

REPUBLIC OF MALAWI

MINISTRY OF IRRIGATION AND WATER DEVELOPMENT

SHIRE VALLEY TRANSFORMATION PROGRAM-1

BIDDING DOCUMENT

FOR

PROCUREMENT OF

CONSTRUCTION OF MAIN CANAL 1 AND MAIN CANAL 2

PROJECT NAME: SHIRE VALLEY TRANSFORMATION

PROGRAM - 1

ICB No: MW-MOAIWD – 87847 – CW - RFB

EMPLOYER: MINISTRY OF IRRIGATION AND WATER

DEVELOPMENT

COUNTRY: MALAWI

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VOLUME II: WORKS REQUIREMENT

PART 2 - WORKS REQUIREMENTS

Section VII. Works Requirements

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Scope of Works

The scope of works under this bidding document covers the construction of Main Canal 1 from Station 6+000 up to 32+788 (Bifurcation point), and part of MC2 from Station 0+000 (bifurcation point) up to Station 18+024, (Lengwe national park). Major works will include construction of two inverted siphons on MC1, three inverted siphons on MC2, Bridges, box culverts, Canal Crossing structures, Concrete lined canal, and wire fencing around populated areas.

The estimated quantities for major works items are as follows:

1. Major works between Main Canal, at 6+000 to Lengwe.

Major Works	Item	Quantity	Unit
Earth Work, L=45 km	Wood-cutting &Roots Removal	1785909.0	m^2
	Earth Cutting	2940225.0	m ³
	Excavation	110,001	m ³
	Weathering Rock Cutting	67,698	m ³
	Embankment (porterage & Compact)	285,957	m ³
	Embankment (Dump Truck 15 ton)	1,476,070	m ³
	Waste Soil	1,427,489	m ³
	Lining Canal		
Canal Structures - Lining, L=43 km - Siphon, 3 Nos., L=1795 m	Lining Machine (Con'c B180)	124,268	m^3
	Wire Mash (#5 150*150)	884,874	m^2
	Backfill	128,585	m^3
	Siphon		
	Con'c B180	1,788	m^3
	Con'c B240	19,906	m ³
	Reinforcing steel (SD30)	1,766	Tonne
	Diversion Gate (5.0*3.0)	6	Ea
	Diversion Gate (3.0*3.0)	3,136	Ea
Canal Crossing Structures	nal Crossing Structures Con'c B160		m^3

	Con'c B210	13,734	m^3
	Con'c B240	29,693	m^3
	Reinforcing steel (SD30)	6,253	Tonne
Water supply	PE pipe SDR 26 150mm	4,600	m
	PE pipe SDR 26 125mm	9,500	m
	Excavation works	25,316	m^3
	Backfill	27,905	m^3

2. Environmental and Social Provisions

- **2.1** The environmental requirements noted here are based primarily on the approved SVTP Environmental and Social Management Plan (ESMP) as disclosed in August 2019.
- **2.2** Canal Bridge Fencing and Signage. At any points where an existing road will cross the MC between along the MC route, the contractor shall install a tall, fine mesh fence on both sides of the bridge, intended to discourage people from throwing fish or other objects into the canal. The contractor shall also install signs at conspicuous points along each bridge crossing (about 6 signs per bridge in various languages) with the following (or similar) statement: "PLEASE DO NOT RELEASE FISH INTO THIS CANAL: releasing fish from the Lower Shire River or elsewhere into this canal could harm the ecology of the Upper Shire River, Lake Malombe, or Lake Malawi." The contractor shall ensure that diversion and alternate routes are in place to ensure access routes are available. This will apply between the fish barrier and Lengwe National Park as stipulated in the ESMP.
- **2.3** *Compensatory Tree Planting.* To compensate for the land area that will be cleared to make room for the MC and associated works, the ESMP specifies compensatory tree planting including fruit trees on previously degraded lands. This is part of livelihood restoration plan.
- **2.4** Locations of Construction Facilities. Borrow pits, waste disposal and spoil deposition areas, construction camps, equipment staging areas and maintenance facilities, supply depots, and any such construction-related facilities shall always be located entirely in specified locations. All construction equipment shall be operated, staged and stored at least 100 metres from the banks of river Tchyomba; Waste disposal facilities, receptacles and storage equipment shall be located at a distance of at least 100 metres from the banks of river Tchyomba; Unless prior written authorization is provided by the Engineer.

