THE REPUBLIC OF UGANDA

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

UGANDA CITIES AND MUNICIPALITIES INFRASTRUCTURE DEVELOPMENT PROGRAM (UCMID)

Terms of Reference

For

Consultancy Services for Preparation of Engineering Designs for Ten (10) Cities, Twenty-Six (26) Municipal Councils and Thirteen (13) Districts Hosting Refugees.

January 2026

1.0 INTRODUCTION

1.1 Background Information

Uganda's urban population continues to grow at a rate of 5.2% annually which is among the highest in the world. This rapid urbanization escalates the demand for urban services, jobs and housing which outpaces the capacity of local authorities to plan and deliver services effectively. In addressing this urbanization challenge, the Government of Uganda through Ministry of Lands, Housing and Urban Development and the Participating LGs successfully implemented the 1st Phase of Uganda Support to Municipal Infrastructure Development (USMID) Programs between 2013 and 2024.

Building on the success of the first phase, Government embarked on preparation of a 2nd Phase of the program, now referred to as **Uganda Cities And Municipalities Infrastructure Development (UCMID) Program** in order to consolidate the gains made, in institutional capacity and infrastructure development, and to ensure long-term sustainability. The new program will cover all the Cities and Municipalities outside the Greater Kampala Metropolitan Area and Thirteen (13) Districts hosting refugees.

UCMID is anchored in Uganda's long-term national development agenda, as articulated in Vision 2040 and the Fourth National Development Plan (NDP IV), both of which identify infrastructure and human capital development as key drivers for achieving middle-income status.

UCMID will primarily:

- Support the development of green, low-carbon and climate resilient infrastructure investments in the program cities and Municipalities and selected urban areas in the program refugee-hosting districts;
- Strengthen local capacity in planning, revenue mobilization, job creation and gender inclusion; and
- Integrate service provision for refugees and host communities.

As part of the preparations for UCMID, the Ministry is undertaking design of infrastructure to ensure when the program becomes effective, procurement of civil works contractors starts immediately without delay. This **ToR** has therefore been prepared to facilitate procurement of consultancy services to undertake engineering

design of various infrastructure in the participating LGs, comprising of Ten (10) cities[1] Twenty-Six (26) Municipal Councils[2] and Thirteen (13) Districts[3] Hosting Refugees

1.2 Investment Menu for UCMID

The UCMID program will focus on funding green, low-carbon & climate resilient investments in cities, municipalities and urban areas in refugee hosting districts. The investments should also foster local economic development and job creation opportunities.

1.2.1 Green Investments

These are investments or projects aimed at promoting environmentally sustainable development. These investments focus on improving cities' infrastructure, reducing environmental impact, enhancing resilience to climate change as well as improving quality of life for residents.

Green investments to be considered under this assignment include:

- Green infrastructures such as urban green spaces and leisure parks, green corridors, green roofs and walls,
- Urban forests and wetlands,
- Urban farming,
- Sustainable transport systems,
- Renewable energy projects (solar and wind power),
- Energy and water efficiency initiatives,
- Green buildings,
- Sustainable waste management systems.

1.2.2 Low carbon Investments

These are interventions aimed at reducing or avoiding carbon emissions and fossil fuel dependence, and mitigating climate change. Low-carbon urban investments help in mitigating climate change, enhance urban resilience, drive economic growth, improve public health and create more livable cities.

1.2.3 Climate Resilient Investments

[1] Includes Arua, Gulu, Lira, Soroti, Mbale, Jinja, Masaka, Mbarara, Fort Portal & Hoima

[2] Includes Koboko, Nebbi, Kitgum, Apac, Kotido, Moroto, Kapchorwa, Kumi, Tororo, Busia, Bugiri, Iganga, Njeru, Lugazi, Kamuli, Mityana, Mubende, Kasese, Masindi, Ibanda, Ntungamo, Kabale, Kisoro, Rukungiri, Sheema & Ishaka-Bushenyi.

[3] Includes Arua, Terego, Yumbe, Madi Okollo, Obongi, Adjumani, Lamwo, Moyo, Isingiro, Kamwenge, Kiryandongo, Kyegegwa and Kikuube

These help to address climate change vulnerabilities and strengthen the adaptive capacity of urban communities to climate change impacts.

Key adaptation measures include:

- flood mitigation, urban drainage systems and stormwater management,
- water security,
- climate-resilient housing and transport infrastructure,
- green infrastructure,
- disaster risk management & early warning systems.

1.2.4 Investments for Job Creation

Investments specifically targeting job creation include:

- Construction and upgrading of markets
- Sustainable urban farming and agroforestry practices
- Sustainable urban tourism development
- Urban green and climate-smart resource centres, innovation hubs, and incubation centres for green skilling, entrepreneurs and start-ups
- Investments that promote peaceful co-existence in refugee-hosting districts

1.2.5 Investment Pillars

The UCMID investment menu is further categorizes under five (5) pillars through which performance-based grants shall be provided to LGs. The following are some of the sub-projects that fall under each of the pillars.

(a) Pillar 1-Transport and mobility

These may include road construction and rehabilitation, construction of Non-Motorised Transport corridors, installation of streetlights on key urban roads and on other public areas, construction of transport terminals (bus/taxi parks), parking facilities to manage traffic flow, traffic lights at road junctions, installation of utility service ducts and bus-stop and taxi stop stages along roads.

(b) Pillar 2-Urban drainage and flood mitigation

These may include construction and rehabilitation of primary and secondary drainage systems, sustainable urban drainage systems that incorporate nature and green infrastructure (includes Rain Gardens, Permeable Pavements, Bio-Swales, Detention and Retention Basins).

(c) Pillar 3-Nature based solutions (NBS)

These investments will include urban green spaces and parks, restoration of urban wetlands, forests, flood plains and construction of wet lands, green corridors and green streets, rain gardens, bioswales, vegetated swales and permeable surfaces to reduce run-off and flooding, rain water harvesting, restauration of degraded landscapes and wastelands.

(d) Pillar 4-Sustainable solid waste management

Investments will include strengthening waste segregation and material recovery facilities, small scale waste recycling initiatives, community waste composting initiatives to produce organic fertilizers for urban and peri-urban agriculture, waste collection and transportation infrastructure.

(e) Pillar 5-Economic Development and Job Creation

These investments will include construction and upgrading of markets designed and constructed as "green buildings", sustainable farming and agroforestry practices, sustainable urban tourism development, urban green and climate smart resource centers, innovation hubs, incubation centers for green and climate smart skilling entrepreneurs and startups, investments that promote peaceful coexistence in the refugee hosting districts.

1.3 Nature of Sub-Projects for Design and Geographical Coverage for Consultancy services

The infrastructure for design shall be spread across the five investment pillars and taken from all the participating Local Governments under UCMID which include Ten (10) Cities, Twenty-Six (26) Municipal Councils and Thirteen (13) districts hosting refugees. Some planned investments with existing designs shall be subjected to design update but the majority of sub-projects will require new designs. The number of consultancies required (Lots) and the geographical coverage will be defined in the request for Proposals (RfP).

2.0 SCOPE OF THE CONSULTING SERVICES

This consultancy involves carrying out all activities that will lead to implementation of selected subprojects in the program participating Local Governments. These Terms of Reference (TORs) specify the tasks and duties of the Consultant for conducting Engineering studies, Environment and Social Impact Assessments (ESIA) & Resettlement Action Plans (RAP) studies and Tender Documents for selected infrastructure sub-Projects. It will be the Consultant's responsibility to ensure that all intended outputs are delivered in the most efficient and effective manner ensuring value for money at all times.

The Consultant shall at all times work closely and make adequate consultations with the Client and other stakeholders, especially the respective local governments. Successful Consultants shall be required to interface with each other during the performance of the assignment to ensure harmonization of design standards under the program.

The Ministry for Lands, Housing and Urban Development shall be responsible for oversight, ownership and coordinate approval of all work done by the Consultants at all stages. The Consultant shall ensure that all approvals by relevant sections of Government as required by law are done timely.

The following are the major deliverables under these consultancy services:

- Inception Reports
- Draft Designs Reports
- ESIAs for each designed sub-project conforming to the NEMA regulations
- RAPs for each designed sub-project
- Final detailed Design Reports, complete with engineering drawings, cost estimates and civil work packages
- Report of location and costing of the required service utility lines relocations necessary prior to civil works.
- Tender documents complete with all sections required under the PPDA regulations.
- Terms of References and RfPs that LGs shall use to procure supervising consultants when needed.

3.0 INCEPTION PHASE

During inception phase the Consultant shall:

(a) Collect available information regarding the sub-projects for *design update* and for new Designs.

(b) Carry out initial Site Visits to all sub-project sites to confirm the current condition, Right of Way (RoW) and land availability.

(c) Prepare GIS maps showing location of selected sub-projects under consideration and include the previously implemented USMID projects to show inter-connectivity of sub-projects. In addition other public infrastructure within the LG, such as roads, transport terminals, railway lines, markets, green spaces, etc should clearly be included on the GIS maps to show the distribution of infrastructure in each city and municipality. Maps, Shape files & other GIS data shall be part of the outputs. The maps should be compatible with ArcGIS.

