

## GHANA

### **GREATER ACCRA RESILIENT AND INTEGRATED DEVELOPMENT PROJECT (GARID) CONSULTING SERVICES FOR SUPPORT TO THE PROJECT IMPLEMENTATION UNITS THROUGH FRAMEWORK AGREEMENT**

REFERENCE No.: GH-MZIC-286373-CS-QCBS

#### **TERMS OF REFERENCE**

### **1.0 INTRODUCTION**

1.1. The Greater Accra Metropolitan Area (GAMA) hosts 20 percent of the country's estimated 28 million people, contributes to about 25 percent of Ghana's GDP and is the home of the capital of Ghana, Accra. Accra is located along the Atlantic coast and lies within 0 to 144 meters above sea level. The area has four major drainage catchment areas, the Odaw River, within the Korle-Chemu catchment area drains most part of the built-up area in central Accra and runs through about six participating Metropolitan, Municipal and District Assemblies (MMDA) in the Region. The area delineated for project intervention is 272km<sup>2</sup> and 30km long.

1.2. The rainfall regime is bimodal with a major season between the months of March and July with a minor season from September to November. Rains are often short, intense and associated with floods.

1.3. The urban poor in Accra are more vulnerable to floods as they are mostly settled in low lying and unapproved areas. Slum dwellers constitute about 38.4 percent of the city's residents and are subject to poor infrastructure, basic services and housing.

1.4. The increase in the built-up area, low elevation, overcrowded spaces, lack of adequate sanitation and drainage infrastructure and weak regulatory enforcement could increase vulnerability to floods. For example, the most severe flood in recent times, the June 3, 2015 flood, was assessed to have been aggravated by the blockage of drains by solid waste materials. The flood and subsequent fire in a petrol station resulted in the loss of an estimated 150 lives and affected about 53,000 people. If the status quo continues, with the impact of climate change flood incidents could increase in Greater Accra Area.

1.5. The Government of Ghana has received World Bank's assistance in financing the Greater Accra Resilient and Integrated Development (GARID) Project over a six -year period. The Project aims at supporting critical investments to cope with increased urbanization pressures, and, disaster and climate change impacts in Greater Accra Region.

### **2.0 OBJECTIVES OF THE PROJECT**

2.1 As a contribution to the government's objective of improving urban resilience, the Project Development Objective is to improve flood risk management and solid waste management in the Odaw River Basin of the Greater Accra Region and improve access to basic infrastructure and services in the targeted communities within the Odaw River Basin".

2.2 To meet the overall Objective, the GARID project focuses on five components as follows:

- i. Component 1: Climate Resilient Drainage and Flood Mitigation Measures

- ii. Component 2: Solid Waste Management Capacity Improvements
- iii. Component 3: Participatory Upgrading of Targeted Flood Prone Low-income Communities and Local Government Support
- iv. Component 4: Project Management
- v. Component 5: Contingent Emergency Response Component

2.3 The key implementing entities for these components are Ministry of Works and Housing (MWH); Ministry of Sanitation and Water Resources (MWSR) and Ministry of Local Government and Rural Development (MLGRD). The Ministry of Works and Housing, like the other entities shall be working closely with PSUs established in the 2 MMDAs in which the selected communities for upgrading are situated.

2.4 Collectively, progress in these five components will alleviate flooding in Greater Accra and particularly communities within the Odaw River basin. Every opportunity will be taken to ensure that the long-term vision for the nation’s capital to be an economic hub is retained and infrastructure deficient communities within the Odaw channel which are affected by the drainage improvements are upgraded. Flood modelling studies have identified the areas and low-income communities that are most affected by flood events.

2.5 The Ministry of Works and Housing (MWH) has overall responsibility for project implementation but for Component 3, the Participatory Upgrading of Targeted Flood Prone Low-income Communities, the Project Coordinating Unit of the Ministry of Works and Housing has been given responsibility to guide and manage implementation together with Project Support Units (PSUs) established in each of the 2 relevant MMDAs (see Table 1) in which the communities to be upgraded are situated.