Required permits and licences for environmental and social impact assessment (ESIA), environmental and social management plan (ESMP), mineral explorartion and mining licences and workers' safety will have to be secured from relevant authorities in the country.

- **2.5** *Restoration of Existing Infrastructure.* Prior to undertaking civil works, the contractor shall photograph and otherwise document the baseline condition of all infrastructure (buildings, fences, watering ponds, etc.) that might be affected by project works, as well as roads that would be used during construction .
- **2.6** *Borrow Pit and Land Restoration.* Prior to the completion of works, and subject to condition of operating a borrow pit obtained from Environmental Affairs Department, the contractor shall restore any borrow pits created under this contract (that will not be used for subsequent SVTP construction) to either (i) a permanent or seasonal wetland (pond) with gentle slopes to prevent animal drownings or (ii) land contours similar to pre-project conditions. The specific restoration option should be selected with the approval of the Engineer and in consultation with local authorities. Beyond borrow pits, post-construction soil rehabilitation is mandatory and the contractor's full responsibility. Unusable spoils shall not be left in mounds but shall be flattened at the end of construction and revegetated. Post-construction soil rehabilitation shall take place at the end of work in each of the three canal construction segments, rather than all at the end of the construction contract. Delays in payment will be applied if soil rehabilitation as well as the removal of all rubbish and construction equipment is not done within the set timeframe.
- **2.7** *Minimum Vegetation Clearing*. Vegetation removal for canal construction shall be limited to the canal pathway and a limited footprint on both sides of the canal. The width of this footprint shall be agreed in advance by the Contractor and Engineer.
- **2.8** Controlling Erosion, Dust, and Pollution. Use of silt fences is mandatory for any construction work close to waterways. Evacuation of concrete wash water in any water bodies is strictly forbidden. During the dry season (May to November), the contractor shall apply daily dust control interventions. If water is pumped from the Shire River, the vehicle access shall be stabilized (such as with a concrete access ramp) to limit erosion along the river. The contractor must provide for the safe and complete removal of wastewater, plastic trash, and other wastes from any camps or other contractor facilities, taking all necessary measures to prevent the pollution of water bodies.
- **2.9** Equipment Maintenance. Washing of vehicles, changing of lubricants, refueling, or any other equipment maintenance which could pollute the water or damage the land shall not take place within 50 meters of any river, stream, pond, or other natural or artificial water body anywhere around SVTP construction areas.
- **2.10** *Noise Abatement.* Rock blasting shall only take place on times as agreed with the Engineer, and with at least 48 hours advance notice to the Engineer, who in turn will

immediately inform stakeholders. Portable noise-absorbing walls shall enclose all sites of blasting, drilling, or other noisy construction activities. Workers shall be strictly prohibited from playing outdoor music or radios, or otherwise making any unnecessary loud sounds. Local populations shall be warned of any blasting through radios, churches, and local authorities. A safety patrol with an alarm shall be used to ensure that all individuals are evacuated in advance from quarries or other blasting sites. The contractor shall institute noise suppression measures so not to disturb game in LNP;

The Contractor shall ensure that the dust and noise generated from the project activities are being managed and mitigated against on the workers and surrounding communities. Mitigation measures could include:

