

PROCUREMENT OF SMALL WORKS

Request for Quotations

For Procurement Emergency Response Operations

(Contingent Emergency Relief Component (CERC))

Ref No: LLWDP/W/08 (5)

Project: Lesotho Lowlands Water Development Project II

Purchaser: Lesotho Lowlands Water Development Project II

Country: Kingdom of Lesotho

Issued on: March 2022

Procurement of:

Rehabilitation of Gravity, Electrical and Solar Water Systems at Nokong in Berea District

Ref No: *LLWDP/W/08 (5)*

Project: Lesotho Lowlands Water Development Project II

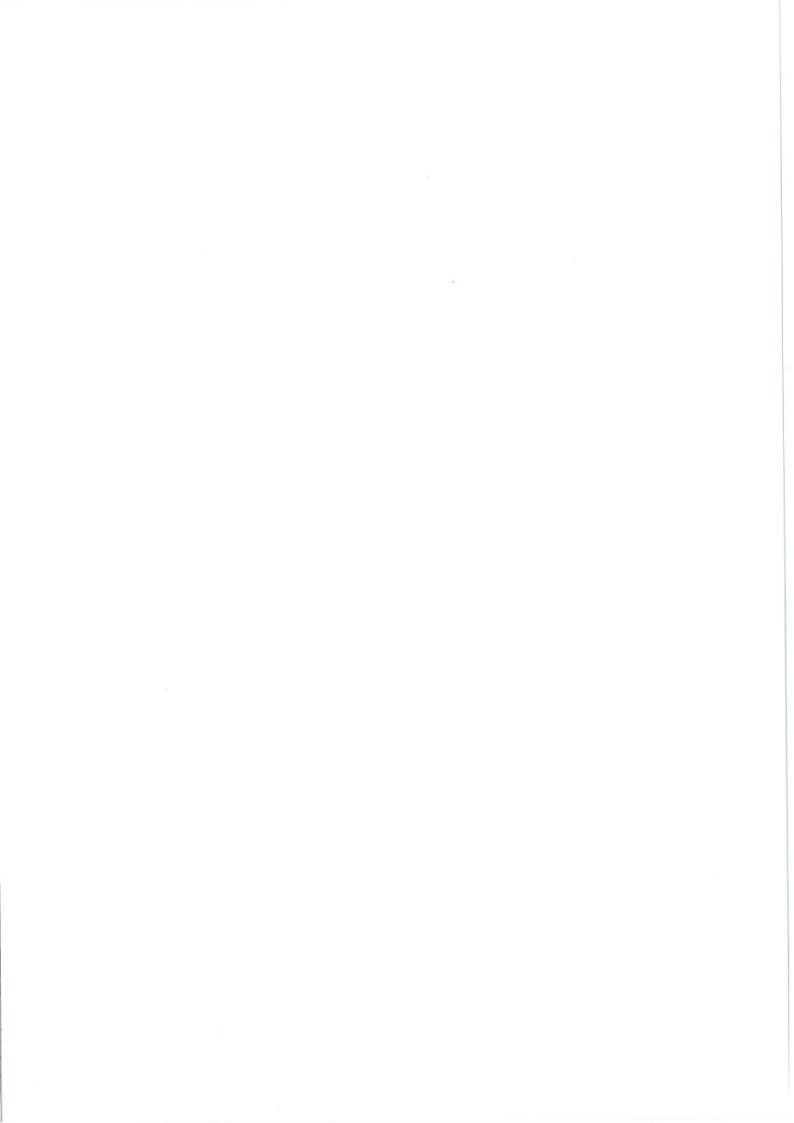
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Request for Quotations

RFQ Ref No.: LLWDP/W/08 (5)

RFQ Date: March 2022

To: Contractors

Request for Quotation (RFQ)

- 1. The Government of Lesotho has received financing from the World Bank (Bank) toward the cost of the Lesotho Lowlands Water Development Project II and intends to apply part of the proceeds toward payments under the contract for Contingent emergency Relief Component (CERC); Lot 5 Repair of Gravity, Electrical and Solar Water Systems in Berea District as follows:
 - (i) Nokong
 - (ii) Ha Ranthiba
 - (iii) Ha Ralekeke
 - (iv) Ha 'Matholoana
 - (v) Ha Nteleki
 - (vi) Kolojane Ha Seisa
 - (vii) Ha Mokhathi
 - (viii) Lekokoaneng/Lits'iling
 - (ix) Ha Sole
 - (x) Mokhethoaneng
 - (xi) Ha Makebe
- 2. The *Lesotho Lowlands Water Development Project II* now invites quotations from contractors for the Works described in Annex 1: Works Requirements, attached to this RFQ.

Fraud and Corruption

- 3. The Bank requires compliance with the Bank's Anti-Corruption Guidelines and its prevailing sanctions policies and procedures as set forth in the WBG's Sanctions Framework, as set forth in Appendix A to the Contract Conditions.
- 4. In further pursuance of this policy, Contractors shall permit and shall cause their agents (where declared or not), subcontractors, subconsultants, service providers, suppliers, and personnel, to permit the Bank to inspect all accounts, records and other documents relating to the RFQ and Contract performance (in the case of award), and to have them audited by auditors appointed by the Bank.

Eligible Materials, Equipment and Services

5. The materials, equipment and services to be supplied under the Contract and financed by the Bank may have their origin in any country subject to Para. 9. At the Employer's request, Contractors may be required to provide evidence of the origin of materials, equipment and services.

Eligible Contractors

- 6. In case the Contractor is a joint venture (JV), all members shall be jointly and severally liable for the execution of the entire Contract in accordance with the Contract terms. The JV shall nominate a representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the Request for Quotations process and, in the event the JV is awarded the Contract, during contract execution.
- 7. A Contractor may have the nationality of any country, subject to the restrictions pursuant to paras. 8 and 9 hereinafter. A Contractor shall be deemed to have the nationality of a country if the Contractor is constituted, incorporated or registered in, and operates in conformity with, the provisions of the laws of that country, as evidenced by its articles of incorporation (or equivalent documents of constitution or association) and its registration documents, as the case may be. This criterion also shall apply to the determination of the nationality of proposed subcontractors or subconsultants for any part of the Contract including Related Services.
- 8. Firms and individuals may be ineligible if so indicated in para.9 below and:
 - (a) as a matter of law or official regulations, the Borrower's country prohibits commercial relations with that country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of goods or the contracting of works or services required; or
 - (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's country prohibits any import of goods or contracting of works or services from that country, or any payments to any country, person, or entity in that country.
- 9. In reference to paras. 5 and 7, for the information of Contractors, at the present time firms, goods and services from the following countries are excluded from this procurement process:
 - (a) Under para. 5 and 8 (a): none.
 - (b) Under para. 5 and 8 (b): none.
- 10. A Contractor that has been sanctioned by the Bank, pursuant to the Bank's Anti-Corruption Guidelines, in accordance with its prevailing sanctions policies and procedures as set forth in the WBG's Sanctions Framework as described in the appendix to the Contract Conditions (Appendix A) paragraph 2.2 d., shall be ineligible to submit Quotations or be awarded or otherwise benefit from a Bank-financed contract, financially or otherwise, during such period of time as the Bank shall have determined. A list of debarred firms and individuals is available on the Bank's external website: http://www.worldbank.org/debarr.

- 11. Contractors that are state-owned enterprises or institutions in the Employer's country may be eligible to compete and be awarded a Contract(s) only if they can establish, in a manner acceptable to the Bank, that they:
 - (a) are legally and financially autonomous;
 - (b) operate under commercial law; and
 - (c) are not under supervision of the Employer.
- 12. A Contractor shall not have a conflict of interest. Any Contractor found to have a conflict of interest shall be disqualified. A Contractor may be considered to have a conflict of interest for the purpose of this Request for Quotations process, if the Contractor:
 - (a) directly or indirectly controls, is controlled by or is under common control with another Contractor that submitted a Quotation;
 - (b) receives or has received any direct or indirect subsidy from another Contractor that submitted a Quotation;
 - (c) has the same legal representative as another Contractor that submitted a Quotation;
 - (d) has a relationship with another Contractor that submitted a Quotation, directly or through common third parties, that puts it in a position to influence the Quotation of another Contractor, or influence the decisions of the Employer regarding this Request for Quotations process; or
 - (e) or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the Request for Quotations process; or
 - (f) or any of its affiliates has been hired (or is proposed to be hired) by the Employer or Borrower for implementing the Contract; or
 - (g) would be providing goods, works, or non-consulting services resulting from, or directly related to consulting services for the preparation or implementation of the project specified in this Request for Quotations, that it provided or were provided by any affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm; or
 - (h) has a close business or family relationship with a professional staff of the Borrower (or of the project implementing agency, or of a recipient of a part of the loan) who: (i) are directly or indirectly involved in the preparation of the Request for Quotations or specifications and/or the evaluation of Quotations, of the subject Contract; or (ii) would be involved in the implementation or supervision of such Contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to the Bank throughout the Request for Quotations process and execution of the Contract.

Performance Security

13. The successful Contractor shall submit a Performance Security in accordance with the Contract Conditions.

Validity of Quotations

14. The quotations shall be valid until Friday April 22, 2022

Price

- 15. The Contractor shall quote its total price in the Contractor's Quotation Form.
- 16. The Contractor shall also fill in its rates and prices for all items of the Works described in the attached Bill of Quantities. Items against which no rate or price is entered by the Contractor will not be paid for by the Employer when executed and shall be deemed covered by the rates for other items and prices in the Bill of Ouantities.
 - The rates and prices shall include all duties, taxes, and other levies payable by the Contractor under the Contract, as of the date 7 (seven) days prior to the deadline for submission of quotations
- 17. A Contractor expecting to incur expenditures in other currencies for inputs to the Works supplied from outside the Employer's Country and wishing to be paid accordingly, shall indicate a foreign currency of its choice in addition to the local currency in: LSL
- 18. The currency(ies) of the Quotation and the currency(ies) of payments shall be the same.

Technical proposal

19. The Contractor shall furnish a technical proposal including a statement of work methods, equipment, personnel, schedule and any other relevant information, in sufficient detail to demonstrate the adequacy of its proposal to meet the work's requirements and the completion time.

Clarifications

20. Any clarification request regarding this RFQ may be sent in writing to *Motlatsi Rabolinyane at mrabolinyane@llwdp.co.ls* with copies to *thaanyaner@gmail.com* and *mdaemane@llwdp.co.ls* before 12:00 Noon on Friday March 18, 2022. The Employer will forward copies of its response to all Contractors including a description of the inquiry but without identifying its source.