**Table 1: Proposed Phase 1 of Tertiary Infrastructure Upgrading and Primary Links for Three Selected Communities**

Area No	Name	MMDA	Area (ha)	Population <sup>1</sup>
1	Nima	Ayawaso East	33	25,963
2	Akweteman	Okaikei North	18	15,550
3	Alogboshie	Okaikei North	17	13,200
<b>Total</b>			<b>68</b>	<b>54,713</b>

### 3.0 OBJECTIVES OF THE CONSULTANCY

3.1 These Terms of Reference are for Technical Assistance (TA) from a firm to provide individual experts to support the core Ministry’s PIU, PCU and PSU staff. The individual experts will work part-time over an initial period of one year as required and will consist of the following staff:

- Municipal/Infrastructure Engineer;
- Contracts Manager;
- Environmental Safeguards Specialist;
- Social and Resettlement/Safeguards Specialist;
- Health and Safety Specialist;
- Quantity Surveyor; and
- Hydraulics Engineer.

<sup>1</sup> Compiled from the latest census.

3.2 The overall objective of the assignment is to; i) provide overall support to the Project PIU, PCU, PSU and the project as a whole in technical aspects, procurement and contract management, social and environmental safeguards, health and safety of project related activities and monitoring and to; ii) assist MWH PIU, PSU and PCU in identifying major issues with project implementation, proposing solutions and in reporting on project progress to MWH and World Bank as required.

3.3 The experts will be expected to liaise with other consultants working on the different components of the project. Such consultants would be engaged by MWH, MSWR etc. Most importantly a major consulting exercise is being undertaken to prepare the Upgrading scheme for Component 3.1. This is Part 1: Community Facilitation, Planning, Preliminary and Detailed Engineering Design, Contract Packaging, Bid Documents, and; Part 2: Contract Management and Construction Supervision Services. Also, Community Liaison Officers have been appointed in each community for the upgrading component and an Individual Consultant has also been appointed in MWH to provide support. Likewise, there is a consultant looking at Solid Waste Management issues in communities within the Odaw River Basin (including the 3 communities participating in the Upgrading exercise) in addition to a major consultancy that is preparing detailed designs for the Flood Mitigation Component under the MWH.

#### **4.0 STAFFING AND SCOPE OF WORK**

- a. The Core business must be in any of the listed: Engineering, Contract Management and Social and Environmental Safeguards;
- b. The Consulting Firm must be a legally registered firm, with proof of registration including with the Public procurement Authority, and shall have a least 5 years' experience in in providing consulting services in infrastructure projects. The Firm must be at least 10 years in business. The firm should have proven records in similar assignments. Must have Experience in providing consulting services to ministries and agencies. Experience in providing technical services through Framework Agreement;

#### **4.1 Technical Assistance Experts**

It is envisaged that the individual experts may be international and or national consultants. All consultants will work along with other project actors including the Planning and Detailed Engineering Design consultants to deliver the required outputs and will provide support to MWH's PIU and PCU in accordance with work plans to be agreed between the experts and MWH's PIU and PCU. The consulting services required for the project will include, but will not necessarily be limited to the services described in this Terms of Reference. The tasks are to be carried out with close cooperation with MWH's PIU, PCU, concerned government agencies and the World Bank.

#### **4.2. Scope of the Services**

The experts will provide coordination, implementation, reporting and capacity development support. Specifically, the experts will: (i) provide technical support to ensure that project implementation fully complies with all World Bank policy and operational requirements in terms of procurement and social and environmental safeguards and other aspects as set out in the World Bank's Project Appraisal Document (PAD); (ii) coordinate activities between all linked project components to ensure consistency, provide common reporting formats and assist PIU and PCU in preparation of regular reports to MWH, other relevant Ministries and the World Bank; (iii) design and conduct capacity strengthening programs for respective District PSUs staff; (iv) carry out overall Project monitoring and regular environmental (ESMP)

and social (RAP) monitoring as required by Government of Ghana (GOG) and World Bank; (vi) advise the PCU on the introduction of innovation and knowledge initiatives, and; vii) develop and deliver training to staff of the PIU, PCU and relevant MMDA staff.

### **4.3 Tasks for Experts**

The experts will work with, assist and advise PIU, PCU and the PSUs in the respective MMDAs in project coordination, implementation support, capacity development, coordination, and monitoring. Staff in the employment of the public sector are not eligible.