- Provision of earplugs to workers working close to high noise machinery and dust masks to those working in dusty conditions i.e. concrete mixer and cement handlers
- Limiting works to daytime to mitigate impact of noise for surrounding communities during the night.
- Limiting noise by housing generators
- Routine servicing of vehicles to limit noise and emissions
- Dust suppression by water spraying in areas being impacted by dust.
- **2.11 Livestock Watering Structures.** The contractor shall establish livestock watering structures within 1 km radius on both sides of 1 km in the buffer zone of the park; to reduce human wildlife conflicts (HWC) and avoid domesticated livestock coming into contact with wild game. A total of 10 watering troughs, with 5 on either side of the canal, shall be constructed in line with mitigation 13 in the ESMP.
- **2.12** *ESMP and RAP*. The Contractor is required to comply with every key provision of the latest Environmental and Social Management Plan (ESMP) and, as applicable, Resettlement Action Plan (RAP). These documents will be an integral part of the Bid Docs.

2.13 Contractor should also take into account the following Environmental and Social considerations:

The contractor shall develop and implement an environment, social, health and safety (ESHS) plan in line with Part D of MC-1+MC-2 Conditions of Contract and Contract Forms. The plan will address the following:

- Environmental incidents or non-compliances with contract requirements, including contamination, pollution or damage to ground or water supplies;
- Health and safety incidents, accidents, injuries that require treatment and all fatalities;
- Interactions with regulators: identify agency, dates, subjects, outcomes (report the negative if none);
- Status of all permits and agreements
- Health and safety supervision
- Workers' accommodation

- Health services: provider of health services, information and/or training, location of clinic, number of non-safety disease or illness treatments and diagnoses
- Gender (for expats and locals separately): number of female workers, percentage of workforce, gender issues raised and dealt with (cross-reference grievances or other sections as needed)
- Environmental and social supervision
- Grievance redress mechanisms instituted
- Traffic, road safety and vehicles/equipment
- Status of implementation of the ESMP (what has been done)
- Compliance reporting on various licence conditionalities, C-ESMP and permits

General consideration

- Before starting any construction activities the contractor is required to present the activities to be performed and the team members to the local authorities as per the stakeholder engagement plan in order to introduce;
 - the contractors' focal points,
 - scope of activities,
 - work schedule,
 - type of machinery and equipment used,
 - sites chosen to install equipment,
 - expected community support,
 - opening of access roads if needed and understanding community expectations and fears from the project.
- Ensure maximum protection of the environment and the socio-economic wellbeing of the people affected by the project, whether within or outside the physical boundaries of the project area.
- Before any construction works begin, the contractor shall ensure that the relevant environmental and land agreement instruments of authorization for the works have been obtained from relevant institutions.
- Familiarize himself with the prepared ESMP for the SVTP, the Pest Management Plan, and the Elephant Marsh Management Plan. Specifically, the contractor shall make every effort to follow and implement the recommendations and mitigation measures of the ESMP.
- Work in cooperation and in coordination with the SVTP Project Implementation Unit and/or any other authority appointed to perform or to ensure that the social and environmental work is performed according to the provisions of the ESMP.
- Always keep on site and make available to Environmental Inspectors or any authorized persons, copies of the ESMPs, and any other relevant documents for the monitoring and evaluation of environmental and social impacts and the level or progress of their mitigation measures.

Acquisition and transportation of construction materials

• Ensure that construction materials such as sand, quarry stone, soils or any other construction materials are acquired from legally approved suppliers.

- Ensure that production of these materials by the suppliers or the contractor does not violate the environmental regulations or procedures as determined by the relevant authorities.
- The movement and transportation of construction materials to and within the construction sites shall be done in a manner that generates minimum air quality impacts, flying objects risks and safety to road users, learners and general public.

Fencing of Construction sites

- Demarcate the boundaries of the site prior to any work commencing on the site. The contractor shall ensure that the temporary fencing is done using the 32-gauge iron sheet.
- Ensure that all their plants, labor and materials remain within the boundaries of the site and that materials used for construction on the site do not blow outside the construction site.
- The temporary boundary demarcation fence shall be removed when the site is demobilized.