Submission of Quotations

- 21. Quotations shall be submitted in the form attached at Annex 2 and delivered to the Offices of Lesotho Lowlands Water Development Project offices situated at 788/9 Fairview Avenue, Lower Thetsane, Maseru Lesotho. To facilitate the procurement process, the Contractors are required to additionally submit copies of the same quotations as soft copies in Word and Excel
- 22. The deadline for submission of Quotations is 11:00 am, 23rd March 2022 Lesotho Time
- 23. The address for submission of Quotations is:

Attention: Procurement Office

Lesotho Lowlands Water Development Project

788/9 Fairview Avenue, Lower Thetsane, Maseru Lesotho

Opening of Quotations

24. Quotations will be opened by the Employer's representatives immediately after the deadline for the submission of Quotations.

Evaluation of Quotations

- 25. The quotations will be evaluated to determine substantial responsiveness of the technical proposal.
- 26. For evaluation and comparison purposes, the currency(ies) of the Quotations shall be converted into a single currency. The currency that shall be used for comparison purposes to convert at the selling exchange rate offered prices expressed in various currencies into a single currency is: US\$. The source of exchange rate shall be: Central Bank of Lesotho. The date for the exchange rate shall be: 23rd March 2022.
- 27. For technically compliant quotations, the total evaluated prices, excluding provisional sums and any provision for contingencies but including day works where priced competitively, will be compared to determine the lowest evaluated price/s.

Contract Award

- 28. The Contract will be awarded to the Contractor who meets the eligibility requirements in accordance with the RFQ, offers the lowest evaluated price/s, offers a technically compliant quotation, and guarantees completion of the Works by the specified date.
 - 28. The Employer shall invite by the quickest means *e-mail* the successful Contractor/s for any discussion that may be needed to conclude the contract or otherwise for contract signature.
 - 29. The Employer shall communicate by the quickest means with the other Contractors on its contract award decision. An unsuccessful Contractor may request clarifications as to why its quotation was not determined to be successful. The Employer will address this request within a reasonable time.
 - 30. The Employer shall publish a contract award notice on its website with free access, if available, or in a newspaper of national circulation or UNDB online, within 15 (fifteen) days after award of contract. The information shall include the name of the successful Contractor, the Contract Price, the Contract duration, summary of its scope and the names of the Contractors and their quoted and evaluated prices.

On behalf of the Employer:

Signature:

Name: Mathealira Lerotholi

Title/position: Project Manager

Attachments:

Annex 1: Works Requirements
(Drawings attached as a Separate Folder)
Annex 2: Quotation Form

Annex 3: Contract Forms

ANNEX 1: Works RequirementsSpecifications

The Employer:

Ministry of Water (LLWDP II)

The Project Manager:

District Engineer

The Supervisor:

DRWS Construction Supervisor

The Works:

Maintenance of Rural Water Supply Systems in Berea

District

The Specifications:

'Drawings' and Volume 7 'DRWS Construction

Specification' - March 2015, 'HDPE Alternative piping

Materials, January - 2006'

The minimum requirements to be met by the Contractor:

Construction Supervisor:

Degree/Btech in civil/ water engineering or construction

management/building technology three years working

experience in construction site supervision.

Site Foreman:

Diploma in civil/ water engineering or construction

management/building technology three years working

experience in Site foreman.

Mason/Plumber:

Certificate in Bricklaying or Plumping and five years

working experience as Mason/Plumber on rural water

sector projects

Electrician:

Certificate in Electrical Installation and five years working

experience.

Vehicle:

One Truck or 4x4 Pick-up in working condition.

Tools:

One set of mason, plumbing and electrical tools and

equipment required for construction of DRWS Standard

structures.

Performance Guarantee:

10% of Contract Value.

Ministry of Water Department of Rural Water Supply

The Key People:	
Const. Supervisor:	Name:
	Qualification:
	Experience:
Site Foreman:	Name:
	Qualification:
	Experience:
Mason/Plumber:	Name:
	Qualification:
	Experience:
Electrician:	Name:
	Qualification:
	Experience:
The Logistics allocat	ted for the Services are:
Vehicle/s:	Registration No:
	Make & Model:
	Year:
Tools & Equipment ((To be used in the project):

The Contractor:

Government of the Kingdom of Lesotho

Ministry of Water

Department of Rural Water Supply

Technical Unit



DRWS Construction Specification

October 2015

CONSTRUCTION SPECIFICATIONS

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PART B - Description of Work

A.1. Concrete

A.1.1 Cement

Cement used for water supply structures shall conform to SABS 471 or alternatively Portland Cement according to SABS 197-1 (Strength 42.5).or alternatively, All purpose cement (Strength 32.5).

Cement shall be delivered in fifty (50) Kg bags. When delivered to the site the bags shall be in perfect condition and shall not be more than three (3) months old at the time of delivery. The cement shall be properly stored in a dry place and shall not be more than (6) months old when used.

Any torn bags and bags showing evidence of dampness or caking shall not be accepted and shall be removed from the site.

A.1.2 Aggregates

Course aggregate used for concrete shall be crushed dolerite, which is 19millimeters in size. Coarse river sand is not accepted as aggregate for concrete.

Sand used for concrete and for mortar shall be rough river sand, clean, free of soil and silt and shall contain no more than 5% of clay. The grains shall be of a maximum size of five (5) mm.

An alternative to the sand shall be the crushed rock sand being used for the construction of the Katse and Mohale dams in the Highlands water schemes of the country.

Aggregates shall be stored in such a way that the different sizes are separately stored and in such a way that segregation is minimised and intermixing of different materials and contamination by foreign matter is prevented.

A.1.3 Water

Water used for mixing of concrete shall be clean, free of oil and grease and shall have no turbidity. The Ph shall be between 6 and 8.

A.1.4 Reinforcement

Reinforcement mesh shall be REF 193 only and shall conform to SABS 1024. Mesh shall be delivered in sheets of 14.4m².

Mild steel bars shall be eight (8) mm diameter bars conforming to SABS 920. Bars shall be delivered in lengths of 6m.

Reinforcement shall be stacked off the ground to prevent distortion and dirt or rust.

A.2. Bricks and Stones

Bricks shall conform to SABS 227 and shall have a minimum strength of 41 Mpa and shall have maximum water absorption of 5% when immersed in water for 15 hours. The size of bricks shall be length 225 mm (+/- 3 mm), breadth 107 mm (+/- 2 mm) and height 75.5 mm (+/- 2.5 mm). Bricks from Loti Brick classified as 'Mohokare', 'Loti Rust' and 'Heart' fulfil the specifications. Bricks of other classifications shall be tested prior to delivery to site.

Sandstone used for building structures shall be non-porous and hard.

Dolerite stone can also be used for the construction of structures where the natural shape allows since it is difficult to shape dolerite stone.

A.3. Pipes and Fittings

A.3.1 Galvanized Steel Pipes and Fittings

<u>Pipes:</u> Galvanised steel pipes are medium duty unless specifically specified light or heavy duty. The pipes and fittings shall comply with SABS 62. Pipes shall be delivered in lengths of 6m with length tolerance of 0 to + 50mm. Minimum wall thickness shall be as follows:

Pipe Size	Light Duty	Medium Duty	Heavy Duty
20 mm	2.1 mm	2.3 mm	2.8 mm
25 mm	2.4 mm	2.8 mm	3.5 mm
32 mm	2.4 mm	2.8 mm	3.5 mm
40 mm	2.6 mm	2.8 mm	3.5 mm
50 mm	2.6 mm	3.2 mm	3.9 mm
65 mm	3.0 mm	3.2 mm	3.9 mm
80 mm	3.0 mm	3.5 mm	4.2 mm
100 mm	3.3 mm	3.9 mm	4.7 mm
1 0 0 11111			

Pipes shall be tested to 5Mpa. Pipes shall be supplied with a galvanised steel socket in one end and a protective plastic cap in the other end. Alternatively the pipes can be supplied with protective caps on both ends and the sockets supplied separately.

<u>Fittings:</u> Pipe fittings shall conform to SABS 509 'Standard Specification for Malleable Cast Iron Pipe Fittings'. All pipes and fittings shall be for screwed joints with taper male and female threads in accordance with SABS 1109. Pipes and fittings shall be galvanised inside and outside in accordance with SABS 763.

Maximum pressure for cast iron fittings is 140 m and special high-pressure steel fittings shall be used for pipe sections with pressure above 140 m.

A.3.2 Brass Fittings

Bib cocks shall conform to SABS 226. They shall be light pattern plain bib tap cobra no. 200 rough brass. The size shall be 20mm.

Gate valves shall be cobra no.1002/125cast brass full gate valve, class 8, with bonnet type head, non-rising spindle and guided wedge. Taper thread female end connections.

Check valves shall be cobra no. 1022 cast brass swing type check with female ends.

Float valves shall be cast brass valves with copper/brass ball.

Globe valves shall be cobra no.121 cast brass valve, heavy pattern SABS 226 – 1987 – class1.

The SABS stamp shall be clearly marked on any brass fittings accepted by DRWS.

Water meters shall Kent PSM cold potable water meters or of a similar or better quality.

A.3.3 Klambon Pipes and Fittings

Pipes shall be galvanised and conform to SABS 1182. The material properties shall comply with that of SABS 62. Pipes shall be delivered in lengths of 6m with length tolerance of 0 to + 50mm. Wall thickness shall be 1.5mm for 25mm to 50mm pipes and 1.8mm for 65mm to 100mm pipes. Pipes shall be tested to 5Mpa.

The coupling housing material and cast grooved fittings shall be of Ductile – Spheroidal Graphite Iron equivalent to ASTM A 536 - 1980 65.45.12. Fabricated grooved fittings shall be from resistance seam welded mild steel pipe. Gasket seal is EPDM. The bolts shall be cup-head oval neck-UNC Thread-ANSI B18.10.1982. Grade 5 (C L 8.8) Electro Zinc Plated. The nuts shall be Hexagon Heavy Duty UNC Thread-Electro Zinc Plated.

A.3.4 High density polyethylene pipes and fittings (HDPE and fittings)

The pipes used for rural water supplies shall be black in colour and shall conform to SABS 1008-41 and shall be PE 80, PN 16, SDR 9.

The length of the coils shall be not less than that agreed between the supplier and user.

All coils shall be marked at maximum intervals of 1m and the marking shall at least indicate the following information:

- the manufacturer's name and/or trade mark;
- the dimensions (nominal outside diameter x nominal wall thickness);

- the outside-diameter tolerance (A or B)
- the designation of the pipe material (PE 80)
- the nominal pressure (PN);
- the pipe series (S or SDR) (optional);
- the production period (date or code);
- the number of this International Standard.

The word "water" may also be included.

Note: PN16 pipe has be chosen as it has a thicker outside diameter and does not kink easily.

The couplings used shall be COMP-510-ASHTORE or Unidelta code 1001 or similar. The reducing couplings shall be COMP-512-ASHTORE or Unidelta code 1002 or similar.

The tees shall be COMP-514-ASHTORE or Unidelta code 1005 or similar. The male adaptors shall be COMP-511-ASHTORE or Unidelta code 1003 or similar The elbows (90 degrees) shall be COMP-513-ASHTORE or Unidelta code 1006 or similar.

The high pressure shall be SADD-505-BLUE (Magnum PN 16).

