultant will be responsible for the accommodation, communication and transportation of the Consultant's staff during assignment execution in stage 1 and stage 2. The staff input rates should be all inclusive and no provisions will be provided under works contract. The Client, from time to time during the performance of the contract, may second to the Consultant project Engineers at the National and/or county levels for training and capacity building.

12) Confidentiality, Propriety Rights of Client in Reports and Records

All the reports, data, and information developed, collected, or obtained during the performance of the Contract from the Client or other Institutions shall belong to the Client. No use shall be made of them without prior written authorization from the Client.

At the end of the Services, the Consultant shall relinquish all data, manuals, reports and information (including the database, codes, and related documentation) to the Client and shall make no use of them in any other assignment without prior written authority from the Client.