(d) Undertake Stakeholder Mapping, prepare a stakeholder engagement plan detailing how each stakeholder will be consulted/engaged during the assignment and commence on the engagements.

(e) Prepare an Inception Report following the outline provided under ***Annex 2***.

4.0 ENGINEERING DESIGN PHASE

The Consultant shall review and update all the existing designs and undertake new designs for the selected sub-projects in each of the participating local governments. In the case of design update, the assignment shall focus on updating the technical aspects, current onsite conditions, environmental and social aspects, costs and tender documentation (adequacy of design and engineering drawings, specifications, Bill of Quantities). The technical requirements for design update or for new engineering designs shall include but not limited to the following:

4.1 Visual Conditional Assessment, Data Collection and Analysis

The Consultant shall visit all the sub-projects to assess the site conditions and gather all relevant information necessary for design. The assessment shall also extend to neighbouring environment e.g. buildings, open spaces and sensitive ecosystems.

The Consultant shall collect, study and document all the existing Climatic, Geological, Mapping data (including cadastral Maps), Land Use and Aerial Photography data; Bio-Geographical data; Demographic and Settlement Patterns and Socio-economic conditions. The data to collect shall also include existing designs (reports, drawings, raw data); existing underground and above ground utilities; laws, regulations, standards and guidelines; land ownership details (including land titles). The consultant shall review and analyse the collected data with the purpose of fully familiarizing itself with the project area, identifying any gaps and arranging for additional data collection necessary for design.

4.2 Review of Design standards and assumptions:

The designs shall be undertaken in accordance with the Ministry of Works and Transport Urban Roads Design Manual (updated version of March 2023) and supplemented by other applicable National Standards, regulations and guidelines including but not limited to;

a) MoWT Road Design Manuals, Jan 2010 (Vol 1-4)
b) MoWT General Specifications for Road and Bridge Works
c) Building Standards
d) Traffic Signs Manuals
e) Road Safety Manual
f) Procedural Guide to Economic Road Feasibility Study (March 2006)
g) National Physical planning standards and Guidelines.
h) World Bank Report on Technical Assessment and Design Support for Enhancing Green, Climate-Resilient and Low-Carbon Investments in Kampala and 30 Cities and Municipalities.

In addition, the Consultant shall follow the prevailing relevant national laws including Environment Laws, Labour laws, Public Procurement Laws among others.

4.3 Topographical and Cadastral Surveys

The consultant shall review all existing survey data and undertake additional topographical and cadastral surveys as necessary to obtain sufficient information for new designs or design update.

The consultant shall Set out and peg the infrastructure to ascertain the project site boundaries. This activity shall be done under the guidance of MC/City technical staff and the M/CDF. Where the extent of the project affects people's property, the consultant shall immediately inform the Town Clerk in writing to secure the right of way. **A project which is encumbered or right of way not available shall not proceed to detailed design**.

A detailed survey report shall be prepared including methodology of the field surveys; description of control points and their layout; raw survey data (CSV & Excel files), setting out data and GIS maps showing location of all designed sub-projects. **The consultant shall be required to provide evidence of having obtained survey data including control points from the department of surveys and mapping**.

4.4 Traffic and Axle load surveys

The Consultant shall review all existing traffic and load axle survey data to confirm their adequacy for the design and undertake new surveys necessary for updating or for preparation of new designs.

4.5 Utilities and Way leaves

In this assignment the consultant shall use the setting out data to document all existing utility services and properties in the right of way. The consultant will in consultation with the respective City/municipality technical leadership , liaise with utility companies to get utility maps and details of facilities within the road corridor which shall be confirmed on site and prepare detailed quantities and cost estimates for all required relocations and include them in standalone BoQs. The consultant shall be required to provide evidence of consultation with the LGs and engagement with utility companies and submit to the Client the maps of facilities encountered.

4.6 Soils and Geotechnical Investigations

The Consultant shall review any existing soils and materials investigations reports and proceed to undertake additional site investigations and laboratory tests to ensure that adequate information is available for designing the pavement and other associated structures. The studies shall include (but not limited to):

- ✓ Determination of strength and adequacy of sub-grade materials.
- ✓ Analysis of stability and strength of existing embarkments and structural foundations.
- ✓ Determination of suitability of cut materials to be utilized as fill.
- ✓ Soil & groundwater aggressiveness tests.
- ✓ Rock investigations.
- ✓ Extensive identification of suitable borrow pits, gravel pits and other material sources that will be used during construction including estimation of available volumes.

Consultant shall provide coring schedule as per the MoWT specifications.

4.7 Pavement Design

Using the soils and materials investigation report and other inputs the consultant shall undertake the pavement designs for all the planned road infrastructure. The Consultant shall be required to explore and provide all possible pavement options depending on traffic conditions, availability of construction materials and Client/user Requirements. The consultants are encouraged to use alternative construction materials as guided by relevant manuals with the intention of utilizing existing pavements to reduce the cost of roads.

4.8 Geometric Design

The Consultant shall undertake detailed geometric designs for all selected roads to ensure adherence to design standards. The designs shall cover Horizontal, Vertical and all cross-sectional elements including standard carriageway, parking lots, road junctions, drainage, walkways, cycle lanes, greening (with trees and selected grass), street lighting, traffic signals, etc. The final alignment options and cross sections shall take into consideration availability of the right of way, the road safety measures, space to accommodate utility services, road furniture among others.

4.9 Hydrological Study and Hydraulic Design

The Consultant shall undertake detailed hydrological analysis and hydraulic design studies for road drainage structures as well as for standalone drainage facilities where necessary. The designed drainages should link up and drain into the secondary and primary drainage channels that are identified in the drainage masterplans of each city/Municipality. The studies shall include but not limited to:

i) Review of existing hydrological/hydraulic reports including Stormwater Drainage Masterplans (DMPs), where they exist.
ii) Collect and compile hydrological data for the project area.
iii) Hydrological and Hydraulic Analysis for various drainage basins/catchments.

iv) Determination of technical priority drainage development needs for standalone drainage where DMPs are not yet in place.
v) Designing/sizing of drainage systems covering cross drainage culverts/bridges, side drains for roads and priority drainage channels (mainly primary channels).
vi) Preparation of comprehensive hydrological and hydraulic design report.

4.10 Design of other Road Associated Infrastructure:

Each road shall be designed to include (but not limited to) the following:

i) Walkways
ii) Utility Services and ICT ducts,
iii) Accesses to buildings and other connecting roads, including accesses catering for PWDs
iv) Traffic Control facilities,
v) Road markings,
vi) Road Lighting,
vii) Design of Traffic signal junctions Crash barrier systems,
viii) Sanitation Facilities,
ix) Road reserve mark posts
x) Roadside Furniture (traffic signs, information sign boards, road name signs, guardrails, waiting sheds, etc.),
xi)
Bus stages/bays; taxi stages and bodaboda stages at appropriate locations as necessary.

4.11 Architectural and Structural Design for Local Economic Infrastructure & Solid waste Management facilities

The Consultant shall collect user requirements and prepare scheme and architectural designs of all planned infrastructure. These may include bus/taxi parks, multi-level parking facilities, markets, administration hubs, training/resource/skilling centres, youth centres, tourism hubs, slaughterhouses, solid waste management facilities etc.
Using geotechnical investigation reports, hydrological/hydraulic reports and other inputs the consultant shall undertake structural designs for all the planned building infrastructure. The key elements of design shall include (but not limited to):

- ✓ Site surveys including baseline surveys and collection of user requirements.
- ✓ Preparation of scheme/architectural layouts.
- ✓ Environmental and social feasibility and RAP studies.
- ✓ Socio-economic surveys.
- ✓ Preliminary design cost estimates.
- ✓ Analysis of design options including a recommendation of the preferred option to facilitate quick decision making.
- ✓ Detailed site investigations (including cadastral, topographical, hydrological and geotechnical investigations).

- ✓ Detailed architectural designs and structural analysis & drawings. These shall be prepared for all buildings on site. Sections, elevations and side views shall be prepared to suitable scales to illustrate different parts of the buildings, finishing, and levels of various internal and external slabs, beams, columns and foundations. Special details to larger scale shall be prepared showing staircases where applicable.
- ✓ Landscape design for parking lots, green areas, walkways, site illumination, fencing and ensure appropriate aesthetics for the infrastructure.
- ✓ Mechanical and electrical design.
- ✓ Equipment analysis & design.
- ✓ Operation and maintenance plans.

The consultant is required to undertake appropriate studies for an economic design which reduces construction period and costs while also ensuring that the buildings adhere to green, low carbon and climate resilience principles.

4.12 Designing for Green, Low-carbon Climate Resilience

Urban road projects and buildings shall be designed to contribute to Climate Change mitigation and adaptation. The following design elements are considered essential for "green", low carbon and climate resilience.

4.12.1 Urban Roads

The following works on urban roads can be accounted as climate-relevant and green or nature-based solutions as long as during design and implementation they can be clearly identified as separate items in the BoQs:

- Flood mitigation and stormwater management components, i.e. drainage systems that prevent floods,
- Installation of solar street lighting on urban roads.
- Tree planting / tree canopies along urban roads / streets
- Development of surfaces that contribute to NMT (pedestrian footpaths, cycling lanes, pedestrian overpasses etc). NMT provisions should physically be separated from carriage way.
- Development of dedicated lanes for public transport (e.g. bus lanes and stops, motorcycle lanes and shades).
- Installation of traffic lights, provided they are part of a smart traffic control system, including sensors.
- E-mobility infrastructures, e.g. provision of spaces fore-V charging stations.