A.3.5 Polyvinyl pipes and fittings (PVC pipes and fittings)

The pipes shall be manufactured to specification NO. R55-1993 in DPI plastics ISO 9002.

The standard length is 6 metres which will include an integral lying rubber joint.

The pipe to be used for Rural water supply systems shall have a working pressure of 1600MPA or 160m which is class 16.

Note: class 16 has been chosen because it withstands a working pressure that is very close to the working pressure of the medium duty GI pipes which is used in the systems of the department of Rural Water Supply.

All fittings which include equal tees, reducing tees, reducers, end caps, saddles, repair couplings and elbows shall be manufactured to conform to the material requirements of SABS 936.

These fittings are socketed and the socketed dimensions conform to SABS 966 and are rated class 25-2500 Kpa working pressure.

A.4. Manhole frame and cover

Manhole frame and cover over water surfaces shall conform to SABS 10111. The size shall be 45cm by 60cm.

Manhole covers over pump installation chambers shall be fabricated from mild steel according to the drawing for 'Lockable Manhole Cover, DRWS'. The frame shall be made of 75mm x 50mm x 6mm unequal angle iron. The lid shall be made from 6 mm mild steel plate 1140mm x 900mm. The manhole cover shall be painted with corrosion protection paint.

A.5. Fencing Materials

A.5.1 Pump Installation Security Fence

The fence shall be 1.8m high. All materials used for the fence shall be galvanised. The corner posts shall be 76.5mm diameter, 2.4 m long with 45cm overhang and 2 stays. Intermediate posts shall be 50mm diameter, 2.4 m long with 45cm overhang. The diamond mesh shall be 2.5mm diameter with 75mm square openings. The plain wire used to support the diamond mesh shall be 4mm in diameter mounted at 30 cm interval vertically. Razor wire shall be installed in one loop on the 45cm overhang.

Gates for vehicle access shall be double gates 1.8m high, total 3.0 m wide, which shall be placed on the borehole side of the pump house. The vehicle gates shall be mounted on corner posts supported by stays. The gate for pedestrian access shall be 1.8m high and 1.2m wide and shall be placed on the side opposite the vehicle access gate. The pedestrian gate shall be mounted on intermediate posts.

The standard size pump installation security fence consists of:

- 6 corner posts;
- 12 stays;
- 10 intermediate posts;
- One roll of 30 m length and 1.8m height of diamond wire mesh;
- One roll of 30 m razor wire;
- 280 m of 4 mm plain galvanised wire;
- 5 kg of binding wire;
- vehicle access double gate total 3.0m wide and 1.8m high;
- pedestrian gate 1.8m high and 1.2m wide.

A.5.2 Spring Catchment fence

Spring Catchment fence shall be post and barbed wire fence, 1.2 m high. Corner posts shall be 5" cresolite poles 1.8m long. Standards shall be Y shaped iron standards with holes for fastening the wire. Droppers shall be 1.2m long iron droppers. Barbed wire shall

be galvanised standard barbed wire in 50 kg rolls. Bailing wire shall be 1.5mm galvanised wire.

A6. Diesel Engine House doors and windows

A.6.1 Doors

The door for the diesel engine pump house shall be one 9" steel doorframe with two doors. The outside door shall be type A with AV vent opening size 81.5 cm x 203 cm opening outside with a special pad lock protection as shown on Drawing B 10 B.

The inside door shall be a security door lockable from inside with a 200mm shooter-bolt for pad lock. The security door shall be made of a 20mm square mild steel tube (wall thickness 2mm) placed vertically at 100mm interval and one horizontal tube at the level of the lock. The two padlocks shall be 100mm heavy duty Viro padlocks.

Frames and doors shall be painted with corrosion protection paint after welding.

A.6.2 Windows

For each diesel engine house there shall be two W1 type windows, which shall be louvered window type ALV/BLV of size 158 by 74.5 cm.

A.7. Gabions

The gabions are fabricated to SABS 1200 D.K. standard. The gabions are made from 2.7 mm galvanised wire to SABS 675 Class A. The mesh has 80 mm x 100 mm openings. The sizes are $2m \times 1m \times 0.5m$ or $2m \times 1m \times 1m$.

A.8. Timber and nails

Timber shall be SA Pine of good quality. Timber shall be straight with maximum tolerances of 10 mm per metre.

Nails shall be wire nails of specified length.

A.9. Dicing Oil and Thread-sealing Tape

Dicing oil shall be un-used and delivered in 5 litre sealed containers. The dicing oil shall be of a quality approved for drinking water supplies.

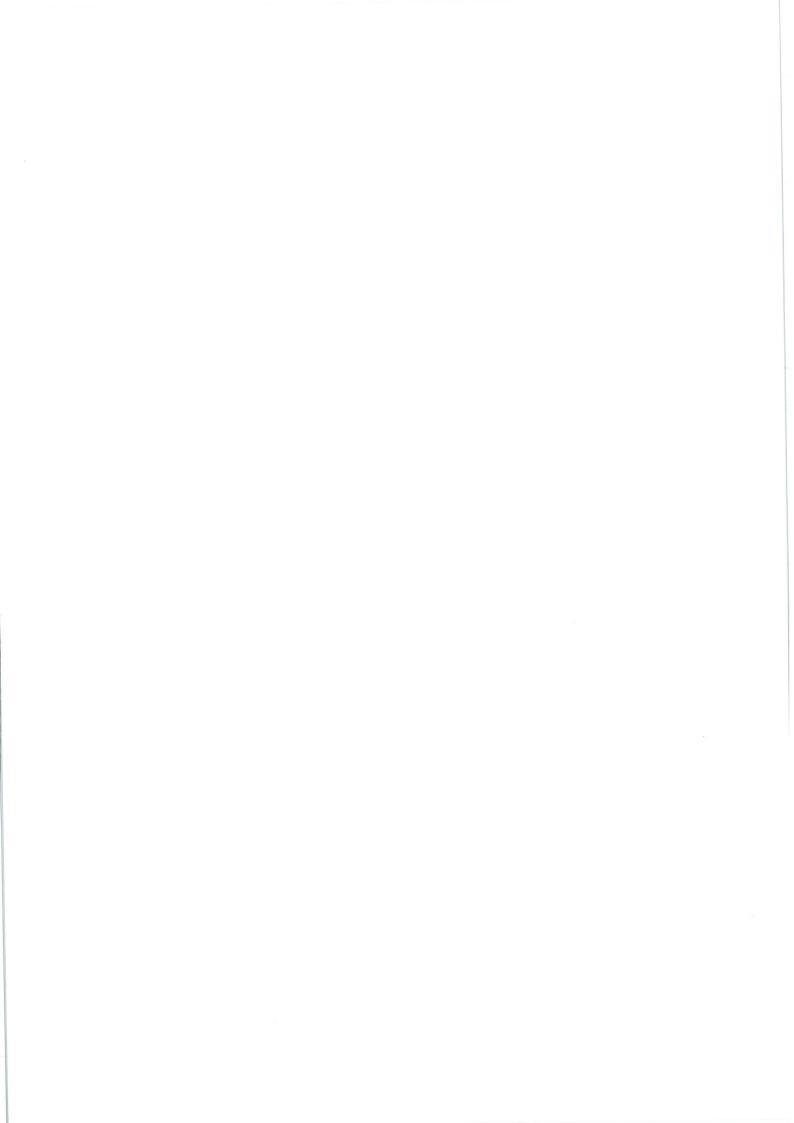
Thread-sealing tapes are standard plastic based thread-sealing tapes in rolls of approximately 30 m.

A.10. Water-minder Tool Box

The water- minder toolbox shall be a loose tray lift out box L450 by W175 by H200 No.1103. It shall be supplied with a medium duty Viro padlock.

The contents of the box shall be:

- One 18 inches JOHN-LEO P1385 pipe wrench
- One 12 inches JOHN-LEO P1383 pipe wrench.
- One Geodore 12 inches shifting spanner
- Two thread sealing tapes in rolls of approximately 30 m in length.
- 1.5m Alluminium step ladder
- Hacksaw + 2 extra blades
- One roll insulation tape



CONSTRUCTION SPECIFICATIONS

PART B - Description of Work

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B.1. Pipework

B.1.1 Excavation and Back-filling

The minimum cover over any pipeline is either 60cm of soil or 20cm of stone masonry build on top of the pipe.

Excavation for pipelines in soil shall have a width of 40 cm and either a depth adequate for covering the pipeline with 60 cm of soil or excavated to a solid rock surface.

Back-filling of soil over the pipeline shall be done in layers of 20 cm and compacted manually between the layers. The first layer over and around the pipeline shall be free of stones larger than 5 cm in diameter.

In places where a depth of the trench of 60cm cannot be reached because of rock, the rock shall be excavated to a depth of 30 cm if the rock is soft and can be excavated using hand tools such as crowbar, hammer & chisel, pickaxes etc. After laying the pipe, the trench in rock shall be back-filled with broken rock or stones and cement-sand mortar mixed 1:4.

Only in places where the rock is too hard to be excavated by hand, the pipeline shall be laid on the rock surface and a stonemasonry wall with the dimension 40cm wide and 20cm above the pipeline shall be constructed using cement-sand mortar mixed 1:4.

Any trench in soil above the stone masonry pipe cover shall be back-filled and compacted.

B.1.2 Pipe laying

Before laying and joining, all soil and other matter shall be removed from inside of the pipe by holding it vertically upwards. Clean the threads with a steel brush before applying five (5) layers of thread sealing tape to make a watertight joint between pipes. The connection of pipes is made using fittings. Bends and elbows shall be installed at changes in direction of the pipeline. Bending of pipes to form bends is not permitted.

When a pipe has to be cut and threaded, the lengths of the threads for the various pipe diameters shall be:

- 20mm pipe: 15mm thread
- 25mm pipe: 17mm thread
- 32mm pipe: 19mm thread
- 40mm pipe: 21mm thread
- 50mm pipe: 24mm thread
- 65mm pipe: 27mm thread - 80mm pipe: 30mm thread

B.1.3 Washouts

Washouts shall be installed on positions marked on the site plan. The washouts shall be constructed at the low points so as to permit draining of the pipelines and flushing of sediments. Unless otherwise specified, washouts shall be constructed with a tee on the pipeline facing down, M&F bend and a pipe sloping down with a length so that the end of the pipe is above ground level. The end of the pipe is closed with a plug, and shall be protected with stone masonry according to the ground conditions, typically of a size of 0.5 m x 0.5 m.

B.1.4 Air vents

Pipelines shall be laid so that high points occur at natural air release points such as standpipes or service connections. Air-vents shall be installed at highpoints in accordance with the layout plan. Air-vents shall normally be a tee facing up and closed with a plug to be opened manually, or where the pressure allows, a vent pipe shall be installed. The air-vent shall be protected with stone masonry according to the ground conditions, typically of a size of 0.5 m x 0.5 m x 0.5 m.