Storage of Construction Materials and Equipment

Construction materials shall be stored in a manner to ensure that:

- There is no obstruction of service roads, passages, driveways and footpaths;
- Where it is unavoidable to obstruct any of the service paths, the contractor shall provide temporary or alternate by-passes without inconveniencing the flow of traffic or pedestrians;
- There is no obstruction of drainage channels and natural water courses;
- There is no contamination of surface water, ground water and the ground;
- There is no access by public or unauthorized persons, to materials and equipment storage areas;
- There is no access by staff, without appropriate protective clothing, to materials and equipment storage areas; (hazardous, corrosive or poisonous substances including sludge, chemicals, solvents, oils, cement dust or their receptacles such as boxes, drums, sacks and bags)

Solid Waste Management

The Contractor shall institute a waste management system for the site.

- All wastes shall be disposed of offsite at a designated dumping site in consultation with the Chikwawa District Council.
- Burning of any waste on any construction site is forbidden.
- Supply waste bins throughout the site at locations where construction personnel are working. The bins shall be provided with lids and an external closing mechanism to prevent their contents blowing out and shall be scavenger-proof to keep out other animals that may be attracted to the waste.
- Bins shall be emptied twice a week and waste removed to a temporary storage site where it shall be properly contained in water and windproof containers until disposed of. The bins shall not be used for any purposes other than waste collection.
- Use the best practical means for preventing emissions of noxious or offensive substances into the air, land and water and make every effort to render any such emissions (if unavoidable) inoffensive and harmless to people and the environment. The means to be used for making the emissions harmless or for preventing the

- emissions shall be in accordance to the ESMP, and with the approval of the relevant Local Authority.
- Comply with the waste management regulations and local bye laws for disposal of empty cement bags, construction/demolition wastes, combustion products, dust, metals, rubble and timber.

Wastewater Management

- Wastewater treatment and discharge will conform to the applicable regulations by the relevant Local Authority and Ministry of Agriculture, Irrigation and Water Development.
- The Contractor shall construct the necessary and adequate sanitary collection facilities to prevent pollution. The Contractor shall dispose of collected waste water in a manner agreed with the respective councils.
- The oil should be stored in tanks and drums as hazardous waste and disposed of in an approved manner. Spill trays should be provided and used where appropriate.
- The Contractor may discharge "clean" silt laden water over land, preferably grass land at the construction site and allow this water to filter into the ground. However, the Contractor shall ensure that he/she does not cause soil erosion as a result of any over land discharge.
- All washing of equipment shall take place within the construction camp. Water from washing operations shall be collected in a conservancy tank, remove it from the site and disposed of in the agreed manner in consultation with local council.

Spill Prevention and Management

- All hazardous substances must be labeled and stored in tanks and containers. All containers need to be in good condition. All empty containers must have markers and labels and safely disposed in appropriate areas. In case of any spill;
 - Stop, contain and clean up the spill.
 - Identify the chemical.
 - If the spill cannot be controlled, call for help.
 - Evacuate immediate area and provide help for the injured.

Stockpiles, Quarries and Site Restoration

- Quarries shall be prohibited where they might interfere with the natural or designed drainage patterns. The contractor is advised to use quarry from existing quarry sites which are legally recognized.
- Wherever stockpiles are created, they should be cleared and disposed of properly after construction finishes.
- The Contractor shall ensure that all temporary structures, equipment, materials, and facilities used for construction activities are removed upon completion of the project.
- Ensure proper demolition of temporary structures especially toilets to prevent health and safety risk to the general public.
- Any oil and fuel contaminated soil shall be removed and buried in designated dumpsites in consultation with the Environmental District Office.