4.12.2 Buildings

The proposed investment menu includes a significant number of buildings. These may include transport Terminals (bus/taxi parks), multi-level parking facilities, markets, administration hubs, training/resource/skilling centres, youth centres, tourism hubs, slaughterhouses, solid waste management facilities etc. However, the approach for estimating 'green and climate-relevant' contribution used on urban road projects is not very appropriate for building projects. Instead, a scoring grid 1, 2, 3 is assigned on particular elements of the design based on their estimated impact on 'green' and climate relevance.

It is important to note that each building to be constructed under the program must be evaluated against this scoring grid, listing all the measures which are implemented for this building. This will produce a Building Green and Climate Score as a percentage, i.e. 100% of all the measures from the list are applied and 0% if no measure is applied. When measuring the value of investment in the contract and payment certificate, the value of climate-related components will simply be calculated by multiplying the total value of the work by the Building Green and Climate Score.

The following table presents a list of potential measures to evaluate the level of green and climate change adaptation and mitigation for the buildings built within the program. Design consultants are advised to use this table to assess the completeness of the design and compliance of the infrastructure to the green and climate agenda.

Table 1: How to calculate the Building Green and Climate Relevance Score

Nr	Green and climate change relevant measures	Design and Construction Considerations	Measure applied?	Criteria weight	Building Green and Climate Relevance Score (%)
			Yes/No	**Total: 85**	
1	Natural lighting	Sun orientation to improve indoor lighting and reduce energy requirements.		3	
2	Air quality and natural ventilation, wind loads	Orientation about wind direction		2	
		Maintain natural or induced ventilation.		2	
		Passive temperature control		2	
		Incorporate wind breakers		1	
		Orient trees to channel cooling breezes to the building.		2	
		Optimum positioning of windows		2	
		Roof slope design that withstands wind forces/loads		1	

Nr	Green and climate change relevant measures	Design and Construction Considerations	Measure applied?	Criteria weight	Building Green and Climate Relevance Score (%)
			Yes/No	Total: 85	
		Enhanced-air circulation		2	
3	Thermal regulation, heat management & Indoor temperature control	Solar protection of facades from direct sunlight and heat		2	
		Maintain existing elements like trees to provide shading or adversely block		3	
		Building site orientation to the equator, sun angles and orientation.		2	
		Appropriate orientation of opening, windows, and spaces to achieve maximum daylight with minimized heat gain.		2	
		Use of heat-reflecting exterior treatment on the walls to minimize the amount of heat from the sun and heat into the building		2	
		Appropriate insulation and reflective surfaces on roofs		2	
		Incorporation of a fly roof that creates shade and encourages airflow beneath, reducing temperatures		2	
		Ventilated roof space to minimize temperature differential across bulk ceiling insulation		2	
		Use of medium-high thermal inertia materials for the walls.		2	
4	Drainage, stormwater management and flooding control	Building level above 100-year return period flood level		3	
		Integration of site drainage with wider drainage of the area		3	
		Pervious paving materials that allow stormwater infiltration and reduce stormwater run-off.		3	
5	Energy efficiency & renewable energy	Incorporation of solar systems		2	
		Energy-efficient lighting		2	
		Daylight sensors		2	
6	Heating, Ventilation and Air Condition	Rightly sized to provide to achieve good performance & maintain high energy performance.		2	

Nr	Green and climate change relevant measures	Design and Construction Considerations	Measure applied?	Criteria weight	Building Green and Climate Relevance Score (%)
			Yes/No	**Total: 85**	
	(HVAC) system, (when needed)	Designed to use low Global Warming Potential (GWP) refrigerants		2	
7	Green infrastructure & Nature-based solutions	Landscaping: greening, trees, plants and grasses incorporated, shaded waiting and sitting areas		3	
		Incorporation of a rainwater harvesting and water storage system		3	
		Incorporating green roofs, i.e., growing vegetation or solar panels, can be done on the roof of a building.		3	
		Incorporating green walls, i.e. vertical gardens or living walls planted on building facades.		3	
8	Water saving & efficiency	Ultra-low-flow flush toilets		1	
		Water-efficient taps, urinals & sensor taps		1	
		Water saving aerators		1	
		Dual flush systems in toilets		1	
9	Sustainable solid waste management system	Segregated and labelled waste receptacles		2	
		Covered waste collection area		2	
		Good accessibility		1	
		Optimum distribution within the building area		1	
		Optimum distribution within the building area		1	
		Electronic waste recovery and recycling		2	
10	Construction materials, sources and suppliers	Environmentally responsible manufacturing techniques		2	
		Locally sourced/recycled construction materials		1	
		Licensed and regulated sources / suppliers.		2	

4.13 Environmental and Social Impact Assessment & Resettlement Action Plans

In general, ESIA & RAP studies shall be carried out to:

a) Identify and assess the potential environmental and social impacts and risks for the planned infrastructure sub-projects.
b) Recommend enhancement measures for positive environmental and social impacts and mitigation measures for the negative environmental and social impacts
c) Prepare Resettlement Action Plans (RAP) for the sub-projects for approval by the Chief Government Valuer (CGV) where there is going to be financial compensation.
d) Prepare an Environmental and Social Impact Assessment (ESIA) Report with Environmental and Social Management and Monitoring Plans for review and clearance by the Ministry for Lands, Housing and Urban Development and approval by National Environment Management Authority (NEMA) by way of issuing an ESIA certificate.

The following shall constitute specific activities for ESIA & RAP. The ESIA will involve investigations on social aspects, economic activities, conservation of natural resources, historical and anthropological heritages, public consultations and disclosures. The consultancy shall mainly encompass the following tasks under ESIA and RAP;

(a) Prepare Environmental and Social Impact Assessment Reports

(i) Environmental & Social scoping and Terms of Reference

The consultant shall undertake initial environmental and social scoping of the planned projects to understand the inherent impacts and risks. The draft scoping reports and terms of reference shall be submitted to the Client for review and subsequently the Consultant shall submit revised reports for approval by NEMA through the Environmental Licensing and Management Information System (ELMIS). Preparation of the Scoping report shall involve preliminary consultations with key stakeholders and review existing reports like Engineering Feasibility and designs, Scoping report, ESIA Terms of Reference (ToRs), Project Appraisal Document, Project Operational Manual among others. It shall clearly define the geographical scope, ecological and socio-economic aspects of the sub project in the given clusters and carry out preliminary assessment of impacts and risks. It shall refine the work plan for the full ESIA.

(ii) Detailed Desk Review

Throughout the ESIA process, the Consultant is to review all existing reports like Engineering Feasibility and designs, Scoping report, ESIA Terms of Reference (ToRs), Project Appraisal Document, Project Operational Manual, ESIA reports for similar projects, progress reports, minutes, among others. This will enable Consultant to concisely describe each sub-project assessed, its geographic, ecological, general layout including

maps and socio-economic aspects at appropriate scale and refining the data collection plan.

(iii) Stakeholders' Consultations and engagements

The Consultant will make arrangements for stakeholders' consultations with the affected/benefiting communities, political and technical leadership, Divisions, Districts, Wards and Sub Counties. Other relevant stakeholders include but are not limited to the Ministry of Works and transport, Ministry of Lands, Housing and Urban Development, National Environment Management Authority, Ministry of Water and Environment, Ministry of Gender, Labour and Social Development, District/City Roads Committees, Utility Bodies, Municipal Development Forum and general leadership at the Local Government

The following are the stages and some of the issues for consultations:

Table 2: Stages of Consultations

Stage	Issues for consultations
Inception	➢ Agreement on selected projects ➢ Objectives and Scope of the assignment ➢ Participation of stakeholders ➢ Introduction of experts and availability of counterpart staff ➢ Availability of right of way
Draft design	➢ Design processes and findings ➢ Conceptual drawings ➢ Design options ➢ Challenges and recommendations ➢ Encumbrances ➢ Relocation of utilities ➢ Environmental, safety and social issues ➢ Presentation of overall RAP report including strip maps for all sub-projects showing properties affected.
Detailed Design Stage	➢ Preferred design options ➢ Ownership of selected options ➢ Sustainability ➢ Presentation of RAP with a focus on resettlement actions that will arise during the civil works. ➢ Confirmed safety considerations ➢ Approval of designs and ESIAs
Others	➢ Addressing any issues that may arise at any time during the execution of the assignment.

The findings of public consultations including stakeholders' opinions and concerns shall be recorded in the ESIA report. The consultant shall liaise with the Client and seek prior approval before stakeholder engagements are held. The consultant must show evidence in form of minutes, reports, pictures, attendance lists of all stakeholder engagements held including correspondences made with stakeholders. This evidence has to be shared with the client after every engagement within one weeks after the engagement.

(iv) Establishing baseline conditions

The consultant shall undertake general and site-specific bio-physical and socio-economic baseline conditions of the project areas. The biophysical baseline conditions include detailed assessments and inventories of fauna, flora and sensitive ecosystems, physical-chemical environment (water, air and noise etc.). In addition, assessments of the geological, hydrological, edaphic, climatic and topographic conditions, land use patterns, physical-cultural resources, accident patterns, among others shall be conducted.