If an air-release valve is specified, a valve chamber 45 cm x 60 cm shall be constructed to protect the valve.

B.1.5 Pipe sleeves

Where the normal cover of the pipeline is not possible, the pipeline shall be sleeved. The diameters of the sleeves to the different pipe diameters shall be:

- 40mm for 20mm and 25 mm pipe,
- 50mm for 32mm pipe,
- 65mm for 40mm pipe,
- 80mm for 50mm pipe and
- 100mm for 65mm pipe.

The ends of the sleeve pipe shall always be anchored in a concrete foundation minimum 40 cm x 40 cm x 40 cm.

B.1.6 Road crossings

Where possible road crossings shall be through an existing road culvert. The water pipe shall be placed in the culvert in a way that it does not obstruct the flow in through the culvert. If it is not possible to cross the road through an existing culvert, the Ministry of Works/ Roads Directorate shall be contacted before excavation in constructed roads.

Pipelines crossing a road shall be sleeved. The sleeve shall extend 2 meters from the drain on both sides of the road.

B.1.7 Donga crossing

Pipelines can cross dongas either as a suspended pipeline or under the bottom of the donga and protected by gabions or other form of strong cover. Reference to drawing D-04.

The diameter of sleeves for suspended donga crossings shall be as specified above for sleeve pipes. Supporting pillars and end of sleeves shall be anchored in concrete foundations (PC 250) minimum 40 cm x 40 cm x 40 cm. Supporting pillars shall be constructed outside the water course in the donga.

Gabions are supplied folded. On site they are opened and assembled by wiring together all the corners. Empty units are subsequently joined together along all adjacent edges, both horizontally and vertically. The filling is carried out with hard stones of a size slightly larger than the openings in the mesh. The filling should be done so that the sides of the gabions are straight. The gabion is filled to one half of the volume and bracing wires are placed inside every 50cm. The gabion is then filled to the full volume and bracing wires are placed on top of the stones before closing the gabion.

Foundation for the bottom gabion shall be excavated to a level where the ground is firm and free of topsoil and to at least half of the height of the gabion. The foundation shall be level. A gabion of size $0.5 \,\mathrm{m} \times 1 \,\mathrm{m} \times 2 \,\mathrm{m}$ shall be placed in the middle of the donga and normal size gabions $1 \,\mathrm{m} \times 2 \,\mathrm{m}$ on the sides so that the water will flow in the middle of the donga. The end of the gabions shall extend a minimum of 2 meters inside the wall of the donga.

B.1.8 Scour Checks

The back filling of trenches on steep slopes needs careful attention. Surface water tends to wash out the back-filled material. To prevent this, scour checks are built in the trench while back filling. The scour check is a stonemasonry walls build inside the trench of a minimum dimension of 60 cm deep and 100 cm long and 20 cm wide, extending into the walls of the trench.

Scour checks are constructed when the slope of the ground is more than 10 degrees. The scour checks are constructed every 5 meters when the slope is between 10 and 20 degrees and every 3 meters when the slope is above 20 degrees.

B.1.9 Pipeline markers

Spring catchments, tees, private connections and ends of pipe sleeves including road crossings shall be clearly marked with a pipe line marker. The pipeline marker is a 1 meter long pieces of pipe of a diameter the same as the pipe in the ground. The pipeline marker is embedded 50cm in concrete. The marker is placed on top of the tee or the end of the sleeve, which it shall mark.

B.1.10 Valves

Valves are installed in brick or stone masonry valve chambers covered with pre-cast slabs according to drawing no S/B-04. Valve chambers at tanks shall be constructed parallel to the tank wall and at a distance between the tank and the valve chamber of 50cm.

B.1.11 Pressure Testing of Pipelines

No pipe shall be covered prior to inspection by the construction supervisor. Pipe joints shall be left un-covered until pressure testing has been performed.

Pressure testing is performed by filling with water the section of the pipe system, which has to be tested. All taps and washouts shall be plugged. All pipe joints shall be inspected for leaks and pipeline re-jointed if leaks appear.

B.1.12 Private Connections

Tees (including reducing bush to 20mm and a 20mm plug) shall be installed for private connections during the construction of pipelines in the water distribution system. The tees shall be installed for all connections, which are anticipated within the design period of the water system. The location of the tee shall be marked with a 20mm pipeline marker. The household installing the private connection shall hire a qualified contractor to install the connection from the tee to the yard or house and pay for all materials and labour costs. Only the tee, reducing bush and plug is included in the construction contract for the water system.

B.2. Concrete Work

B.2.1 Excavation for foundations for structures

Excavations shall be carried out to a solid level platform free from topsoil. Excavations shall be large enough to allow space for free movement during construction. Unconsolidated or filled material is not accepted under structures. Lean concrete 1:6:10 shall be cast as a base for reinforcement and the concrete slab covering an area 20 cm larger than the size of the structure.

B.2.2 Mixing, placing and compaction

Standard gauge boxes of dimensions in millimetres 300 by 300 by 356 deep shall be used to measure the volumes of the sand and aggregates. This volume is the equivalent of one 50 kilograms bag of cement. Alternatively mortar boxes or other containers can be used to measure cement, sand and aggregates. If wheelbarrows are used for the measuring of aggregates, the top shall be levelled with a straightedge to ensure that the volumes are accurate.

The concrete must be mixed in suitable quantities sufficient only for that section of the work under construction.

If a mechanical concrete mixer is not used, the following method of hand mixing shall be used:

- The mixing shall be done on a lean concrete platform of PC 100 or mix (1:6:10) and shall be of minimum dimensions 2.0m by 2.0m by 50mm thick.
- The measured quantity of sand and cement are spread out on the mixing platform and mixed dry using a shovel turning the mixture over and over until a uniform colour is achieved.
- The sand cement mix is spread in a uniform layer of 10cm thickness and the measured quantity of course aggregate is spread in an even layer on top. Mix dry using a shovel turning the mixture over and over until the sand cement mixture and the course aggregate is uniformly mixed. The uniform mixture is spread out in the thickness of about twenty (20) cm.

- Water is sprinkled over the mixture and simultaneously turned over. The operation is continued until a uniform homogeneous concrete is obtained. Water in small quantity shall be added by sprinkling towards the end of the mixing to get the required consistency.

Concrete for foundations of major structures (tanks of 15 m³ and above in volume) shall be vibrated with a mechanical vibrator. Concrete shall be placed in one horizontal layer and compacted using a probe type vibrator. The vibration shall be continued until no air bubbles appear and the surface of the concrete has a glazed appearance.

Concrete in smaller structures shall be compacted by ramming with a clean wooden pole until the concrete is well compacted.

Concrete for major structures (tanks of 15 m³ and above in volume) shall only be cast in the presence of the construction supervisor or after the written approval of the supervisor to continue with the casting. The contractor shall notify the supervisor three (3) days prior the day of casting concrete, so that the supervisor makes arrangements to be present on the site.

B.2.3 Concrete curing

All concrete shall be protected from rapid drying by covering for at least fourteen (14) days with polyethylene sheets. Protection of the concrete against rapid drying shall start immediately after the concrete is cast.

No building shall start on top of the foundation slabs until the concrete is twenty-four (24) hours old.

B.2.4 Concrete mixtures for DRWS Structures

PC 100 which is mix (1:6:10): This is lean concrete used for levelling uneven surfaces, concrete mixing platforms even for the blocks used for construction of VIP latrines etc. The

minimum twenty-eight (28) day crushing strength shall be fifteen (15) Newton per square millimetre. The minimum seven (7) day crushing strength shall be eight (8) Newtons per square millimetre.

PC 200 which is a mix (1:3:5): This mix is used for DRWS structures that are not reinforced. The minimum twenty-eight (28) day crushing strength shall be twenty (20) Newtons per square millimetre. The minimum seven (7) day crushing strength shall be fourteen (14) Newtons per square millimetre.

PC 250 which is a mix (1:2.5:4): This mix is used for DRWS structures that are reinforced like foundations, platforms and covering of tanks and siltboxes etc. The minimum twenty-eight (28) day crushing strength shall be twenty-five (25) Newtons per square millimetre. The minimum seven (7) day crushing strength shall be seventeen (17) Newtons per square millimetre.

PC 300 which is a mix (1:2:3): Used for concrete where a higher strength is required or necessary like the pre-cast slabs used for covering tanks and standpipe pillars. The minimum twenty eight (28) day crushing strength shall be thirty (30) Newtons per square millimetre. The minimum seven (7) day crushing strength shall be twenty-one (21) Newtons per square millimetre.

The above mixes shall be used when using high strength cement (42.5) but when using All Purpose cement:

For PC 250, use a mix of (1: 2.5: 2.5)

For PC 300, use a mix of (1:2:2)

For PC 100 and PC 200, the mixes shall remain the same.

B.2.5 Reinforcement

Reinforcement shall be positioned accurately according to the drawings. Tolerance for location of reinforcement is 10 mm. Reinforcement rods shall be bound with 1 mm binding wire on all junctions. The reinforcement shall never be placed on the soil surface, but on lean concrete. The side and top cover to the reinforcement in the foundations for structures shall be 15cm.

Spacer blocks shall be provided to ensure the reinforcement is correctly positioned in the works. Spacer blocks shall be 40mm x 40mm x 40mm. Each spacer block shall be made of PC 300 concrete and binding wire shall be securely embedded into each block to permit adequate fastening to the reinforcement.

B.2.6 Concrete testing

The strength of the concrete will be tested by the Construction Supervisor and the Quality Inspector using 'Concrete Test Hammers'.

If the testing shows the strength of the concrete to be less than the specified strength for the particular grade of concrete, the contractor shall at his own expense remove the defective concrete and reconstruct with fresh concrete.

The contractor shall ensure that the consistency of the concrete remains within acceptable limits. The construction supervisor can require slump tests to be carried out if the consistency is questionable. The contractor will be required to supply the equipment for slump tests. The slump cones shall conform to SABS 863.

B.2.7 Form-work

Form-work shall be sufficiently watertight to prevent any loss of liquid from the concrete. Form-work shall be constructed of materials of such quality and strength as to ensure rigidity through out the placing, vibration, compaction, setting and hardening of the concrete. Before placing any concrete all rubbish and all foreign matter shall be removed from the inside of the form-work and the inside of the form-work shall be thoroughly washed with water. Before re-use all form-work shall be properly re-conditioned and all form surfaces that are to be in contact with the concrete shall be thoroughly cleaned.

Form-work shall at earliest be removed when the concrete is twenty-four (24) hours old. Form-work shall be removed with care so as to avoid injury to the concrete.

B.3 Masonry

B.3.1 Brickwork

All DRWS structures shall be build in English bond.

The walls of structures of volume up to 15 cubic meters shall be one (1) brick thick. Structures above 15 cubic meters in volume shall be constructed with walls of one and half brick in thickness.

Horizontal joints shall be an average thickness of 12mm. The vertical joints shall be an average thickness of 10mm. All joints must be completely filled with mortar. Pointing shall be round flush jointing using a plastic tube or similar.