#### **4.3.1 Municipal/Infrastructure Engineer (Team Leader)**

The Municipal/Infrastructure Engineer (with specific experience on World Bank supported projects in drainage, urban upgrading, slum/informal settlements upgrading and related infrastructure work) will assist and advise the PIUs and PCU on aspects of the overall upgrading scheme for Component 3.1 including planning, preliminary and detailed engineering design, contract packaging and management; and (ii) be responsible for preparing reports and consolidating reports prepared by other consultants and project actors (iii) be responsible for coordinating the deployment of the key experts at appropriate times and direct communication with the PIU and PCU.

Specifically, the tasks are, but not limited to the following:

- a. stimulate strong working relationship with PIU and PCU staff and all agencies and stakeholders that may be involved with execution of specific assignments and ensure smooth coordination among them.
- b. In concert with the PIU and PCU, develop detailed time bound implementation schedules for all assignments.
- c. Provide training in project management and oversight for PIU and PCU, and provide continued training on specific aspects of project implementation through working side-by-side with the PIUs and PCU staff;
- d. Help to ensure compliance with the relevant GOG and World Bank policies and guidelines.
- e. Check, as necessary, detailed designs, cost estimates, bidding documents, and other contract documentation prepared by other project actors under this component.
- f. Provide regular oversight to PCU and PIU staff and other relevant consultants in the management of the project and in the design of works and supervision of construction and subsequent commissioning of works (Note: Design and Supervision of works for the Upgrading component will be a separate major consultancy engaged by MWH).
- g. Assist the PCU in arranging for smooth handover of the project facilities to the agencies responsible for operation and maintenance including advice and assistance on the preparation of all documentation necessary (e.g. as-built drawings) to close out contracts.
- h. Assist PCU staff in the monitoring, evaluation of progress on the Upgrading Component and in the timely submission of regular progress reports to PCU (for checking and onward transmission) and World Bank, particularly the progress against target indicators.
- i. Assist, guide and ensure all resettlement and environmental impact mitigation measures are fully implemented, ensure associated reporting is completed, and ensure minimization of adverse environmental impacts during construction in conjunction with the Construction Supervision Consultants (CSC) when appointed.

- j. With the assistance of the procurement specialist in the PCU, advise and assist in the various procurement activities as may be directed by the PCU/PIU and for which technical advice will be given by the CSC.
- k. Carry out refresher training courses for PCU and PIU staff on World Bank procurement guidelines.
- l. Assist the PCU and PIUs in the detailed monitoring and evaluation surveys and reporting on progress in meeting sub-project indicators.
- m. Provide other general advice and assistance to the PCU and PIUs as may be necessary from time to time.

The required expertise and qualifications are as follows:

#### **Qualification**

- A **Master's** degree in civil engineering
- Must be a member of a duly recognized professional body

#### *General professional experience*

- At least 15 (fifteen) years professional working experience
- At least 7 (seven) years' experience in municipal engineering, drainage and urban upgrading related projects.
- Proven international experience
- Experience leading multi-disciplinary teams

#### *Specific professional experience*

- Participation in at least three (3) projects on slum/informal settlements upgrading projects in the past 10 (ten) years.
- Participation in at least three (3) projects involving contract management including at least one donor supported project (preferably the World Bank, EU or AfDB) in the past 10 years
- Experience working in West Africa with at least one (1) assignment/project completed in Ghana

#### *Language skills*

- Excellent written and spoken English, as well as excellent communication and presentation skills.
- Basic understanding of at least one Ghanaian local language in the project community.