Socio-economic baseline assessments will involve data on demographics, potential PAPs, beneficiaries of economic infrastructure, culture and religion, livelihoods and economic activities, housing and settlements, water and sanitation, transport, road use and roads conditions including maintenance, education, enrolment and literacy indicators, key health indicators (child and maternal health, health units etc.), HIV and AIDS conditions, employment and labor conditions (including migrant/influx labour), gender indicators (including gender based violence, sexual harassment, etc.), children's rights (including Violence against children), other special interest categories like people with disabilities, the elderly, the youths among others, health and safety, peace and security, utilities and social infrastructure, existing complementary services to the sub-projects, among others.

The baseline conditions are intended to provide a measure of existing environment and the socio-economic situation, assessing the impact of the project on these conditions against which future changes due to the sub-projects can be monitored.

While carrying out this assignment, the Consultant shall follow ESIA guidelines and other relevant regulations especially from NEMA and the MoGLSD.

(v) Legislative and Regulatory Framework

The Consultant shall identify and describe the pertinent regulations and standards- both National and World Bank Environmental and Social Safeguards Policies governing the environmental quality, health and safety, protection of sensitive areas, land use control at the national and local levels and ecological and socio-economic issues among others. The Consultant shall identify the project activities that should comply with the identified regulations and provide cost-effective compliance measures.

(vi) Assessment of Potential Environmental and Social Impacts and risks

The Consultant will provide a detailed assessment and evaluation of the positive and negative, direct and indirect, immediate and long term, and permanent and temporary impacts due to the construction and operation of the proposed sub- project and related activities. Impacts will be assessed in either qualitative or quantitative terms, according to their inherent nature and the availability of adequate data to enable predictive analysis to be undertaken. The Consultant should pay special attention to the assessment of cumulative environmental and social impacts. Assessment shall include impacts on the different baseline conditions (Environmental and Socio-economic) during and after project implementation.

(vii) Identification of Impact Enhancement and Mitigation Measures

The Consultant will establish enhancement measures for positive impacts and identify cost-effective measures to avoid, minimize or mitigate adverse impacts. As necessary, these will comprise both appropriate sub- project specific and general environmental and social protection measures. The general and specific protection measures will be incorporated in the Environmental and Social Management and Monitoring Plan.

(viii) Environmental and Social Management and Monitoring Plans (ESMMP)

The Consultant shall prepare an ESMMP outlining (a) the exact project activities and their ecological and social impacts, the proposed mitigation measures, the institutional arrangements required for effective implementation of the proposed mitigation measures as well as for effective monitoring of the implementation of the mitigation measures, including time horizons and cost estimates for these activities, (b) recommendations pertaining to the strengthening of the institutions responsible for the implementation of the ESMMP; and (c) relevant monitoring indicators (d) overall cost estimates for the Client, Contractors, and Participating LGs and (e) principles for mitigation of impacts associated with unforeseen design modifications.

(ix) Submission of ESIA Reports

The output will be an Environmental and Social Impact Assessment report prepared in accordance with the National regulatory provisions and World Bank Safeguards Policies. The report shall be clear and concise. The reports should be in a format acceptable to local competent authorities, international environmental standards and development partners. Upon reviews and approvals by the Client, the Consultant shall present the reports to NEMA for approval and consequently acquire the NEMA ESIA certificate for the proposed development of the sub-projects.

(b) RESETTLEMENT ACTION PLAN (RAP)

The Consultant shall prepare a RAP to address any involuntary resettlement, temporary displacement, relocation, livelihoods restoration as well as compensation issues related

to project affected persons (PAPs). In addition, the processes of implementation may lead to temporary loss of land and other assets which calls for compensation. RAP will be carried out as per the international requirements with reference to the World Bank Policy 4.12 as well as the laws of Uganda. In the initial stages, the consultant shall prepare a rapid assessment of land take by the proposed project to enable the Entities make a decision on which sub-projects will be implementable and therefore should move forward for detailed RAP stage. The major consideration is whether the scale of RAP, if any, is within the limits of what the entities shall finance and have the project implemented on schedule.

The purpose of the Resettlement Action Plan (RAP) is to identify and document the people affected, losses to be incurred, and plan, implement and monitor the appropriate resettlement measures for impacts that result from project activities. Therefore, the RAP will deal with social issues related to land acquisition, such as loss of economic activities and livelihoods or displacement/relocation, limitations on access to property due to construction of subprojects, clearing Right of Way (RoW) and potential material sites.

The consultant will prepare details for all required resettlement actions on the proposed sub projects. Based on the draft designs, the local governments will be informed of the requirements of RAP. It will be the duty of the LGs to complete the required resettlement actions before a sub project is cleared to proceed to the detailed design stage. The draft design stage will therefore have a final RAP report as an output. Some sub projects will be cleared to proceed to the detailed design stage where the resettlement actions to be implemented will be a result of the on-going civil works (after commencement). Such resettlement actions should be budgeted for under the civil works. The RAP will include among others the following elements:

(i) Socio-economic study

This will include census of PAPs, Land tenure and transfer systems, including an inventory of communal resources from which people derive their livelihoods and sustenance, non-title-based usufruct systems (including grazing, use of forest and swamp areas) governed by local recognized land allocation mechanisms, and any issues raised by different tenure systems in the project area; the patterns of social interaction in the affected communities, including social networks and social support systems, and how they will be affected by the project; public infrastructure and social services that will be affected; and social and cultural characteristics of communities to be affected, including a description of formal and informal institutions (e.g., community organizations, C/MDFs, ritual groups, Non-Governmental Organizations (NGOs)) that may be relevant to the consultation strategy and to designing and implementing the resettlement activities.

(ii) Legal Framework

The relevant legal framework will be reviewed. This will cover the power of eminent domain and the nature of compensation associated with it, in terms of both the valuation methodology and the timing of payment; the applicable legal and administrative procedures, including a description of the remedies available to affected persons in the judicial process and the normal timeframe for such procedures. It also includes any available alternative dispute resolution mechanisms relevant to resettlement under the project; relevant laws (customary and traditional law) governing land tenure, valuation of assets and losses, compensation, and natural resource usage rights; environmental laws and social welfare legislation; laws and regulations relating to agencies responsible for implementing resettlement activities; gaps, if any, between World Bank Policies and local laws covering eminent domain and resettlement and the mechanisms to bridge such gaps.

(iii) Institutional Framework for implementation

The institutional framework will involve the identification of agencies responsible for resettlement activities and NGOs that may have a role in project implementation. Capacity of such agencies and NGOs will be examined and proposals to enhance their institutional capacity for resettlement implementation will be made.

(iv) Eligibility

The consultant shall propose a criterion for definition of persons to be affected and criteria for determining their eligibility for compensation and other assistance, including relevant cut-off dates. However, it is anticipated that there will not be any compensation required.

(v) Scope of Land/Property Survey and Valuation

In the unlikely event that there will be compensation, the consultant will determine the extent of effect using infrastructure designs pegged out on the ground. The methodology will entail valuing losses to the affected property to determine their replacement cost; and a description of the proposed types and levels of compensation under local law considering the requirements of World Bank Safeguards Policy (OP 4.12) and such supplementary measures as are necessary to achieve replacement cost for lost assets.

(vi) Property Survey

- ✓ Accordingly, the Consultant shall appropriately survey all land and assets for expropriation by the sub project. The planned paved roads will be permanent and therefore any resulting land acquisition requirements will be permanent as opposed to gravel roads.Where required, the consultant shall install visible mark strips on the land to be used for the purpose of the project and obtain all cadastral maps and other relevant information necessary to identify property owners and other persons that are likely to be affected by the project, produce drawings showing the land tenure system along the alignment and the land shaded uniquely

for each type of tenure system. The proposed sub projects should be superimposed on the cadastral maps. In addition, the consultant shall identify and map any properties that have encroached on the road reserve as indicated by cadastral maps and conditions on the ground. These shall be submitted to the client for review and subsequently to the cities and municipalities for action as per the development control plan.

- ✓ Secure and verify copies of registered land titles where permanent land acquisition is necessary like for the roads, maps of the site and immediate neighbourhood (for injurious effect purposes) including full cadastral survey of the site.
- ✓ Establish and map out the Survey Control Points along the proposed route; carry out topographical route survey capturing outstanding features; digitize the cadastral maps obtained as above, and transform them into coordinate system; superimpose the topographical survey, to produce strip maps, drawings and data complying with requirements of the Chief Government Valuer (CGV) and Commissioner of Survey and Mapping for purposes of acquiring properties and relocation of utilities falling within the site. Verify the strip maps with the actual situation on the ground. Verified strip maps shall be prepared for each sub-project and these shall be submitted and presented to the client for review.
- ✓ Establish the names and particulars of the affected persons, areas covered by their plots to assist the valuers compute the values of such property. These should be referenced in accordance with agreed referencing system.
- ✓ Document the damaged properties such as crops during survey and prepare a photo documentation to store the information.
- ✓ Prepare a buildings condition survey report (with pictures) to manage any future claims of property damage arising out of the civil works. Buildings condition survey report shall be prepared for each sub-project and these shall be submitted and presented to the client.