The tolerance in dimensions and plumpness for brick structures shall be 10mm.

All bricks shall be soaked in water before building.

B.3.2 Stonemasonry

Stone structures shall be built in un-coursed rubble stone masonry.

Stone shaping: Stones shall be broken into pieces, which can be carried by one person. The stone shall be cut roughly on all sides, if possible according to the natural shape. No angle between the face and the sides should be greater than 90 deg. The face shall be shaped so that it is straight and even with a tolerance of 10mm. Corner stones are shaped with the face and the reverse face at 90 deg. angles.

Building: Only the cornerstones shall have horizontal joints, all other joints must be irregular. 4 joints should never come together on the face of the wall. Straight joints longer than 2 stones shall be avoided. Every third stone shall be a binder, which is a stone reaching into the wall a minimum ²/₃ of the thickness of the wall. The top of the wall shall be built with shaped stones, which are properly bonded to the rest of the wall. The overlap of the stones shall be a minimum of 10 cm in all directions.

Before building on the foundation, the concrete shall be cleaned with a steel brush and roughened with a chisel if necessary. The corners shall be built first to a height of 1 meter and the wall filled in between. Stones shall be cleaned and wetted before use. The stones shall be laid on a mortar bed and then knocked in the mortar with a hammer. The face and the inside wall shall be built at the same time. Stiff plastic mortar shall be used. Slurry mortar shall never be used to fill the inside of the wall.

The size of the joints shall be 25mm thick. After building the joints are scraped out to a depth of 2-3 cm. The joints are filled with a fine rich mortar 1:2 to a depth of 2-5 mm inside the face of the stone. The joints are carefully smoothened with a pointing trowel.

The tolerances in the dimensions and plumpness shall be twenty (20) millimetres.

B.3.3 Waterproof Plastering

Waterproof plastering shall always consist of four (4) layers:

<u>Spatter dash:</u> This first layer shall be four (4) millimetres thick consisting of mix 1:2 cement to clean rough sand with largest grain size of 4 millimetres. This layer is applied as a slurry to the inside walls. The walls shall be well wetted before the spatter dash is applied. If necessary a second layer may be applied to ensure full coverage and water proofing of the structure. The spatter dash is cured for seven (7) days.

Rendering: The second layer is the rendering layer, which consists of a mix ratio of 1:3 cement to coarse sand with largest grain size of 4 millimetres. This layer should be 10mm thick and shall not be floated.

<u>Setting coat:</u> The setting coat consisting of mix 1:2 cement to clean sand with largest grain size of 2-3mm is applied in the form of slurry as soon as the rendering coat has set. The setting coat is floated to make a smooth surface for the cement paste.

<u>Cement paste:</u> The cement paste consists of a thin paste of cement and water that is applied in a layer of 1mm immediately after the setting coat. The cement paste hardens to form a very smooth hard layer that makes cleaning of the inside of the water retaining structures easy.

B.3.4 Mortar and Topping

The mortar used for building with bricks and stonemasonry shall be mix 1:4 cement to clean sand with the largest grain size of 4mm. The mortar used for floating the surface of concrete shall be mix 1:3 cement to clean sand with the largest grain size of 2-3 mm.

Finishing the surface to concrete cover slabs of silt boxes and tanks shall be performed in one operation. After casting the concrete, the concrete shall be floated adding a small amount of mortar while the concrete is still wet.

B.3.5 Leak test of water retaining structures

After completion of the water retaining structure the interior of the structure shall be cleaned and filled with water. The structure shall be allowed to stand in this full state for seven (7) days.

The Supervisor shall monitor the water level in the structure during these seven days. If the drop of the water level during these 7 days exceeds five (5) millimetres or if there is other evidence of leakage the contractor shall drain the structure and repair the leakage from the inside of the structure.

B.4. Water Sources

B.4.1 Spring Catchment

Spring catchments shall be built in a way that no water from the spring is lost and so that no surface water can seep into the spring and contaminate the water.

The excavation is done to the rock surface if possible so that the spring catchment can be constructed on the rock. If this is not possible due to the depth of soil over the rock the excavation shall be done so that the soil cover on top of the spring catchment is a minimum of 2 meters.

The standard spring catchment is constructed as a closed catchment. A wall is build down stream from the eye of the spring. The area inside the wall is filled with clean hard stones and the top is sealed with a concrete slab. The outlet pipe shall be placed lower than the eye of the spring.

Alternative designs of spring catchments shall require prior approval by the DRWS Water Supply Engineer.

B.4.2 Protection of area above springs

The area above the spring must be protected for erosion and pollution of the water source. A surface water diversion drain shall be constructed to divert any rainwater away from the spring area.

When a fence is specified, it must be constructed as a 5 string barbed wire fence. Corners are constructed with 3 vertical wooden poles with horizontal poles and wire crosses between. The Poles are anchored in concrete. Iron standards are placed every 6 meters and anchored in concrete and droppers every 1.5 meters. All 5 wires are tied to droppers and standards with bailing wire.

B.4.3 Protection of Borehole/ Pump Installation

The pump installation and the construction of the pump house shall be set out in a manner that will allow for access to the borehole and the pump installation for a drilling rig and maintenance vehicles.

A security fence shall be constructed around the borehole and pump house or solar panel installation. The fence shall be 2 m from all the sides of the pump house or the solar panel installation. The fence shall have a gate for vehicle access, positioned so that a drilling rig can get access to the borehole. A gate for pedestrian access shall be provided conveniently close to the pump house door or the pump installation.

B.5 Water Minder Training

The two water minders appointed by the Village Water and Health Committee must be trained in the maintenance of the water system.

The water minder must know the location of all pipelines and structures in the water supply system, and shall be instructed in how to carry out regular inspections of the system and preventive maintenance such as clean out the pipe system and regular cleaning of tanks and silt boxes.

The water minder must be able to carry out minor repairs such as replace taps and washers, replace valves and repair minor leaks in structures.

The water minder must be instructed in the environmental protection of the area around the spring or the borehole.

Department of Rural Water Supply Ministry of Water Government of Lesotho

Specifications Electrical Pump Installation & Maintenance

Contents

- 1. Procedure
- 2. Time
- 3. Reporting
- 4. Type of Works
- 5. Guidelines for installation depth and replacement
- 6. Quality

DRWS/March/2015

1 Procedure

The contract is a unit rate contract, where work is performed based on orders for specific pump systems to be installed or maintained.

The order shall specify the location where the work shall be carried out and the type of work required according to the items on the 'Schedule of Rates'. If the work involves a new installation then the order shall also specify the pumping head, the pumping rate, bore hole yield or spring yield + size of feed tank and any other information the contractor will need in order to check that the design is correct. The Order shall also specify if any parts for the works shall be collected from DRWS Store.

The work is initiated by an order from the DRWS District Engineer (DE) in the district where the work is to be performed. The DE issues the order to the contractor and submits a copy of the order to the DRWS Project Manager (PM).

The Contractor performs the work within the time period specified for different type of installations or repairs. The date of the order is the starting date of the time period for implementation. Before starting activities on site, the Contractor informs the DE 3 days in advance.

After completion of the work, the Contractor submits his invoice to the DE. The DE checks the quality and quantity of work carried out and if approved, he recommends the invoice for payment. The DE submits the invoice for payment (Regional or District Accounts Office). The Contractor receives his payment from the DRWS District Office.

2 Time

The time for completion of the different type of installations or maintenance shall be as follows:

A.	Construction of Pump Chamber and fence etc.	6 weeks
В.	Installation of new Pumps and Motors	3 weeks
C.	Maintenance, first visit and diagnose	1 week
	+ For completion of the order	3 weeks

The contractor is expected to respond to all orders within the periods specified above, however the maximum number of orders he is expected to complete within a one month period is 5.

In case the contractor fails to fulfil the above time periods, delay damages will be subtracted from the invoice for the delayed repair at the rate stated in the Contract Conditions.

3 Reporting

3.1 Quarterly Report to DRWS

The contractor shall submit a quarterly report to DRWS Project Manager before the 5th of the month following the end of the quarter. The report shall list all the orders received and attended to during the reporting period and the amounts invoiced for each order.

The report shall also specify any problems the contractor has experienced in relation to the implementation of the contract and recommendation of actions needed by DRWS.

3.2 Invoice

The contractor will invoice for the repairs done according to the rates in the 'Schedule of Rates' plus the cost of parts according to the rates in the 'Part Price List' (attached as Annex A). Companies which are not registered with the Department of Sales Tax will be paid the cost of parts according to the price list + 10%.

If items are required, which are not listed in the 'Part Price List', then the contractor will be paid for the items based on the original invoice from the main supplier or manufacturer of that item. The cost paid will be the cost excluding VAT. Companies which are not registered with the Department of Sales Tax (VAT) will be paid the cost of parts according to the original invoice + 10%.

The rates in the 'Schedule of Rates' are not changed during the contract period. The 'Part Price List' will be revised by DRWS after one year if part prices from the manufacturer have increased more than 10 %.

Transport costs are invoiced according to the contractor's unit rate per kilometre, multiplied with the actual number of kilometres (shortest route, return distance) from the District Office to the site where the work is carried out, multiplied with the actual number of trips, up to the maximum number of trips allowed for a specific item as stated under 4. Type of Works.

The rate for 'Workshop Repair' can not be invoiced together with the rate for 'On Site Repair'. The need for workshop repair shall be justified in writing together with the invoice.

4 Type of Works

A1 Construction of Pump Chamber

Construction of Pump Chamber for Electrical Pump in brick work according to DRWS Drawing No. B09. The rate shall include all materials and labour.

Transport can be charged for a maximum of 2 return trips from District Office to the site.

A2 Construction of Security Fence

Construction of Security Fence with gates and locks etc. according to DRWS Specifications and Drawings. The rate shall include all materials and labour.

Transport can be charged for a maximum of 2 return trips from District Office to the site

A3 Foundation & Installation of Frame

Casting of Concrete around anchor bolts inside pump chamber and supply and installation of frame and anchor bolts for electrical motor and pump according to DRWS Specifications and Drawings. The rate shall include all materials and labour.

Transport can be charged for 1 return trip from District Office to the site.

B1 Installation of new Electrical Motor

Labour cost for supply and installation of new electrical motor including all necessary controls, connection to LEC Meter and testing by LEC. Parts shall be paid in addition to the rate quoted according to the parts price list.

The Contractor shall check the design of the pump/ motor installation including the drive according to the pumping head and rate specified on the order.

Transport can be charged for a maximum of 2 return trips from District Office to the site

B2 Installation of new BH Pump

Labour cost for supply and installation of new bore hole pump. Parts shall be paid in addition to the rate quoted according to the parts price list.

The Contractor shall check the design of the pump/ motor installation including the drive according to the pumping head and rate specified on the order.

Transport can be charged for 1 return trip from District Office to the site

B3 Installation of new Horizontal Pump

Labour cost for supply and installation of new surface mounted horizontal pump. Parts shall be paid in addition to the rate quoted according to the parts price list.