#### **4.3.2 Contracts Manager**

The Contracts Manager shall work closely with the PCU and relevant PIU staff to manage procurement and contracts under Component 3.1 and any other assignment as may be deemed fit by the PCU;

- a. collaborate with PCU, PIU and other consultants and project actors in order to ensure coherent execution of defined assignments;
- b. assist and advise on contract negotiations with contractors/consulting firms on the implementation of activities under the project;
- c. assist the PCU and PIU in completing and submitting appropriate reports on the project to MWH and World Bank when necessary;

- d. provide technical support and advice to the PCU and PIU as related to procurement, contract management and their contract administration;
- e. use World Bank procurement guidelines to monitor and verify all type of project related procurement under Component 3.1 including consultancy services, contract works, goods and supplies;
- f. assist with review, check, and monitor procurement cycles and establish check list(s) of the process and timing in collaboration with PCU and PIU;
- g. assist in the preparation of monthly and quarterly progress reports by the PCU/PIU including comparison between planned and actual progress achieved, procurement and contract management;
- h. monitor progress of contracts implementation to ensure compliance with the stipulated standards, procedures and planned procurement schedule;
- i. prepare specific procurement documents, i.e. Tender Documents including Tender Data Sheet, Terms of Reference and Request for Proposals for New Projects as required by PIU/PCU;
- j. participate in the evaluation for pre-qualification of the contractors, expression of interest for short listing, tenders and proposals and in preparing corresponding reports;
- k. assist in the preparation of procurement plans and related monitoring plans for Component 3.1 in order to expedite project implementation;
- l. provide hands on training and skill transfer (through mentoring) to appropriate staff of the PCU/PIU on procurement and contract management;
- m. prepare technical reports as may be required and prepare an end-of assignment report for specific task completed;
- n. perform any other duties as requested by PCU/PIU/PSU

The required expertise and qualifications are as follows:

#### **Qualification**

- A bachelor's degree in civil engineering, building technology or related discipline
- Must be a member of a duly recognized professional body

#### *General professional experience*

- At least 10 (ten) years professional working experience
- At least 5 (five) years' experience in procurement and contract management of infrastructure related projects.
- Proven international experience (experience working on assignments outside country of origin, preferably in developing countries)
- At least 8 years of field working experience in varied urban infrastructure projects

#### *Specific professional experience*

- Participation in at least three (3) projects involving procurement and contract management including at least one donor supported project (preferably the World Bank, EU or AfDB) in the past 10 (ten) years
- Experience working in West Africa with at least one (1) assignment/project completed in Ghana
- Previous experience in working on a project(s) in slum communities;
- Knowledge of international Forms of Contract is essential and familiarity with managing contracts in Ghana would be an advantage.

Language skills

- Excellent written and spoken English, as well as excellent communication and presentation skills.
- Basic understanding of at least one Ghanaian local language in the project community.

#### 4.3.3 Environmental Safeguards Specialist

The Specialist should work closely with the PCU and relevant PIU staff in all key environmental related activities, with an emphasis on coordination and capacity building with environmental focus;

- a. In liaison with the Upgrading Construction Supervision Consultants (CSC) and PIUs staff, review contractor bids and ensure they adequately address environmental requirements as set out in ESMPs and all the latest environmental requirements of the World Bank and GOG, and ensure the Contractors have all plans, procedures, approvals, and documentation in place for ESMP compliance prior to commencement of any work;
- b. Ensure smooth implementation of the Environmental and Social Monitoring System (ESMS) developed, including developing a system and schedule for regular site visits, environmental sampling, follow up consultations with local residents on issues and environmental concerns arising during project construction.
- c. Check that the environmental safeguards are being adequately addressed in the field by contractors and are being monitored closely by the CSC, including reviewing and verifying CSC monitoring reports;
- d. Ensure reporting protocols in the ESMP are followed (including quarterly reports, mid year reports and annual reports) in a timely fashion, are of good quality, and ensure that reports are disseminated to stakeholders according to guidelines in the ESMS;
- e. Collaborate with Environmental Protection Agency on regulatory compliance issues (for water quality, noise and dust from construction sites, sanitation in workers campsite, protective clothing for workers, etc.) and with other national authorities as needed;
- f. Assist PCU and PIU to carry out necessary issuing of penalties, works stoppage, and other non-compliance measures;
- g. Conduct follow-up consultations and interviews with local residents to identify concerns or grievances arising during the various construction contracts, and ensure that environment-related grievances follow proper channels as established by the respective grievance committee;
- h. In collaboration with the PCU and PIUs, provide technical inputs on environment and sanitation for any project Information, Education, and Communication activities – the Specialist should take the initiative to identify opportunities, coordinate on programs across GARID Districts and assist the PIUs in the design and implementation of these programs;
- i. Assess MMDA capacity gaps and training needs on environmental issues and propose capacity building measures to PCU for inclusion in the project Capacity Building Plan.