(vii) Valuation

In accordance with the scope, the Consultant shall:

- ✓ Identify the project affected persons using procedures approved by the Chief Government Valuer.
- ✓ Carry out detailed valuation of all affected land, properties and livelihoods affected by the project, which will provide the basis for compensation/resettlement.
- ✓ Compile land acquisition and resettlement costs for areas that PAPs are to be resettled.
- ✓ Ensure the data collection during valuation is done on forms acceptable to the CGV and the process is properly witnessed by the client.
- ✓ Ensure that all property such as houses and PAPs are photo documented, including damaged crops, for easy identification during disclosure and payments.

(viii) Resettlement measures

The consultant will identify and provide a description of the packages of compensation and other resettlement measures (including relocation and temporary displacements) that

will assist each category of eligible affected persons to achieve the objectives for which the RAP will be prepared. In addition to being technically and economically feasible, the resettlement packages should be compatible with the cultural preferences of the affected persons.

(ix) Site selection, Site preparation and Relocation

Alternative relocation sites if any, will be identified in consultations with LGs. Institutional and technical arrangements for identifying and preparing relocation sites will be designed considering a combination of productive potential, location advantages and other factors comparable to the advantages of the old sites. A time schedule will be designed to consider the process of acquiring and transferring land and other ancillary resources. Procedures for physical relocation under the project, including timetables for site preparation and transfer; and legal arrangements for regularizing tenure and transferring titles including measures to prevent land speculation and influx of ineligible persons at selected sites.

(x) Housing, Infrastructure and Social Services

The consultant will make plans to guide provision of housing, infrastructure and social services (e.g., water supply, feeder roads, sanitation, electricity) at relocation sites. Plans to ensure comparable services to host populations; any necessary site development, engineering, and architectural designs for these facilities will also be made by the consultant.

(xi) Environmental Protection and Management

The Consultant will provide a description of the boundaries of the relocation area; and an assessment of the environmental impacts of the proposed resettlement, measures to mitigate these impacts (coordinated as appropriate with the environmental assessment of the main investment requiring the resettlement) will be made by the consultant.

(xii) Community Participation and Disclosure

The consultant will develop a strategy describing consultation and participation of PAPs and hosts in the design and implementation of the resettlement activities. It will present a summary of the views expressed by the settlers and hosts and how these views were taken into account in preparing the resettlement plan. It will also highlight the resettlement alternatives presented and the choices made by affected persons regarding options available to them, including choices related to forms of compensation and resettlement assistance, to relocating as individuals families or as parts of pre-existing communities or kinship groups, to sustaining existing patterns of group organization, and to retaining access to cultural property (e.g. places of worship, pilgrimage centers, monuments, cemeteries, among others). Furthermore, institutionalized arrangements by which affected people can communicate their concerns to project authorities will be

defined to ensure that vulnerable groups such as indigenous people, ethnic minorities, the landless, children and women are adequately represented.

(xiii) Integration with Beneficiary communities

The consultant will identify and develop measures to mitigate the impact of resettlement on any host communities, including consultations with host communities, NGOs and Sub-national entities; arrangements for prompt tendering of any payment due the hosts for land or other assets provided to PAPs; arrangements for addressing any conflict that may arise between PAPs and host communities; and any measures necessary to augment services (e.g., education, water, health, and production services) in host communities to make them at least comparable to services available to PAPs.

(xiv) Grievance Redress Procedures

The consultant shall propose affordable and accessible procedures for third-party settlement of disputes arising from resettlement. Such grievance mechanisms will consider the availability of judicial recourse and community and traditional dispute settlement mechanisms. The Client and the Participating LGs shall establish the grievance management committees for each sub project as the first point of contact for any grievances. Referral mechanisms to Sub County/Division and District/MC/City level grievance management committees shall also be established.

(xv) Organizational Responsibilities

The consultant will design the organizational framework for implementing resettlement, including identification of agencies for delivery of resettlement measures and provision of services; arrangements to ensure appropriate coordination between agencies and jurisdictions involved in implementation; and any measures (including technical assistance) needed to strengthen the implementing agencies' capacity to design and carry out resettlement activities; provisions for the transfer to local authorities or PAPs themselves of responsibility for managing facilities and services provided under the project and for transferring other such responsibilities from the resettlement implementing agencies, when appropriate.

(xvi) Implementation Schedule and Validity

The consultant will develop an implementation schedule covering all resettlement activities from preparation through implementation including target dates for achieving expected benefits to PAPs and hosts and terminating the various forms of assistance. The schedule should indicate how the resettlement, livelihood restoration and community development activities are linked to the implementation of the overall project. The report will also set the validity period of the planned interventions and recommend actions to be undertaken when the validity period expires while some actions are still outstanding.

(xvii) Costs and Budget

The consultant will develop tables showing itemized cost estimates for all resettlement activities, including allowances for inflation, population growth, and other contingencies; timetables for expenditures; sources of funds; and arrangements for timely flow of funds, and funding for resettlement, if any, in areas outside the jurisdiction of the implementing agencies. The Budget shall include detailed cost estimates for the implementation of the Livelihood restoration and Community Development Action Plan (CDAP).

(xviii) Monitoring and Evaluation

To ensure complete and objective reporting, the consultant will prepare a time-based schedule for monitoring of resettlement activities by the implementing agency, supplemented by independent monitors as considered. This will have performance monitoring indicators to measure inputs, outputs, and outcomes for resettlement activities. It will also define the roles of the affected persons, NGOs, sub national entities, the Client and the Financing Agency in the monitoring process as well as evaluation of the impact of resettlement and related development activities. The results of resettlement monitoring should guide subsequent implementation.

(xix) Reporting

The client will institute a multidisciplinary Contract Management Team to supervise and provide the necessary support to the consultant to successfully execute the assignment.

All reports from the consultant shall be fully signed by the respective specialists and the submission shall be made by the Lead Consultant. The RAP reports shall be prepared as a self-standing document. The Client shall review and comment on the submitted reports within two weeks of reports submissions. The consultant shall present key outputs to the Program management teams.

Regarding approvals from other parties like Chief Government Valuer, the Consultant shall endeavour to make the necessary submissions/presentations. The consultant shall incorporate the comments from the client and the final reports incorporating the third parties shall be submitted by the Consultant to the Client. The reports shall be submitted in fourteen (14) hard copies and one (1) soft copy on a CD ROM.

4.14 Unit Rate Analysis and detailed Cost estimation,

The Consultant shall undertake market surveys and prepare detailed quantities and cost estimates using established design techniques, and best practice recommendations and following MoWT general Specifications. The Unit rates shall be analyzed for all items of works providing all required details and explanation. The cost estimates shall be appropriately worked out separately for all proposed infrastructure services and facilities

provided in the investment menu. All forms of applicable taxes shall be incorporated in the cost analysis.

4.15 Economic and Financial analysis

The analysis shall detail expected costs and benefits for the duration of the project's post completion design life. The Consultant shall calculate and show the following five decision criteria. (i) Net Present Value (NPV), (ii) Internal Rate of Return (IRR), (iii) Net Present Value Over Cost Ratio (NPV/C), (iv) First Year Rate of Return, and (v) Switching Values.

4.16 Scheduling and Contract packaging

Upon completion of designs, the Consultant shall in consultations with the client and the participating entities review the prioritization of investments and prepare implementable work packages in line with available funds and implementation timelines. Works packages shall also include appropriate implementation schedules that will be included in Tender Docs.

4.17 Tender Documents including Standard Bidding Docs, Bill of Quantities, Specifications and Drawings,

The Consultant shall prepare Tender Documents to allow for the procurement of works based on Standard PPDA documents including Standard Bidding Docs (Vol. 1), Bill of Quantities (Vol 2), Specifications (Vol 3) and Drawings (Vol 4).
Procurement documents (solicitation documents, supervision consultancy ToRs, request for Proposals, advertisements, etc in line with the PPDA procurement guidelines) for supervision of the civil works packages will also be prepared including a fair estimate cost for supervision.

(a) Design Drawings

The Consultant shall prepare the following-coloured detailed engineering drawings for each sub-projects in A2 paper size or other sizes as agreed with the Client.

- Plan and profile drawings showing running chainages, natural ground levels and design levels all at 20m intervals, horizontal and vertical curve details, cut/fill depth along the road centerline, side drain locations, descriptions and references to all drainage and bridge works, location and values of benchmarks and traverse stations, location of road furniture, contour lines superimposed on plans, the boundaries of the road reserve (including setting out) and any other relevant information, in a format approved by the Client.

- Cross-sections, showing all details of road cross section cuts and fills, side drains, pavement thickness, camber and super elevation, shoulders and pavement widening.

- Culverts: showing details of all types of culverts and other drainage structures, their inlets and outlets including the protection works necessary for the project.

- Major structures: for all bridge structures, detailed engineering design plans will be produced at appropriate scales, including contoured site plans, substructures and foundation details, protection or ancillary works and bar bending schedules.

- Ancillary works: showing plans of all other ancillary works including related works

- Accommodation of traffic: the Consultant shall prepare a traffic operation plan detailing the construction sequencing, use of traffic control devices and other activities designed to minimize traffic distraction. This operation plan will be complemented by drawings showing typical traffic management, including appropriate signage for the typical construction situations expected to be encountered.