The Contractor shall check the design of the pump/ motor installation including the drive according to the pumping head and rate specified on the order.

Transport can be charged for 1 return trip from District Office to the site

B4 Installation of new Submersible Pump

Labour cost for supply and installation of new submersible pump including all necessary controls, connection to LEC Meter and testing by LEC. Parts shall be paid in addition to the rate quoted according to the parts price list.

The Contractor shall check the design of the pump/ motor according to the pumping head and rate specified on the order.

Transport can be charged for a maximum of 3 return trips from District Office to the site.

C1 Repair Electrical Motor minor - on site

Labour cost for electrical motor repairs which can be done on site. Parts shall be paid in addition to the rate quoted according to the parts price list.

The rate can not be charged together with the rate for 'Workshop Repair' on the same order.

Transport can be charged for a maximum of 2 return trips from District Office to the site

C2 Repair Electrical Motor major - workshop

Labour cost for electrical motor including submersible pump motor repairs, which needs to be done in a workshop e.g. rewinding etc. Parts shall be paid in addition to the rate quoted according to the parts price list.

The rate includes the repairs done on site under the same order.

Transport can be charged for a maximum of 2 return trips from District Office to the site.

C3 Repair BH Pump Installation above ground

Labour cost for repair of pump installation e.g. discharge head, connection to the first rod/column, repair to discharge pipe connection. Parts shall be paid in addition to the rate quoted according to the parts price list.

The rate for above ground repair can not be charged together with rate for below ground repair.

Transport can be charged for a maximum of 2 return trips from District Office to the site.

C4 Repair BH Pump Installation below ground

Labour cost for repair of pump installation where the pump needs to be removed from the bore hole e.g. all repairs to the pump unit, repairs to the rods or columns below the connection to the discharge head. Parts shall be paid in addition to the rate quoted according to the parts price list.

Transport can be charged for a maximum of 2 return trips from District Office to the site.

C5 Repair of Horizontal Pump Installation

Labour cost for repair of the pump installation including the connection to the drive, the suction and discharge pipe. Parts shall be paid in addition to the rate quoted according to the parts price list.

Transport can be charged for a maximum of 2 return trips from District Office to the site.

C6 Repair of Submersible Pump Installation – on site

Labour cost for repair of the pump installation including any repairs to the controls. Parts shall be paid in addition to the rate quoted according to the parts price list.

Transport can be charged for a maximum of 2 return trips from District Office to the site.

C7 Fishing of dropped pump parts

This category covers the case where a pump cylinder and columns have fallen into the bore hole, either before the repair work started or while the pump was being removed. The cost is charged in addition to the other repairs carried out on the same pump. The number of cases where fishing of pumps is charged will be monitored and if a contractor repeatedly has dropped the pump, it will be regarded as a bad performance and can eventually lead to suspension of the contract.

C8 Removal of borehole pump

This category covers the case where a pump needs to be removed from the borehole, e.g. if the borehole has dried up or need cleaning and rehabilitation. The cost for this category shall include transport of the pump including the column, cable and all other parts to the DRWS District store and the fixing of a cover plate on the borehole. Water level and depth of borehole shall be measured and recorded.

C10 Checking and repair of pumping main

Labour cost for checking and repairing the pumping main. Parts shall be paid in addition to the rate quoted according to the parts price list.

Transport can be charged for a maximum of 2 return trips from District Office to the site.

E2 Provisional sums for Electricity Connection

These sums are used by the *Contractor* to connect electricity to the project. It involves applying for electricity connection from LEC and on getting the quotation, the *Contractor* pays for the service. He *Contractor* makes a constant follow up by communicating with LEC to make sure the service is provided in time for the project to be completed on schedule. The *Contractor* would have to produce original invoices and shall be paid 10% on top of these invoices. Under no circumstances shall the provisional sums be exceeded.

5 Guidelines for Installation Depth and Replacement

5.1 Installation Depth

In case the repair team needs to decide on changes to the installation depth e.g. if the borehole depth has decreased due to silt or if the borehole yield has decreased, the DRWS District Engineer shall be consulted.

In case of new installations, the depth will be specified on the order. The contractor shall check that the installation depth is correct and if not, consult the District Engineer and agree on an adjustment.

5.2 Replacement

The contractor shall if possible reuse and renovate existing components instead of installing new motors and pumps. The contractor shall advice the department on the replacement e.g. if it is advisable or not to replace motor and pump on submersible pumps or rotor and stator in pump units independently.

Cost of new motors, discharge heads and pump cylinders will only be paid after written justification that the old part is not functional and it is not cost efficient to renovate the old part.

5.3 Parts

The contractor is responsible for the supply of all parts.

DRWS has a stock of parts for different pumps and motors. The order shall specify if the contractor shall collect the part from the DRWS District Store.

The contractor will be issued the parts and debited the cost of the parts based on the cost in the part price list. The cost of parts will be deducted from the payment of the subsequent invoice submitted by the contractor.

6 Quality

The contractor provides a 6 months guarantee on workmanship for each Installation and Repair.

Parts are also covered by the guarantee to the extent that the guarantee is provided by the manufacturer of the parts.

All parts supplied under the contract shall be new and of a quality approved by the manufacturer of the specified equipment.

All parts shall be new and unused and of the make and type specified in the 'Parts Price List'.

A new installation for an electrical pump shall include the following items:

- Steel enclosure for controls with Compression Glands for all cable entries. The controls include Phase Angle Relay, Contactor, Level Relay, Circuit Breakers, Timer, Lightning Arrestors, Selector Switch and Warning Lights for Phase Order, Pump Dry and Overload.
- Lightning protection for the borehole installation consisting of 6 m 25 mm GI lightning pole with lightning spike, and a 16 mm2 bare copper wire buried 60 cm deep around the borehole chamber in a distance of 1 m. All metal parts of the installation shall be connected to a potential equalising connector bar.
- Sensor guide pipe: 25 mm inside diameter HDPE class 6 fixed to the base plate with compression coupling. For the purpose of water level measurements, the guide pipe shall be installed even if water level sensors are not required.
- The pump column shall be GI Steel column with parallel thread/long screw sockets.
- Non return valve and gate valve shall be installed in the valve chamber. The pump main and cables shall be buried to a depth of 60cm where it leaves the valve chamber.

Department of Rural Water Supply Ministry of Water Government of Lesotho

Specifications Solar Pump Installation & Maintenance

Contents

- 7. Procedure
- 8. Time
- 9. Reporting
- 10. Type of Works
- 11. Guidelines for installation depth and replacement
- 12. Quality

1 Procedure

The contract is a unit rate contract, where work is performed based on orders for specific pump systems to be installed or maintained.

The order shall specify the location where the work shall be carried out and the type of work required according to the items on the 'Schedule of Rates'. If the work involves a new installation then the order shall also specify the pumping head, the pumping rate, bore hole yield or spring yield + size of feed tank and any other information the contractor will need in order to check that the design is correct. The Order shall also specify if any parts for the works shall be collected from DRWS Store.

The work is initiated by an order from the DRWS District Engineer (DE) in the district where the work is to be performed. The DE issues the order to the contractor and submits a copy of the order to the DRWS Project Manager (PM).

The Contractor performs the work within the time period specified for different type of installations or repairs. The date of the order is the starting date of the time period for implementation. Before starting activities on site, the Contractor informs the DE 3 days in advance.

After completion of the work, the Contractor submits his invoice to the DE. The DE checks the quality and quantity of work carried out and if approved, he recommends the invoice for payment. The DE submits the invoice for payment (Regional or District Accounts Office). The Contractor receives his payment from the DRWS District Office.

2 Time

The time for completion of the different type of installations or maintenance shall be as follows:

Α.	Construction of Pump house and fence etc.	6 weeks
В.	Installation of new Pumps and Engines	3 weeks
C.	Maintenance, first visit and diagnose	1 week
	+ for completion of the order	3 weeks

The contractor is expected to respond to all orders within the periods specified above, however the maximum number of orders he is expected to complete within a one month period is 5.

In case the contractor fails to fulfil the above time periods, delay damages will be subtracted from the invoice for the delayed repair at the rate stated in the Contract Conditions.

3 Reporting

3.1 Quarterly Report to DRWS

The contractor shall submit a quarterly report to DRWS Project manager before the 5th of the month following the end of a quarter. The report shall list all the orders received and attended to during the reporting period and the amounts invoiced for each order.

The report shall also specify any problems the contractor has experienced in relation to the implementation of the contract and recommendation of actions needed by DRWS.

3.2 Invoice

The contractor will invoice for the repairs done according to the rates in the 'Schedule of Rates' plus the cost of parts according to the rates in the 'Part Price List' (attached as Annex A). Companies which are not registered with the Department of Sales Tax will be paid the cost of parts according to the price list + 10%.

If items are required, which are not listed in the 'Part Price List', then the contractor will be paid for the items based on the original invoice from the main supplier or manufacturer of that item. The cost paid will be the cost excluding VAT. Companies which are not registered with the Department of Sales Tax will be paid the cost of parts according to the original invoice + 10%.

The rates in the 'Schedule of Rates' are not changed during the contract period. The 'Part Price List' will be revised by DRWS after one year if part prices from the manufacturer have increased more than 10 %.

Transport costs are invoiced according to the contractor's unit rate per kilometre, multiplied with the actual number of kilometres (shortest route, return distance) from the District Office to the site where the work is carried out, multiplied with the actual number of trips, up to the maximum number of trips allowed for a specific item as stated under 4. Type of Works.

The rate for 'Workshop Repair' can not be invoiced together with the rate for 'On Site Repair'. The need for workshop repair shall be justified in writing together with the invoice.

4 Type of Works

A1 Construction of Pump Chamber

Construction of Pump Chamber for Electrical Pump in brick work according to DRWS Drawing No. B09. The rate shall include all materials and labour.

Transport can be charged for a maximum of 5 return trips from District Office to the site

A2 Construction of Security Fence / Palisade Fence

Construction of Security Fence with gates etc. according to DRWS Specifications and Drawings The rate shall include all materials and labour.

Transport can be charged for a maximum of 5 return trips from District Office to the site.

A3 Foundation & Installation of Frame for Pump

Casting of Concrete around anchor bolts inside pump chamber and supply and installation of frame and anchor bolts for electrical motor and pump according to DRWS Specifications and Drawings. The rate shall include all materials and labour.

Transport can be charged for 1 return trip from District Office to the site.

A4 Foundation & Installation of Frame for Solar Panels

Casting of Concrete foundations, supply and installation of poles and frames for solar panels according to DRWS Specifications and Drawing No P03. The rate shall include all materials and labour. The Rate is for the foundation and frames for one section of Panels.

Transport can be charged for a maximum of 2 return trips from District Office to the site.

B1 Installation of new Electrical Motor and Solar Panels

Labour cost for supply and installation of new electrical motor including all necessary controls and solar panels. Parts shall be paid in addition to the rate quoted according to the parts price list.