The required expertise and qualifications are as follows:

#### Qualification

- 
- A bachelor's degree in Chemical Engineering, Biochemistry, Environmental/Health Management

- A Masters' degree in Environmental Management/Environmental or Public Health Engineering or related field
- Must be a member of a duly recognized professional body

*General professional experience*

- At least 10 (ten) years professional working experience
- At least (five) years' experience in implementation, monitoring and evaluation of ESMPs and EMPs

*Specific professional experience*

- Participation in at least five (5) projects involving monitoring and evaluation of implementation of ESMPs and EMPs including at least one donor supported project (preferably the World Bank, EU or AfDB) in the past 10 (ten) years
- Experience working in West Africa with at least one (1) assignment/project completed in Ghana
- Previous experience in working on a project(s) in slum communities;

*Language skills*

- Excellent written and spoken English, as well as excellent communication and presentation skills.
- Basic understanding of at least one Ghanaian local language in the project community

**4.3.4 Social and Resettlement/Safeguards Specialist:**

- a. The Specialist should work closely with PCU and relevant PIUs staff and staff on all key social and resettlement activities and in particular to ensure the requirements of the Resettlement Policy Framework (RPF) and the various Resettlement Action Plans (RAPs) are being adhered to.
- b. Conduct a review of all Resettlement Action Plans and Valuation Reports, and suggest amendments to RAPs as necessary based on the findings of this review and the design review carried out by the Construction Supervision Consultants.
- c. Liaise with the Construction Supervision Consultants during the design review on strategies and design elements that can reduce overall Project Affected People (PAP) and compensation costs;
- d. Assist the PCU and PIU staff as necessary to establish and operate functional grievance and RAP committees with clear roles and responsibilities defined with procedures, protocols, etc.;
- e. Facilitate the review, approval, and disclosure process of valuation reports, including approval by the relevant Ministries, Local Authorities and World Bank;
- f. Prepare or ensure implementation and regular update of the resettlement database and tracking systems developed to inventorize PAPs and track approval processes, compensation payments, relocation status, potential impoverishment risks and vulnerable groups, etc.;
- g. Ensure regular update and smooth implementation of the Resettlement Action Plans for each package of work, intermittently and over the life of the specific contracts, including high standards for community engagement and adherence to Ghanaian laws and World Bank Safeguard Policies;
- h. Facilitate site clearance and ensure that all compensation is paid, documented, and sites are cleared prior to initiating any civil works;



- i. Investigate implementation issues identified by the Contractors, CSC, PCU, PIUs and World Bank. Discuss issues and findings with the PCU and formulate recommended actions;
- j. Assess MMDA capacity gaps and training needs on social issues and resettlement and propose capacity building measures to PCU for inclusion in any project Capacity Building Plans;
- k. Provide resettlement training to project partners (including MMDAs, ward and sub-ward representatives, CBOs etc) when necessary to inform them on the scope of: (i) World Bank policy and procedural requirements, (ii) national laws and regulations, (iii) resettlement planning, including social impact, and gender analyses, (iv) resettlement implementation and supervision, and (v) monitoring and evaluation.
- l. Monitor resettlement on all contracts, including any accidental damages caused by Contractors during implementation of works; provide coordination with the PCU and PIU, local Ward and Sub-ward representatives, and the project's community-based monitoring groups. This should include regular field visits and spot-checks;
- m. Prepare quarterly and annual reports on resettlement according to standard reporting guidelines for social, grievance and resettlement issues;
- n. In collaboration with the PCU and PIU, assist in coordination and implementation of Information, Education, and Communication activities.

The required expertise and qualifications are as follows:

#### **Qualification**

- A bachelor's degree in Social Science/Social Studies or related field
- A masters' degree in in Social Science/Social Studies or related field
- Must be a member of a duly recognized professional body

#### *General professional experience*

- At least 10 (ten) years professional working experience
- At least (five) years' experience in implementation, monitoring and evaluation of RAPs and ESMPs.