Natural Habitats

- The contractor shall ensure cutting down of trees is limited to construction within the building perimeter and where it's needed to cut trees beyond perimeter, the contractor should get approval from Forestry Department.
- In all relevant civil works projects, the contractor shall locate project facilities (permanent and temporary) so as to avoid or minimize the clearing of natural vegetation.
- The contractor shall enforce a strict prohibition on the washing of vehicles or changing of lubricants in waterways or wetlands.
- The contractor shall ensure that no operation may lead to degradation of water resource systems for both physical and chemical aspects which may affect the aquatic habitat.

Chance Finds Procedures for Physical Cultural Resources

If, during project construction, the contractor or project workers encounter archaeological relics, fossils, human remains, or other items of historical or other cultural value, the Contractor shall shall exercise measures stipulated in section 9.1.3 of the ESMP (Action Plan for Cultural Heritage) that, among others, includes;

- temporarily suspend any works which might damage these items; and
- notify the Client who then notifies the competent authority for instructions or guidance regarding the appropriate next steps to evaluate, salvage, recover, protect, and/or document the items found.

Occupational Health and Safety of Workers

The Contractor shall have an Occupational Health and Safety (OHS) Specialist that will oversee the implementation of the Occupational Health and Safety System that the contractor will develop. The implementation of the OHS System will ensure, among others, that the Contractor shall ensures that all workers use their Personal Protective Equipment (PPE) when required, and that Contractor provides a small clinic (including first aid kits) with a nurse available on-site or on-call at all times. In addition, one vehicle shall be available at all times to drive wounded staff to Chikwawa Hospital but where need be to Blantyre.

Construction sites pose occupational health and safety and probable risk to workers and general public. Furthermore, increased movement of vehicles and equipment during construction and operation of plant and machinery can pose a risk of accidents. Increased movement of vehicles and equipment during construction and operation of plant and machinery can also pose risk of accidents and injuries.

On Public safety risks: the increased number of trucks and machinery ferrying quarry and other road construction materials will increase the potential for road accidents. Lack of adequate warning signs will also be another source of accidents. If excessive dust is left unattended to accidents will increase in the Project impact area. Furthermore, the Contractors shall comply to the provisions of the Occupational Health and Safety Act 1997 and the World Bank Environmental and Social Standard on Health and Safety. The Contractor shall ensure the following:

To mitigate Occupational Safety and Health risks, the Contractor shall ensure that;

- All staff are provided with necessary PPE;
- The necessary lifting gear are provided;
- Appropriate training is provided to plant operators;

- Equipment is serviced regularly to maintain it in pristine condition;
- Staff are supervised and given appropriate instructions;
- First aid tool boxes and first aiders are made available at project site; and
- Workers are sensitized on safety regulations including what to do in case of injury.
- Workers shall be provided with clean potable water on the site, safety cooking places and shelter;
- Workers shall be provided with wash rooms and ventilated pit latrines;
- Exposure to physical, chemical, biological and radiological hazards is minimized; and
- Monitoring systems for ensuring EHS are in place and followed.

Worker Behavior

To help ensure that good environmental and social practices are consistently followed throughout project construction and operation, all workers, operational staff, and contract personnel shall be prohibited from;

- hunting,
- Fishing,
- Wildlife capture,
- Bush-meat purchase,
- Plant collection,
- Unauthorized vegetation burning,
- Over-speeding,
- Weapons possession (except by security personnel),
- Working without Personal Protection Equipment (PPE),
- Inappropriate interactions with local people and learners,
- Disrespecting local customs and traditions,
- Littering of the site and disposing trash in unauthorized places,
- Use of alcohol by workers during working hours,
- Sexual harassment, or
- Building fires outside camp areas without being authorized.