The Contractor shall check the design of the pump/ motor installation including the drive according to the pumping head and rate specified on the order.

Transport can be charged for 1 return trip from District Office to the site.

B2 Installation of new BH Pump

Labour cost for supply and installation of new bore hole pump. Parts shall be paid in addition to the rate quoted according to the parts price list.

The Contractor shall check the design of the pump/ motor installation including the drive according to the pumping head and rate specified on the order.

Transport can be charged for 1 return trip from District Office to the site.

B3 Installation of new Horizontal Pump

Labour cost for supply and installation of new surface mounted horizontal pump Parts shall be paid in addition to the rate quoted according to the parts price list.

The Contractor shall check the design of the pump/ motor installation including the drive according to the pumping head and rate specified on the order.

Transport can be charged for 1 return trip from District Office to the site.

B4 Installation of new Submersible Pump

Labour cost for supply and installation of new submersible pump including all necessary controls and connection to the solar panels. Parts shall be paid in addition to the rate quoted according to the parts price list.

The Contractor shall check the design of the pump/ motor according to the pumping head and rate specified on the order.

Transport can be charged for 1 return trip from District Office to the site.

C1 Repair Electrical Motor minor - on site

Labour cost for repair of electrical motor including controls and panels, which can be done on site. Parts shall be paid in addition to the rate quoted according to the parts price list.

The rate can not be charged together with the rate for 'Workshop Repair' on the same order.

Transport can be charged for a maximum of 2 return trips from District Office to the site.

C2 Repair Electrical Motor major - workshop

Labour cost for repair of electrical motor including submersible pump motor and controls, which needs to be done in a workshop e.g. rewinding etc. Parts shall be paid in addition to the rate quoted according to the parts price list.

The rate includes the repairs done on site under the same order.

Transport can be charged for a maximum of 2 return trips from District Office to the site.

C3 Repair BH Pump Installation above ground

Labour cost for repair of pump installation e.g. discharge head, connection to the first rod/column, repair to discharge pipe connection. Parts shall be paid in addition to the rate quoted according to the parts price list.

The rate for above ground repair can not be charged together with rate for below ground repair.

Transport can be charged for a maximum of 2 return trip from District Office to the site.

C4 Repair BH Pump Installation below ground

Labour cost for repair of pump installation where the pump needs to be removed from the bore hole e.g. all repairs to the pump unit, repairs to the rods or columns below the connection to the discharge head.

The rate includes the repairs carried out under 'Above Ground Repairs' on the same order. Parts shall be paid in addition to the rate quoted according to the parts price list.

Transport can be charged for a maximum of 2 return trips from District Office to the site.

C5 Repair of Horizontal Pump Installation

Labour cost for repair of the pump installation including the connection to the drive, the suction and discharge pipe. Parts shall be paid in addition to the rate quoted according to the parts price list.

Transport can be charged for a maximum of 2 return trips from District Office to the site.

C6 Repair of Submersible Pump Installation – on site

Labour cost for repair of the pump installation including any repairs to the controls. Parts shall be paid in addition to the rate quoted according to the parts price list.

Transport can be charged for a maximum of 2 return trips from District Office to the site.

C7 Fishing of dropped pump parts

This category covers the case where a pump cylinder and columns have fallen into the bore hole, either before the repair work started or while the pump was being removed. The cost is charged in addition to the other repairs carried out on the same pump. The number of cases where fishing of pumps are charged will be monitored and if a contractor repeatedly has dropped the pump, it will be regarded as a bad performance and can eventually lead to suspension of the contract.

C8 Removal of borehole pump

This category covers the case where a pump needs to be removed from the borehole, e.g. if the borehole has dried up or need cleaning and rehabilitation. The cost for this category shall include transport of the pump including the column, cable and all other parts to the DRWS District store and the fixing of a cover plate on the borehole. Water level and depth of borehole shall be measured and recorded.

C9 Checking and rewiring of solar panels

Labour cost for checking and rewiring of solar panels. Parts shall be paid in addition to the rate quoted according to the parts price list.

Transport can be charged for a maximum of 2 return trips from District Office to the site.

C10 Checking and repair of pumping main

Labour cost for checking and repairing the pumping main. Parts shall be paid in addition to the rate quoted according to the parts price list.

Transport can be charged for a maximum of 2 return trips from District Office to the site.

5 Guidelines for Installation Depth and Replacement

5.1 Installation Depth

In case the repair team needs to decide on changes to the installation depth e.g. if the borehole depth has decreased due to silt or if the borehole yield has decreased, the DRWS District Engineer shall be consulted.

In case of new installations, the depth will be specified on the order. The contractor shall check that the installation depth is correct and if not, consult the District Engineer and agree on an adjustment.

5.2 Replacement

The contractor shall to the largest extend possible reuse and renovate existing components instead of installing new engines and pumps. The contractor shall advice the department on the replacement e.g. if it is advisable or not to replace motor and pump on submersible pumps or rotor and stator in pump units independently.

Cost of new motors, discharge heads and pump cylinders will only be paid after written justification that the old part is not functional and it is not cost efficient to renovate the old part.

5.4 Parts

The contractor is responsible for the supply of all parts.

DRWS has a stock of parts for different pumps and motors. The order shall specify if the contractor shall collect the part from the DRWS District Store.

The contractor will be issued the parts and debited the cost of the parts based on the cost in the part price list. The cost of parts will be deducted from the payment of the subsequent invoice submitted by the contractor.

6 Quality

The contractor provides a 6 months guarantee on workmanship for each Installation and Repair.

Parts are also covered by the guarantee to the extent that the guarantee is provided by the manufacturer of the parts.

All parts supplied under the contract shall be new and of a quality approved by the manufacturer of the specified equipment.

All parts shall be new and unused and of the make and type specified in the 'Parts Price List'.

A new installation for a solar pump shall include the following items in addition to the pump and panels:

- Steel enclosure for controls with Compression Glands for all cable entries. The controls include Control box for solar pump, Level Relay, Lightning Arrestors, Selector Switch and Warning Lights for Pump Dry and Overload.

- Lightning protection for the borehole installation consisting of 6 m 25 mm GI lightning pole with lightning spike, and a 16 mm2 bare copper wire buried 60 cm deep around the borehole chamber in a distance of 1 m. All metal parts of the installation shall be connected to a potential equalising connector bar.

- Sensor guide pipe: 25 mm inside diameter HDPE class 6 fixed to the base plate with compression coupling. For the purpose of water level measurements, the guide pipe shall be installed even if water level sensors are not required.

- The pump column shall be GI Steel column with parallel thread/long screw sockets.

- Non return valve and gate valve shall be installed in the valve chamber. The pump main and cables shall be buried to a depth of 60cm where it leaves the valve chamber.

ANNEX 2: Quotation Forms

Contractor Quotation Form

From:	[Insert Contractor's name; in case of a joint venture, specify the name of the joint venture]
Contractor's Representative:	[Insert name of Contractor's Representative]
Title/Position:	[Insert Representatives title or position]
Address:	[Insert Contractor's address]
Email:	[Insert Contractor's email address]

To:	[Insert Employer's name]
Employer's Representative:	[Insert name of Employer's Representative]
Title/Position:	[Insert Representatives title or position]
Address:	[Insert Employer's address, including email]
RFQ Ref No.:	
Date of Quotation:	

Dear [insert name of Employer's Representative]:

SUBMISSION OF QUOTATION

1. Conformity and No Reservations

In response to the above named RFQ, we offer to execute the Works as per this Quotation and in conformity with the RFQ, Delivery and Completion Schedules and Technical Specifications. We confirm that we have examined and have no reservations to the RFQ, including the Contract.

2. Eligibility

We meet the eligibility requirements and have no conflict of interest, in accordance with the Request for Quotations.

3. Suspension and Debarment

We, along with any of our subcontractors, suppliers, consultants, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the World Bank Group or a debarment imposed by the World Bank Group in accordance with the Agreement for Mutual Enforcement of Debarment Decisions between the World Bank

and other development banks. Further, we are not ineligible under the Employer's Country laws or official regulations or pursuant to a decision of the United Nations Security Council.

4. Quotation Price

The total price of our offer is [Insert one of the options below as appropriate]

[Option 1, in case of one lot:] Total price is: [insert the total quotedf price in words and figures, indicating the various amounts and the respective currencies];

Or

[Option 2, in case of multiple lots:] (a) Total price of each lot [insert the total price of each lot in words and figures, indicating the various amounts and the respective currencies]; and (b) Total price of all lots (sum of all lots) [insert the total price of all lots in words and figures, indicating the various amounts and the respective currencies]; (c) Cross-discount for award of more than one lot [indicate any cross discounts]

5. Quotation Validity

Our Quotation shall be valid until the date specified in the RFQ, and it shall remain binding upon us and may be accepted at any time before it expires.

6. Performance Security [delete if performance security is not required]

If we are awarded the Contract, we commit to obtain a Performance Security in accordance with the RFQ.

7. Commissions, gratuities, fees

We have paid, or will pay the following commissions, gratuities, or fees with respect to this Quotation

[If none has been paid or is to be paid, indicate "none."]

Address	Reason	Amount
	Address	Address Reason

8. Not Bound to Accept

We understand that you reserve the right to:

a. accept or reject any Quotation and are not bound to accept the lowest evaluated cost Quotation, or any other Quotation that you may receive, and

b. annul the RFQ process at any time prior to the award of the Contract without incurring any liability to Contractors.

9. Fraud and Corruption

We hereby certify that we have taken steps to ensure that no person acting for us, or on our behalf, engages in any type of Fraud and Corruption.

On behalf of the Contractor:

Name of the person duly authorized to sign the Quotation on behalf of the Contractor: <u>[insert complete name of person duly authorized to sign the Quotation]*</u>

Title of the person signing the Quotation: *[insert complete title of the person signing the Quotation]*

Signature of the person named above: [insert signature of person whose name and capacity are shown above]

Date signed *[insert date of signing]* day of *[insert month]*, *[insert year]*

*The power of attorney shall be attached to the Quotation.