- Architectural and structural drawings as already explain in *Section 4.12*.

The Consultant shall prepare and submit contract drawings in AutoCAD, or any other appropriate software that enables comprehensive view of the drawings and in PDF.

(b) Special Specification

The Consultant shall review the General Specification and recommend specific options, or possibly additional options, which shall be incorporated into a Special Specification. The Consultant shall further consider the sourcing of all major materials, sand, aggregates, bitumen, reinforcing steel, structural steel etc. and determine whether Manufacturer's certificates concerning composition and strength will be obtainable or adequate and as such whether sampling and testing will be needed. In the latter case such testing must be covered in the General or Special Specification.

The Consultant shall determine if additional clauses are required in the specifications to cover such elements as:-

- ✓ Access and issues with regard RAP and Land Acquisition;
- ✓ Environmental;
- ✓ Utilities;
- ✓ Special pavement requirements;
- ✓ Traffic Detours;
- ✓ Bridge construction;
- ✓ Issues from the risk matrix; and

- ✓ Any other issues specific to the contract that need to be defined.

4.18 Update of Existing Designs

The Consultant shall review and update all the available designs in each of the participating LGs to enable the entities prioritize them for tendering within the first year of program implementation. **The main objective of design review is to make the designed sub-projects compliant with the new design standards of the Urban Roads Design manual as well as make "green", low carbon and climate resilient.**

The technical requirements for design update shall include but not limited to the following:

a) Visual assessment-Visit the sites to assess whether there are any changes in site conditions that could affect the design
b) Review of Design standards and assumptions used to align then with the current situation
c) Check Topographical survey reports to obtain additional information necessary to confirm the surveys carried out previously
d) Check Soils investigations and pavement design reports for adequacy and conduct additional tests where necessary.
e) Update the pavement designs
f) Check geometric design and verify its sufficiency and accuracy
g) Review Drainage Design and ensure adequacy of all drainage structures
h) Undertake ESIA and RAP studies
i) Update Design drawings
j) Update of the cost estimates
k) Update Economic analysis
l) Update Bidding documents and technical specifications
m) Compile design review Report.

4.19 Compilation of Detailed Design Reports.

The consultant shall compile detailed design reports following the outline presented under ***Annex 2***.

5.0 TRANSFER OF KNOWLEDGE

MOLHUD wishes to promote skills development in the country by attaching fresh graduates in specific fields of engineering, social development, environmental sciences, surveying/GIS to the respective consultancy contracts. The Consultant shall submit as part of the proposal a training plan articulating how graduates shall be trained during the assignment.

6.0 QUALIFICATION AND RELEVANT EXPERIENCE OF THE FIRM

The consulting firm should meet the following requirements;

- ✓ The Consulting Firm shall have a general experience of at least 3 years in undertaking consulting work.
- ✓ Evidence of at least 2 years specific experience in undertaking engineering designs and ESIA/RAP studies and supervision of civil works in Uganda or similar setting particularly in Africa,
- ✓ Evidence of valid company registration and trading license or any other applicable certificate/License to operate in Uganda
- ✓ Evidence of availability of required experts for the assignment (attach fully signed current CVs, copies of academic certificates/ transcripts and copies of National IDs/Passports)
- ✓ And any other mandatory requirements as shall be specified in special conditions for a firm to provide services to the Government of Uganda.

7.0 EXPERT TEAM COMPOSITION AND INPUT

The Consultants shall employ well qualified and competent professional staff at all times in the execution of the assignment and shall therefore propose a team of experts that is fully able to deliver the services in accordance with the requirements of the assignment. The Consultant is free to optimally organise his resources as he wishes but the key personnel must be provided for. The key Professional Staff input is expected to be **65 person-months** for each lot as indicated in ***Table 3***.

The Consultant shall complete the Team Composition and Task Assignment in sufficient detail to ensure that all technical requirements fall under the responsibility of a named expert. The Consultant shall submit signed CVs for all the Key Staff in their proposed team with a confirmation from each staff that they shall be available for the assignment. All CVs must meet the minimum requirements to be considered compliant. The Consultant shall replace any key staff who scores less than 75%. ***The Consultant may propose additional professional or support staff that may be relevant to the performance of the assignment. However, their associated costs shall be taken to have been included under the fees for the listed key staff*.**

The Consultant's proposal should include as a minimum the following **twelve (12)** Key Professional staff presented in the table below.

Note: Where foreign professionals shall be involved as key experts, they shall be required to meet the statutory professional registration and work permits requirements of Uganda. In addition they will be required to present a plan of

how they intend to build the skills of local experts in their field oof expertise as they undertake their tasks.

Table 3 Minimum Key Professional Staff Requirement

No.	Key Staff for Each Cluster	Estimated Input (Person months)
	Team Leader (to be designated from one of experts below)	-
1)	Soils and Materials/Pavement Engineer	6
2)	Senior Road/Highway Engineer	6
3)	Structural/Bridge Engineer	6
4)	Architect	6
5)	Hydrologist/Drainage Engineer	6
6)	Land Surveyor	6
7)	Environmentalist	6
8)	Sociologist	6
9)	Quantity Surveyor/Measurement Engineer	4
10)	Electrical Engineer	4
11)	Business Development Expert	3
12)	GIS/CAD Technician	6
	TOTAL PERSON-MONTHS	**65**

The minimum qualifications for the above listed key professionals are as follows:

8.0 MINIMUM QUALIFICATIONS FOR KEY PROFESSIONAL STAFF

1. Team Leader

The Team Leader shall be responsible for conducting the entire study and therefore shall be the principal contact person between the Consultant and the Client. The Consultant shall assign one of the key experts with appropriate management skills to perform additional roles of the Team Leader.

2. Soils and Materials/Pavement Engineer

The Materials Engineer shall be responsible for reviewing existing soils and materials reports and conducting new studies as necessary for achieving optimal design and construction. The Materials Engineer shall coordinate with the Team Leader and theRoad/Highway Engineer in reviewing the pavement design and should be conversant with current practice in testing and pavement construction strategies. He/She must be a qualified chartered or registered Civil Engineer with a degree in Civil Engineering and must have a minimum of 10 years of general experience and 5 years specific experience in pavement evaluation, materials testing, soils investigation and pavement design.

3. Senior Road/Highway Engineer

The Roads Engineer shall be responsible for the planning road network, terminals, abutting lands and relationships with other modes of transportation and carrying out geometric design of road. He or she will work closely with the Team Leader during the study and shall also assist the Materials Engineer in the design of road pavement. He/She must be qualified, chartered or registered Civil Engineer with a degree in Civil Engineering or an equivalent qualification. A Post graduate qualification will be an added advantage. He/She must have at least 10 years of cumulative experience related to road studies and designs of which 5 should be on assignments of similar nature. Fluency in written and spoken English is mandatory.

4. Structural/Bridge Engineer

Structural Engineer shall be responsible for assessment of existing bridges and undertaking designs of new bridges, buildings and other structures under the program. He/She must be a registered Civil Engineer with a degree in Civil Engineering, or Structural Engineering and Postgraduate qualification in Bridge/Structural Engineering will be an added advantage. He/She must have a minimum of 10 years of cumulative engineering experience related to studies and designs of bridges/structures and 5 years specific experience in design of structures.

5. Architect

The Architect shall be responsible for preparing/reviewing the architectural designs and drawings of buildings (and related structures) and beautification of projects to international standards, both for new and rehabilitated buildings/structures. He/She shall have not less than 6 years general post graduate experience and 3 years specific experience on assignments of a similar nature to this project. He/She must be registered with at least Bachelor's Degree in Architecture.

6. Hydrologist/Drainage Engineer

The Hydrologist shall be responsible for reviewing existing hydrological and hydraulic designs of all provided sub-projects and undertaking new designs as appropriate. The Hydrologist shall be a holder of a degree in Applied Science or a degree in Civil Engineering or an equivalent qualification and a Post-graduate qualification in Hydrology/Hydraulics Engineering will be an added advantage. He/she must be registered with at least 10 years general experience and 5 years specific experience related to hydrological and hydraulic studies, water/flood management schemes including the use of appropriate flood design models.

7. Land Surveyor

The Land Surveyor shall be a qualified and competent professionally registered Surveyor with a relevant degree in land surveying. He/She must be a registered Surveyor with at

least 10-year general experience and 5 years' specific experience in surveying for road design, route location, topography and cadastral and acquisition of land, property and crops. He should have a working experience in GIS.

8. Environmentalist

The Environmental Specialist shall be responsible for reviewing/carrying out environmental impact assessments of the projects and propose mitigating actions to be carried out in order to minimise any negative impacts that the road construction will have on the environment and the people. He/She shall ensure that all environmental assessments and statutory/mandatory approvals pertaining to environment are done at the right time. The expert shall also be required to have relevant experience in environment management and related field.

He/She should be qualified with a degree and a post graduate qualification in Environmental Management or Natural Resources/ Biological Sciences. He/She shall have at least 10 years general experience and 5 years specific experience working on environmental management with sound knowledge of laws and regulation, environmental issues, initiatives and managing mitigation measures. Knowledge of environmental management issues in construction projects and familiarity with Bilateral or Multilateral Development organizations is required. The expert should be certified and registered practitioner with NEMA.