#### *Specific professional experience*

- Participation in at least (five) (5) projects involving in monitoring and evaluation of implementation of RFPs, ESMPs and RAPs including at least one donor supported project (preferably the World Bank, EU or AfDB) in the past 10 (ten) years
- Experience working in West Africa with at least one (1) assignment/project completed in Ghana
- Previous experience in working on a project(s) in slum communities;

#### *Language skills*

- Excellent written and spoken English, as well as excellent communication and presentation skills.
- Basic understanding of at least one Ghanaian local language in the project community.

#### **4.3.5 Health and Safety Specialist**

- a. The Specialist shall work closely with PCU and relevant PIU staff in ensuring compliance with occupational health and safety laws, procedures, guidelines and specifications, and provide

advice on measures needed to minimize hazards, accidents or unhealthy situations in construction sites;

- b. Liaise with the Construction Supervision Consultants in ensuring all contractors establish a safe workplace according to Ghana's legal standards and foster a culture of attention to health and safety in all work sites under the project throughout the project life cycle;
- c. Prepare and/or update health and safety management plans, policies, systems, procedures and guidelines for construction works under the project, review them on a regular basis and keep them up to date at all times.
- d. Advise PIU, PCU, contractors, consultants and other stakeholders on various safety and health related matters related to project implementation.
- e. Support the PIU and PCU in raising awareness on health and safety issues among project staff, consultants, contractors and other stakeholders.
- f. Conduct risk assessment at all construction sites, outline preventive measures on health and safety and work with the PIU/PCU to enforce these measures.
- g. Initiate, organize and conduct health and safety training for PIU, PCU, contractors, consultants and other stakeholders.
- h. Inspect work sites and the work of contractors on a regular basis to identify issues or non-conformity, and recommend necessary actions to the PIU and PCU where unsafe acts or processes that seem dangerous or unhealthy are detected.
- i. Oversee installations, maintenance and disposal of substances, plant and equipment etc. to ensure they are done in conformity with applicable laws and industry best practice.
- j. Record and investigate incidents (including near misses) to determine the cause and to propose improvements to processes in the future.
- k. Prepare reports on incidents (including near misses) and compile statistical information on health and safety issues and present them to the PIU and PCU for action;
- l. Ensure that all health and safety policies, procedures, rules and regulations are adhered to by all contractors during construction works, and are regularly reviewed, updated and communicated.
- m. Ensure that safety inspections, audits, risk assessments, working procedures are managed, and contractors and their staff are aware of their responsibilities in relation to health and safety issues.
- n. Establish and conduct a structured programme of health and safety training (including a well-developed induction program) for PIU and PCU staff, contractors, consultants and other stakeholders.
- o. Participate in regular site meetings, provide necessary advice and report on relevant health and safety matters to the PIU and PCU.
- p. Prepare quarterly and annual reports on health and safety matters as it relates to construction works according to standard reporting guidelines for health and safety issues;
- q. In collaboration with the PCU and PIU, assist in coordination and implementation of health and safety related activities.

The required expertise and qualifications are as follows:

#### **Qualification**

- A bachelor's degree in Social Science/Social Studies, Engineering, Public Health or related field
- A masters' degree in Social Science/Social Studies, Engineering, Public Health or related field
- Must be a member of a duly recognized professional body in occupational safety and health

#### *General professional experience*

- At least 10 (ten) years professional working experience
- At least (five) years' relevant experience in a similar role (i.e. health and safety officer/expert/specialist)

#### *Specific professional experience*

- Participation in at least three (3) projects involving preparation/update and implementation of health and safety management plans, policies, systems, procedures and guidelines for construction works in the past 10 years;
- Participation in at least two (2) projects involving preparation/update and implementation of health and safety management plans, policies, systems, procedures and guidelines for construction works including at least one donor supported project (preferably the World Bank, EU or AfDB) in the past 10 years;
- Experience working in West Africa with at least one (1) assignment/project completed in Ghana
- Previous experience in working on a project(s) in slum communities;

#### *Language skills*

- Excellent written and spoken English, as well as excellent communication and presentation skills.
- Basic understanding of at least one Ghanaian local language in the project community

### **4.3.6 Quantity Surveyor**

#### **Qualification**

- A first degree in Building/Costing/Quantity Engineering or quantity surveying or Building economics.
- A Masters degree in Building/Costing/Quantity Engineering or quantity surveying or Building economics.
- A qualified and member of a Professional Body

#### *General professional experience*

- At least 10 (ten) year's experience in the preparation of Bills of Quantities for building, drainage structures and general civil works.
- At least 5 (five) years experience in project implementation and supervision.