Worker – Community Relationship

The relationship with the communities surrounding the construction areas will generally follow, but not be limited to, the following rules:

- Respecting cultural diversity and the livelihoods of local communities;
- Respecting the sites of worship, religious symbols, cemeteries, and other Social emblems;
- Respecting the hours of silence and access restrictions, according to the traditions of local communities and engage community when diverting from the norm; this includes respecting community;
- Not encouraging any kind of child labor at construction sites and also avoiding the purchase of products sold by children and teenagers of less than the minimum age;
- It is forbidden for contractors and subcontractors to negotiate directly with the communities and compensate for damage caused to economic assets without prior knowledge of local authorities.

HIV and AIDS Work Place Policy and Training on HIV and AIDS for workers

The contractor shall prepare and adopt an HIV and AIDS Work Place Policy for the construction site indicating mitigation measures which shall be budgeted elements within the Bill Of Quantities for the construction project. The Mitigation measures shall include but not limited to:

- The contractor shall arrange for HIV and AIDS training programs.
- For the construction workers to ensure their understanding of the relevant issues.
- Provision of Appropriate IEC materials on site and some shall be distributed to workers on the site.
- Both male and female condoms shall be distributed to workers on the site.
- Affected Workers shall be allowed to access ART services without being rendered absent from work.
- Employment of workers shall not discriminate HIV and AIDS affected persons.

Child Labor, Gender Based Violence and Sexual Exploitation and Abuse

- Women and girls are the major victims of sexual harassment in the workplace and in the community.
- Harassed during employment, provision of services at the construction sites such as selling food items and others (domestic work).
- Most sexual harassment acts are not traditionally considered an offence in Malawi & many people in rural areas don't know it's a crime
- Most men and boys and even women and girls consider sexual harassment acts as part of the normal sexual relationship.
- Intention of the project to promote women's employment during the construction, SEA and other harassment will be prevented to limit its impact on women and the project.
- Social interventions including provision of information will be undertaken to address
 the knowledge gap on sexual abuse and exploitation and sexual harassment, its
 prevention.
- Any person under the age of 18 should not be employed in the project sites (No underage in project sites)
- Sexual exploitation and abuse happens in the absence of mutual agreement between two parties.

Contractors Codes of Conduct

Contractors are obliged to create and maintain an environment, which prevents social risks. They have the responsibility to communicate clearly to all those engaged on the project the behaviours which guard against any form of abuse and exploitation. In order to prevent Social risks, the following core principles and minimum standards of behaviour will apply to all employees without exception.

 SEA/SH or Violence Against Children (VAC) constitutes acts of gross misconduct and are therefore grounds for sanctions, penalties and/or termination of employment and/or contract. All forms of Social risks including grooming are unacceptable be it on the work site, the work site surroundings, or at worker's camps of those who commit GBV or VAC will be pursued.

Environmental and Social (ES) requirements

ENVIRONMENTAL AND SOCIAL POLICY (STATEMENT)

The Works' policy goal, as a minimum, should be stated to integrate environmental protection, occupational and community health and safety, gender, equality, child protection, vulnerable people (including those with disabilities), sexual harassment, gender-based violence (GBV), sexual exploitation and abuse (SEA), HIV/AIDS awareness and prevention and wide stakeholder engagement in the planning processes, programs, and activities of the parties involved in the execution of the Works. The Employer is advised to consult with the World Bank to agree the issues to be included which may also address: climate adaptation, land acquisition and resettlement, indigenous people, etc. The policy should set the frame for monitoring, continuously improving processes and activities and for reporting on the compliance with the policy.

The policy shall include a statement that, for the purpose of the policy and/or code of conduct, the term "child" / "children" means any person(s) under the age of 18 years.

The policy should, as far as possible, be brief but specific and explicit, and measurable, to enable reporting of compliance with the policy in accordance with the Particular Conditions of the Contract Sub-Clause 4.20 and Appendix C to the General Conditions of Contract.