9. Sociologist

The Social Development Expert shall be responsible for reviewing/carrying out social impact assessments of the projects and propose mitigating actions to be carried out in order to minimise any negative social impacts that the infrastructure projects will have on the people. He/She shall work closely with the environmentalist in developing the integrated ESMP. He/She shall also be responsible for preparation of the RAPs and conducting a thorough gender analysis of the project and propose actions to be carried out to ensure equal benefits to both women and men are derived from the project.

The Sociologist shall have a Bachelors and a Master's degree in Social Work, Sociology, Anthropology or related Social Sciences and at least 10 years general experience and 5 years specific experience in development work. Consultancy experience in feasibility studies involving social and gender components, resettlement action plan development, social impact assessment and mitigation measures of infrastructure projects is a must have. Familiarity with bilateral or multilateral development organizations is essential.

10. Quantity Surveyor/Measurement Engineer

The Quantity Surveyor/Measurement Engineer shall be responsible for reviewing/carrying out quantity surveying services including determination of quantities of works to be

undertaken for both roads and buildings. He/She shall have at least 8 years general experience and 4 years specific experience on assignments of a similar nature. He/She must have at least a Bachelor's Degree in Quantity Surveying or equivalent and should be registered and a member of a relevant professional institution.

11. Electrical Engineer

The Electrical Engineer shall be responsible for reviewing/carrying out electrical engineering services including preparation of necessary documentation to enable construction and supervision of electrical installations for buildings, solar installations and related structures to international standards for both new and rehabilitated buildings/structures. He/She must be a registered engineer and a member of a relevant professional institution. He/She must have at least a Bachelor's Degree in Electrical Engineering or equivalent qualification. He/She shall have at least 7 years general experience and 4 years of specific experience in assignments of a similar nature. The electrical engineer MUST have proven experience in the installation and maintenance of solar systems.

12. Business Development Expert

The Business Development Expert shall be responsible for the preparation of the Occupation, Operation and Management Strategy including revenue generation and job creation projections for designed local economic infrastructure. He/She shall have experience in business development and local government revenue policies and regulations. He/She must have at least a Bachelor's Degree in business administration or commerce or other related equivalent qualification. He/She shall have at least 8 years general experience and 5 years of relevant experience in assignments of a similar nature. Fluency in written and spoken English is mandatory.

13. GIS/CAD Technician

The candidate should preferably be a qualified civil engineer or possess relevant qualifications in GIS and relevant CAD softwares with minimum 4 years' experience of which at least 2 years must have been gained in carrying out assignments of similar nature. The person must have the capability to handle the proposed software's independently and have the experience of carrying out all computer- aided design, drawing works for infrastructure projects especially road projects and GIS software. The incumbent should be able to train a group of engineers in successful use of the GIS, CAD and other relevant software.

9.0 MANAGEMENT OF THE ASSIGNMENT

9.1 Obligations by the Client

The MoLHUD is the Client and responsible for the overall oversight supervision of the assignment. The client shall constitute a technical committee to review, assess and qualify the designs and other reports as presented by the consultants. For purposes of managing the assignment and receiving communications/issuing notices, the Program Coordinator shall be the contact person. The program Coordinator shall be responsible for the overall management of the assignment.

The Client shall also provide the following services to the consultant:

(1) Liaison services with other stakeholders considered essential for proper execution of the assignment

(2) Coordinate with other stakeholders to be engaged during the assignment through provision of introduction letters to the consultant

(3) Make timely payment to the consultant for labour and reimbursables accrued with client consent and or provide reimbursable in kind.

9.2 Obligations by the Consultant

9.2.1 Progress Review Meetings

The Consultant shall ensure that regular meetings and interfaces with the Client are held during the consultancy assignment. The Consultant shall be proactive in organizing such meetings to clarify on aspects of the assignment as and when required. This shall also include interfacing with Participating City/Municipal Councils and other stakeholders to the project. During the execution of the assignment there shall be at least one Consultant-Client meeting every month. The Contract manager may also call on the Consultant for a meeting at any time during the assignment to provide clarification on any issues that may arise. **During these monthly meetings the Consultant shall present progress of the assignment and seek approvals for key infrastructure design features. The client may request the consultant to present during the monthly meetings a specific report of any sub-activity of the assignment for purposes of monitoring progress.**

The Consultant shall ensure that key stakeholders are kept informed of the progress of work and particularly on the key design features of the infrastructure. The Consultant shall propose a schedule for such meetings/interface and proceed to arrange, convene and meet the associated costs for such meetings. The Client shall always be informed of

the schedule for such meetings and may choose to participate in any or all of these meetings.

9.2.2 Particular Requirements for Reporting and Approvals

a) All reports prepared by the Consultant shall be approved by the Ministry of Lands, Housing and Urban Development. Prior to approval, the consultant shall be required to make presentations to key stakeholders.
b) The MoLHUD will cause an engagement of the key stakeholders including all the participating LGs, Utility providers, and other government Ministries, Departments and Agencies (MDAs) for validation. The Consultant shall use the engagements to obtain comments necessary to make final reports.
c) Form and Language of Reports: The Consultant shall submit written reports in the English Language, in addition to drawings and other pertinent technical illustrations, at the end of each stage. All Reports shall be submitted in hard copy and soft copy as scheduled in the **Table 3**. Soft copies shall be submitted as PDF files and must have corresponding files in the original computer software format such as Microsoft Word, Microsoft Excel, Microsoft Power Point, AutoCAD, Arc GIS, etc.
d) The Consultant shall take into account all comments received from concerned parties and modify or cause to be modified the reports, drawings and documents accordingly.
e) All Data shall be in units of the metric systems and all prices shall be quoted in Uganda Shillings.
f) The general paper format for presentation of reports shall be Size A4 (210 x 297mm) with A4 multiples folded down to that size, except for drawings where appropriate paper sizes shall be used.
g) The Consultant shall bear the cost of printing and reproduction of all Reports and documents under this assignment as well as all associated cost of submissions and obtaining of approvals/comments as appropriate.

9.2.3 Failure to comply with Reporting Schedule

Reports and documents to be submitted by the Consultant shall comply with the implementation schedule of the assignment. Failure on the part of the Consultant to meet submission deadlines will attract a penalty amounting to 0.05% per day of the payment due to the consultant.

9.2.4 Consultant's Performance Guarantee

The Consultant shall remain liable for breach of its obligations to perform for a period up to substantial completion of construction of the designed sub-projects. In the event of omissions or design flaws or considerable inaccurate quantities discovered during civil works construction, the consultant shall be called upon to rectify at its own cost including

incurring any related costs pertaining to the design flaws/omissions within the time requirements of the Client.

9.2.5 Cost of making changes to Reports and documents

In the event that the Consultant's reports or designs and documents are found unacceptable at any stage of the project, the Consultant will resubmit revised reports or documents or designs at no additional cost. Any revisions required by the Client following submissions for approval will be completed by the Consultant within the lump sum cost of the consultancy fees and expenses.

9.2.6 Facilities Provided by the Consultant for the Duration of the Services

The Consultant shall make his own arrangement for accommodation, office, transportation, surveying equipment, insurance etc. and all costs are deemed to be included in the contract price.

10.0 TIME FRAME

The overall duration of the assignment shall be **18 calendar months**. However, all key outputs shall be expected within the first 9 months of the Contract. The Consultant should therefore prepare an activity schedule with all activities to fit within this timeframe and clearly indicating the critical path based on the available time.

11.0 KEY DELIVERABLES AND PAYMENT SCHEDULE

The Consultant shall report to the Program Coordinator, UCMID. The Consultant shall submit both written (in English) and electronic copies at each stage for review and / or approval as summarised in ***Table 4***. All the data and analysis used during the design shall be handed over to the Client electronically. Each report shall be submitted in draft form for Client review and as a final report incorporating Client comments. The draft copy shall be delivered with 3 copies delivered to each Participating LGs and 3 to the Client while the Final copy shall be 4 copies to each of the participating LGs and 4 to the Client. At the end of the assignment, the Consultant shall not claim any right of authorship or design patent of the reports submitted during the assignment.

Payments shall be made to the Consultant following a logical schedule of key deliverables presented in ***Table 4***.

Table 4 Key Contract Deliverables[4] and Payment Schedule

Item	Report	Time Frame	Payment schedule
(1)	Inception Report	Within 2 Months from Commencement Date	20%
(2)	E&S Scoping Reports and ESIA ToR	Within 3 Months from Commencement Date	5%
(3)	RAP Methodology	Within 3 Months from Commencement Date	
(4)	Draft Design Reports draft ToRs for Supervision consultancy	Within 6 Months from Commencement Date	20%
(5)	Draft ESIA and RAP Report	Within 7 Months from Commencement Date	15%
(6)	Final Detailed Design Reports and final ToRs for civil works supervision	Within 8 Months from Commencement Date	20%
(7)	Final Tender Documents for civil works and supervision	Within 8 Months from Commencement Date	5%
(8)	Final ESIA Approved by NEMA	Within 9 Months from Commencement Date	5%
(9)	Approved RAP Report (where there was compensation)/Final RAP report	Within 9 Months from Commencement Date	5%
(10)	Monthly progress reports	Within 7 days after the end of Month	
(11)	Completion Report	18 Months from Commencement Date	5%

[4] Each output is to be presented to the Client for discussion, validation and approval

13.0 ANNEXES

ANNEX 1: LIST OF PROJECTS PROPOSED FOR DESIGN

Details of sub-projects to be provided at the RfP stage.