#### *Specific professional experience*

- At least 10 years of field working experience in quantity measurement and contract closure for sewerage/drainage/water supply, solid waste, roads etc.
- Participation in at least two (2) assignments involving construction management of large multilateral funded projects (preferably the World Bank, EU or AfDB) in the past 10 years.
- Site supervision experience of at least three (3) urban infrastructure projects including experience in community contracting.
- Knowledge of Ghana quantity surveying practices.

#### *Language skills*

- Excellent written and spoken English as well as excellent communication and presentation skills.
- Basic understanding of at least one (1) Ghanaian local language in the project community

#### **4.3.7 Hydraulics Engineer**

1. Lead in the review of engineering design reports and detailed engineering drawings for hydraulic structures in the project beneficiary communities
2. Undertake routine monitoring of construction works for all hydraulic structures to ensure that they meet the required specifications
3. Support the Municipal Infrastructure Engineer in the preparation of monthly reports and other documentation as required by the Client
4. Provide specialist technical inputs and support to the Quantity Surveyor in the review of bid documents and cost estimates for the community upgrading works
5. Provide technical inputs and support for community engagement activities as when requested by the Client
6. Provide technical inputs and support to the Environmental and Social Safeguards Specialists in ensuring compliance of construction works with the relevant World Bank policies and guidelines
7. Support in training needs assessment and capacity development activities for PIU and PSU technical staff who perform urban water management functions

#### **Qualification**

- A **Master's** degree in civil engineering or hydraulics engineering
- Must be a member of a duly recognized professional body

#### *General professional experience*

- At least 15 (fifteen) years professional working experience
- At least 10 (ten) years' experience in the design and construction supervision of urban stormwater drainage infrastructure projects.

#### *Specific professional experience*

- Participation in at least three (3) projects in urban drainage or flood risk management projects in the past 10 (ten) years.
- Participation in at least three (3) donor funded urban infrastructure projects (preferably the World Bank, EU or AfDB) in the past 10 years
- Must demonstrate proficiency and knowledge of software in the field of geographic information systems (GIS), image editors (CAD); and hydraulic/hydrologic modelling;

#### *Language skills*

- Excellent written and spoken English, as well as excellent communication and presentation skills.
- Basic understanding of at least one Ghanaian local language in the project community

The Firm shall provide **certified true copies of all certificates** of proposed staff and **contact information (names and phone numbers) for references** (including Client) on all assignments/projects included in the proposal.

## **5.0 ESTIMATED LEVEL OF EFFORTS**

The firm shall be engaged part -time for a period of one (1) year with a total input of 48 man-months for all proposed staff.

## **6.0 OUTPUT DELIVERY SCHEDULE**

6.1 All experts are expected to prepare and present concise, factual reports covering all inputs and deliverables related to task assigned by the client. These reports will be incorporated into PCU's monthly, quarterly and annual progress reports. Ten (10) hard copies and two (2) electronic copies of each deliverable should be submitted in English.

The home office of the firm shall provide technical backstopping and quality assurance support to the experts and would be required to carefully review all outputs of the assignment including reports to ensure they are of the required quality before submitting them to the Client. The firm shall describe in its proposal, arrangements for backstopping and quality control and how quality control will be performed to guarantee the quality of all the expected outputs under this assignment.

## **7.0 INPUTS BY CONSULTANTS**

6.1 The professional disciplines required to carry out the assignment have been indicated earlier. The consultants shall be responsible for securing their own means of transport, office rental, equipment and logistics required for successful execution of their assignment. The costs of office rental, equipment and transport should be included in the consultant's all-inclusive daily professional fees/financial proposal.

## **8.0 INPUTS FROM CLIENT**

8.1 The PIU/PCU will provide, free of charge, one set of all relevant reports, drawings, maps and contract documents in its custody. All other relevant available documents related to specific task assigned may be provided to the experts.