As a minimum, the policy is set out to the commitments to:

- 1. apply good international industry practice to protect and conserve the natural environment and to minimize unavoidable impacts;
- 2. provide and maintain a healthy and safe work environment and safe systems of work;
- 3. protect the health and safety of local communities and users, with particular concern for those who are disabled, elderly, or otherwise vulnerable;
- 4. be intolerant of, and enforce disciplinary measures for illegal activities. To be intolerant of, and enforce disciplinary measures for GBV, inhumane treatment, sexual activity with children, and sexual harassment;
- 5. incorporate a gender perspective and provide an enabling environment where women and men have equal opportunity to participate in, and benefit from, planning and development of the Works;
- 6. work co-operatively, including with end users of the Works, relevant authorities, contractors and local communities;
- 7. engage with and listen to affected persons and organizations and be responsive to their concerns, with special regard for vulnerable, disabled, and elderly people;
- 8. provide an environment that fosters the exchange of information, views, and ideas that is free of any fear of retaliation, and protects whistleblowers;

9. minimize the risk of HIV transmission and to mitigate the effects of HIV/AIDS associated with the execution of the Works;

The policy should be signed by the senior manager of the Employer. This is to signal the intent that it will be applied rigorously.

MINIMUM CONTENT OF ES REQUIREMENTS

In preparing detailed specifications for ES requirements, the specialists should refer to and consider:

- project reports e.g. ESIA/ESMP
- consent/permit conditions
- required standards including World Bank Group EHS Guidelines
- relevant international conventions or treaties etc., national legal and/or regulatory requirements and standards (where these represent higher standards than the WBG EHS Guidelines)
- relevant international standards e.g. WHO Guidelines for Safe Use of Pesticides
- relevant sector standards e.g. EU Council Directive 91/271/EEC Concerning Urban Waste Water Treatment
- grievance redress mechanism including types of grievances to be recorded and how to protect confidentiality e.g. of those reporting allegations of GBV/SEA.
- GBV/SEA prevention and management.

The detail specification for ES should, to the extent possible, describe the intended outcome rather than the method of working.

The ES requirements should be prepared in manner that does not conflict with the relevant General Conditions of Contract and Particular Conditions of Contract.

PAYMENT FOR ES REQUIREMENTS

The Employer's ES and procurement specialists should consider how the Contractor will cost the delivery of the ES requirements. In the majority of cases, the payment for the delivery of ES requirements shall be a subsidiary obligation of the Contractor covered under the prices quoted for other Bill of Quantity items. For example, normally the cost of implementing work place safe systems of work, including the majors necessary for ensuring traffic safety, shall be covered by the Bidder's rates for the relevant works. Alternatively, provisional sums could be set aside for discrete activities for example for HIV counselling service, gender-based violence and SEA awareness and sensitization or to encourage the contractor to deliver additional ES outcomes beyond the requirement of the Contract.

Contractor's Representative and Key Personnel For Environmental and Social (ES) Requirements

Contractor's Representative and Key Personnel

Item No.	Position/specialization	Relevant academic qualifications	Minimum years of relevant work experience
1	Contractor's Representative		
2	Environmental Safeguards Specialist	Minimum Bachelors of Science degree in environmental management. Those with Masters degree will have an added advantage	Ten years of experience in construction related field or in similar work environment
3	Occupational Health and Safety Specialist	Minimum Bachelor of Science Degree in occupational health and safety. Those with Masters degree will have an added advantage	Ten years of experience in construction related or work related environment
4	Social Safeguards Specialist	Minimum Bachelor of Arts degree in sociology, social development or community development.	Ten years work experience in construction environment, development and implementation of resettlement action plans (RAP) and grievance redress mechanisms (GRM)
5	Gender Based Violence Expert	Bachelor of Arts degree in gender and development, social studies and / or related fields. Those with master's degree will have an added advantage	At least Ten years of monitoring and managing risks related to gender-based violence, out of which 3 years of relevant experience in addressing issues related to sexual exploitation, and assault

Specifications

Provided in Volume II Specifications

Drawings

Provided in Volume III Drawings

Supplementary Information