ANNEX 2: OUTLINE OF KEY REPORTS

Outline of Table Contents for the Inception Report

(a) Executive Summary
(b) Introduction:
- ✓ Background,
- ✓ Key tasks,
- ✓ Consultants' mobilization status

(c) Consultants Understanding of the Assignment:
- ✓ Updated Methodology including Workplan
- ✓ Approach to the assignment

(d) Preliminary Findings
- ✓ Matrix showing summary of documents collected
- ✓ GIS maps for all sub-projects

(e) Stakeholders Engagement Plan
(f) Issues that require Client attention and communication
(g) Appendices
- (i) Attendance sheets for stakeholder meetings
- (ii) Minutes of meetings
- (iii) Correspondences made with the Client
- (iv) Updated List of Sub-Projects
- (v) Updated Workplan (Gantt Chart)
- (vi) Photographs from field visits.
- (vii) Comments Redress Matrix
- (viii) Maps of Project sites etc.
- (ix) Site Inspection Certificates

Outline for Table Contents for Draft Design Reports

(a) Executive summary
(b) Introduction
(c) Visual condition assessment and data collection
(d) Review of Design standards and assumptions
(e) Topographic and cadastral surveys reviews
(f) Traffic and axile load surveys
(g) Utilities and wayleaves
(h) Soils and Geotechnical Investigations

(i) Environmental and social feasibility
(j) Pavement design
(k) Geometric Design (including junctions)
(l) Hydrological assessment and Hydraulic design
(m) Structural Design
(n) Design ancillary features
(o) Road Safety Audit Report
(p) Unit Rate Analysis & Cost estimation
(q) Economic and Financial Evaluation
(r) Tender documentation, Contract Packaging & Implementation Work Schedules
(s) References
(t) Appendices:
(i) Draft Tender Documents: (SBD, BoQs, Specifications/work requirements and Drawings-both PDF and Editable files)
(ii) Draft Tender Documents for relocation of services
(iii) Draft Tender Documents for Street lighting relocation of services
(iv) Draft Baseline Contract Implementation Schedules
(v) Draft Detailed Hydrological and Hydraulic design Report
(vi) Draft Detailed Traffic survey report
(vii) Draft Detailed Topographic survey report including their raw data, GIS maps and setting out data.
(viii) Draft Detailed Geotechnical and Materials Investigations Report including their raw data.
(ix) Draft Report on utilities & properties in the right of way and BoQs
(x) Response matrix to previous comments:
(xi) Minutes of Review meeting, attendance sheets

Outline for Table Contents for the Final Design Reports

(a) Executive summary
(b) Introduction
(c) Visual condition assessment and data collection
(d) Review of Design standards and assumptions
(e) Topographic and cadastral surveys reviews
(f) Traffic and axile load surveys
(g) Utilities and wayleaves
(h) Soils and Geotechnical Investigations
(i) Environmental and social considerations for Design
(j) Pavement design
(k) Geometric Design (including junctions)
(l) Hydrological assessment and Hydraulic design
(m) Structural Design

(n) Design ancillary features
(o) Road Safety Audit Report
(p) Unit Rate Analysis & Cost estimation
(q) Economic and Financial Evaluation
(r) Tender documentation, Contract Packaging & Implementation Work Schedules
(s) References
(t) Appendices:

(xii) Tender Documents: (SBD, BoQs, Specifications/work requirements and Drawings-both PDF and Editable files)
(xiii) Tender Documents for relocation of services
(xiv) Baseline Contract Implementation Schedules
(xv) Detailed Hydrological and Hydraulic design Report
(xvi) Detailed Traffic survey report
(xvii) Detailed Topographic survey report including their raw data, GIS maps and setting out data.
(xviii) Detailed Geotechnical and Materials Investigations Report including their raw data.
(xix) Report on utilities & properties in the right of way and BoQs
(xx) Response matrix to previous comments:
(xxi) Minutes of Review meeting, attendance sheets

Contents of the ESIA Report

The consultant will submit detailed ESIA reports including among others, the following sections;

(a) Cover page.
(b) Table of contents.
(c) List of acronyms.
(d) Executive Summary with maps and photographs.
(e) Introduction.
(f) Description of the proposed project.
(g) Description of the area of influence and environmental baseline conditions.
(h) Environmental and Social Baseline Conditions
(i) Discussion of Uganda's relevant policy, legal, regulatory, and administrative frameworks.
(j) Discussions of the WB Safeguard Policies triggered by the proposed project.
(k) Presentation of consultations with relevant stakeholders and affected persons (Themes and Sub themes will be created on the key issues arising out of the consultations).
(l) Discussion of alternatives/Alternative analysis

(m) Methods and techniques used in assessing and analyzing the environmental and social impacts of the proposed project.
(n) Discussion of the environmental and social impacts of the proposed project.
(o) Discussion of the proposed mitigation measures.
(p) Discussion on Cumulative Impacts.
(q) Environmental and Social Management Plan with detailed budget
(r) Appendices e.g.

- ✓ Maps and photographs,
- ✓ Stakeholder registration records
- ✓ Codes of Conduct for the Contractors and Workers
- ✓ Physical Cultural Resources Management Plan and Chance Finds Procedures
- ✓ Contractor Community Engagement guidelines
- ✓ HIV/AIDS Control and Management Plan
- ✓ Accident Reporting guidelines
- ✓ Health, Safety and Environmental reporting guidelines, Smoking guidelines
- ✓ Guidelines for establishment, operation and decommissioning workers' camps
- ✓ Guidelines for establishment, operation and decommissioning of borrow pits

Structure of the RAP report

The RAP report will contain among others the following;

(a) Cover page
(b) Executive summary;
(c) Background (Including a brief description of the road route location)
(d) Objectives
(e) Conceptual orientation (Ugandan laws, World Bank guidelines, general ideology)
(f) Baseline information (Socio-Economic data, survey data, valuation data, FAQs)
(g) Inferences/conclusions
(h) Proposed actions;

- ✓ Mitigation strategies, Cash/in kind/consequential
- ✓ Consultations
- ✓ Relocation
- ✓ Cultural artefacts
- ✓ Chance findings

(i) Grievance Redress Mechanism,
(j) Proposed arrangements including Staff, Responsibilities, Third parties, M&E, Time, Cost,
(k) References using American Psychological Association (APA format),
(l) Appendices (within same document) which will among others include

- ✓ Social Economic Survey Questionnaires, PAPs Photographs
- ✓ Sub-projects location schematic
- ✓ Public Consultation and Disclosure Report
- ✓ Survey Report (Stand Alone documents) In both hard and soft copy in and autoCAD format
- ✓ Strip maps with GPS coordinates of all PAPs including block identification numbers
- ✓ Survey forms
- ✓ Valuation Report (Stand Alone documents) in hard and soft copy
- ✓ List of PAPs with their respective value of property and crops
- ✓ Valuation forms duly signed by the Valuer, SE data (hard copies).

Structure of Socio-Economic Survey Report

1.0 INTRODUCTION

1.1 Introduction to the project
1.2 Objectives of the Project
1.3 Objectives of the socio-economic survey /Environmental
1.4 Brief about the City/Municipality

2.0 APPROACH AND METHODOLOGY

2.1 Socio-economic survey methodology
- 2.1.1 Survey Design
- 2.1.2 Sampling & defining targeted study area
- 2.1.3 Development of data collection instruments
- 2.1.4 Data Collection
  - 2.1.4.1 Literature review
  - 2.1.4.2 Household survey
  - 2.1.4.3 Key Informant Interviews
  - 2.1.4.4 Community transects walks and Observation
  - 2.1.4.5 Stakeholder Engagement Meeting
- 2.1.5 Data analysis and reporting
  - 2.1.5.1 Qualitative data analysis
  - 2.1.5.2 Quantitative data analysis

3.0 FINDINGS

3.1 Findings from the socio-economic survey
- 3.1.1 Demographic details of households
- 3.1.2 Access to health, education, transport, water and toilet facilities
- 3.1.3 Land use & Uptake Requirements
  - 3.1.3.1 Resettlement and relocation options

3.1.4 Household livelihoods
3.1.5 Gender and Domestic violence
3.1.6 Maintenance of existing related infrastructure
3.1.7 Community Priorities, Knowledge, Attitudes and Roles
3.1.8 Water Supply

4.0 STAKEHOLDER ENGAGEMENT

4.1 Feedback on the proposed project from stakeholders
4.2 Stakeholder matrix with their roles (or how they are affected) and how they can be engaged and how often.
4.3 Feedback on socio-economic issues
4.4 Assessment of the Social safeguards

5.0 Labor considerations. How the local people can be part of the project.

6.0 Child protection and working conditions

5.0 CONCLUSION

5.1 Socio-economic Impact of the project
5.1.1 Direct impacts
5.1.2 Indirect impacts

6.0 RECOMMENDATIONS

6.1 Recommendations on Socio-economic issues/Mitigation measures