Schedules

Bill of Quantities

DISTRICT:	Berea				
Item (Village Name)	Description Of Works	Unit	Qty (1)	Unit Rate (LSL) (2)	Amount (3 = (1) x (2))
	SP 3A-45/MS 4000	no	1		
	Splicing Kit	no	2		
	4 core Submersible cable PT10 * 4OR	no	80		
	Control panel with Black Bocs DOL upto 5.5kW	m	1		
	Timer - 7day/24hours	no	1		
	Safety Rope 7mm Polyprophyline	m	80		
	3 Phase Circuit breakers	no	1		
NY Y	Earth Spike	no	1		
Nokong	Sensor probes	no	1		
	Excavation 60cm * 40cm	m	80		
	Backfilling 60cm * 40cm	m	80		
	Pipelaying (including materials) 50mm HDPE16	m	80		
	Transport rate per km return from district office to site (1 return trips)	57km*1*2	114		
	Installation of new submersible pump	no	1		
	Repair of BH Chamber	no	1		
	SUB-TOTAL				
	SP 3A-45/MS 4000	no	1		
	Splicing Kit	no	2		
	4 core Submersible cable PT10 * 4OR	no	80		
	Control panel with Black Bocs DOL upto 5.5kW	m	1		
	Timer - 7day/24hours	no	1		
Ha Ranthiba	Safety Rope 7mm Polyprophyline	m	80		
ALL ALMANIAN	3 Phase Circuit breakers	no	1		
	Earth Spike	no	1		
	Sensor probes	no	1		
	Valve Chamber for pumping system	no	1		
	Palisade Fencing	no	1		
	Installation of new submersible pump	no	1		

	Transport rate per km return from district office to site (1 return trips)	34km*1*2	68	
	SUB-TOTAL	Jikiii 1 2	00	
	SUB-TOTAL			
	SP 3A-45/MS 4000	no	1	
	Splicing Kit	no	2	
	4 core Submersible cable PT10 * 4OR	no	6	
	Control panel with Black Bocs DOL upto 5.5kW	m	1	
	Timer - 7day/24hours	no	1	
	3 Phase Circuit breakers	no	1	
Ha Ralekeke	Earth Spike	no	1	
	Sensor probes	no	1	
	Valve Chamber for pumping system	no	1	
	Installation of new submersible pump	no	1	
	Replastering 15m3 Feed Tank	no	1	
	Palisade Fencing	no	1	
	Transport rate per km return from	40km*1*2	80	
	district office to site (1 return trips)	40KIII 1 2	80	
	SUB-TOTAL Construct stonewall for uPVC 110mm			
	overflow pipe	m	50	
Ha 'Matholoana	Transport rate per km return from			
	district office to site (1 return trips)	42km*1*2	84	
	SUB-TOTAL			
	Control panel with Black Bocs DOL upto 5.5kW	m	1	
	Timer - 7day/24hours	no	1	
Ha Nteleki	3 Phase Circuit breakers	no	1	
	Earth Leakage	no	1	
	Transport rate per km return from district office to site (1 return trips)	59km*1*2	118	
	SUB-TOTAL			
	Control panel with Black Bocs DOL upto 5.5kW	m	1	
	Timer - 7day/24hours	no	1	
	3 Phase Circuit breakers	no	1	
Kolojane Ha Seisa	Earth Spike	no	1	
	Sensor probes	no	1	
	Transport rate per km return from			
	district office to site (1 return trips)	62km*1*2	124	
	SUB-TOTAL			
	Control panel with Black Bocs DOL		,	
Ha Mokhathi	upto 5.5kW	m	1	
	Timer - 7day/24hours	no	1	

	3 Phase Circuit breakers	no	1		
	Earth Spike	no	1		
	Sensor probes	no	1		
	Transport rate per km return from				
	district office to site (1 return trips)	23km*1*2	46	23	
	SUB-TOTAL				
	SP 3A-45/MS 4000	no	1		
	Splicing Kit	no	2		
	4 core Submersible cable PT10 * 4OR	no	6		
	Control panel with Black Bocs DOL				
	upto 5.5kW	m	1		
Lekokoaneng/	Timer - 7day/24hours	no	1		
Lits'iling	3 Phase Circuit breakers	no	1		
	Earth Spike	no	1		
	Sensor probes	no	1		
	Installation of new submersible pump	no	1		
	Transport rate per km return from	no l			
	district office to site (1 return trips)	15km*1*2	30		
	SUB-TOTAL				
	Ground Exploration and Survey	no	1		
	Drilling of Borehole 165 mm				
	Diameter (HCB)	m	80		
	Supply and Installation of Steel				
	Casing	m	6		
	Supply and Installation of Slotted	m	78		
	uPVC Casing Class 6	m	1		
	48 Hrs Pump Tests	no	1		
	Mobilisation and Demobilisation	no	1		
	Valve Chamber Pumping Systems	no	1		
	Palisade Fence for Pump installation	no	78		
Ha Sole	Pipelaying Formation transla (Spil)	m m	100		
	Excavation trench (Soil)	m	100		
	Backfilling trench	no	1		
	Grundfos Pump SQF 2.5 -2N Control Box IO 100	no	1		
	Safety Rope 7mm Polyprophyline	m	78		
		no	2		
	Splicing Kit Ground Cable from Array to Pump	110	L		
	[10mm2 2core]	m	100		
	3 core - 6 mm2 submersible cable	m	78		
	Excavation of cable trench	m	100		
	Backfilling of cable trench	m	100		
	SUB-TOTAL				
	SP 3A-18/MS 402	no	1		
Mokhethoaneng	Splicing Kit	no	2		

4 core Submersible cable PT10 * 4OR	50000000			
	no	6		
Control panel with Black Bocs DOL				
upto 5.5kW	m	1		
Timer - 7day/24hours	no	1		
3 Phase Circuit breakers	no	1		
Earth Spike	no	1		
Sensor probes	no	1		
Installation of new submersible pump	no	1		
Transport rate per km return from	29km*1*2	58		
SUB-TOTAL				
SQF 1.2.3N/MSF	no	1		
	no	1	/	
	no	1		
	m	1		
No. 465 045 045 045 045 045 045 045 045 045 04	no	1		
•	no	20		
	no	1		
•	no	1		
•	no	1		
Transport rate per km return from	15km*1*2	30		
SUB-TOTAL				
			Total	
		Conti	ingency @ 10%	
0			VAT @ 15%	
		\mathbf{G}	RAND-TOTAL	
	upto 5.5kW Timer - 7day/24hours 3 Phase Circuit breakers Earth Spike Sensor probes Installation of new submersible pump Transport rate per km return from district office to site (1 return trips) SUB-TOTAL SQF 1.2.3N/MSF IO 50 Switchbox Splicing Kit Installation of new submersible pump Repair of Electrical motor - On site Rewiring of solar panels Earth Spike Sensor probes Installation of new submersible pump Transport rate per km return from district office to site (1 return trips)	Timer - 7day/24hours 3 Phase Circuit breakers Earth Spike Sensor probes Installation of new submersible pump Transport rate per km return from district office to site (1 return trips) SUB-TOTAL SQF 1.2.3N/MSF no Installation of new submersible pump Mepair of Electrical motor - On site Rewiring of solar panels Earth Spike Sensor probes Installation of new submersible pump Transport rate per km return from district office to site (1 return trips) Transport rate per km return from district office to site (1 return trips) 15km*1*2	Timer - 7day/24hours 3 Phase Circuit breakers Earth Spike Sensor probes Installation of new submersible pump Transport rate per km return from district office to site (1 return trips) SQF 1.2.3N/MSF IO 50 Switchbox Splicing Kit Installation of new submersible pump Repair of Electrical motor - On site Sensor probes Installation of new submersible pump Transport rate per km return from district office to site (1 return trips) SUB-TOTAL SQF 1.2.3N/MSF IO 50 Switchbox Installation of new submersible pump Transport rate per km return from district office to site (1 return trips) Transport rate per km return from district office to site (1 return trips) SUB-TOTAL Continuation Continuation Continuation Continuation SUB-TOTAL Continuation Continuation Continuation Continuation A phase Circuit breakers no 1 1 1 1 1 1 1 1 1 1 1 1 1	Timer - 7day/24hours no

Activity Schedule (N/A)

Technical Proposal

The Contractor shall provide:

- The names and details of the suitably qualified key personnel to perform the Contract as per contract data.
- Certified educational certificate valid for three months, CVs and consent letters from key personnel.
- Adequate information (certified) to demonstrate clearly that it has the capability to meet the requirements for the key tools, equipment and vehicles (registration certificate) for the Contract
- Its method statement on the execution of the works
- mobilization and construction schedule (in Weeks)
- Relevant Company experience for the past Eight years of works completed in the Rural Water Supply systems and proof of such works (Invoice, Contract or Subcontract with the original contract indicating amounts).
- Audited Financial statement by either LRA or legally registered audit firms.
- Three months bank statement indicating financial stability.
- Credit Facility worth M 1,500,000 from legally registered local Bank.
- Litigation Letter
- Traders license or Company registration and Extracts.

ANNEX 3: Contract Forms

Contract Agreement

THIS AGREEMENT						
Employer]	(hereinafter "the	e Employer"),	of the one	part, and	. [name	of the
Contractor (here	einafter "the Con	tractor"), of th	ne other part	:		

WHEREAS the Employer invited a Quotation for the execution of Works, [insert brief description of the Works], and has accepted the Quotation by the Contractor for the Works:

The Employer and the Contractor agree as follows:

- 1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
- 2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.
 - (a) the Letter of Award of Contract
 - (b) the Contractor's Quotation
 - (c) the Conditions of Contract, including Appendices
 - (d) the Specifications
 - (e) the Drawings
 - (f) Bill of Quantities; 1 and
 - (g) any other document listed in the CC as forming part of the Contract.
- 3. In consideration of the payments to be made by the Employer to the Contractor as specified in this Agreement, the Contractor hereby covenants with the Employer to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.
- 4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

In lump-sum contracts, delete "Bill of Quantities" and replace with "Activity Schedule."

[To facilitate this emergency procurement, if acceptable to the Employer and the Contractor, electronic signature of the Contract Agreement such as using DocuSign is recommended.]

Signed by: for and on behalf of the Employer	Signed by: for and on behalf the Contractor
in the presence of: Witness, Name, Signature, Address, Date	in the presence of: Witness, Name, Signature, Address, Date

Conditions of Contract

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Conditions of Contract

[Note: All italicized text is for use in completing the contract and shall be deleted from the final Conditions of Contract]

A. General

1. Definitions

- 1.1 The following words and expressions shall have the meanings hereby assigned to them. Boldface type is used to identify defined terms.
 - (a) The **Accepted Contract Amount** means the amount accepted in the Letter of Award of Contract for the execution and completion of the Works and the remedying of any defects.
 - (b) The **Activity Schedule** is a schedule of the activities comprising the construction, installation, testing, and commissioning of the Works in a lump-sum contract. It includes a lump-sum price for each activity, which is used for valuations and for assessing the effects of Variations and Compensation Events.
 - (c) The **Adjudicator** is the person appointed jointly by the Employer and the Contractor to resolve disputes in the first instance, as provided for in **CC 21.**
 - (d) "Bank" means the World Bank and refers to the International Bank for Reconstruction and Development (IBRD) or the International Development Association (IDA).
 - (e) **Bill of Quantities** means the priced and completed Bill of Quantities forming part of the Contractor's Quotation.
 - (f) Compensation Events are those defined in CC 40.
 - (g) The **Completion Date** is the date of completion of the Works as certified by the Project Manager, in accordance with **CC 49.1**.
 - (h) The **Contract** is the Contract between the Employer and the Contractor to execute, complete, and maintain the Works. It consists of the documents listed in **CC 3.3** below.
 - (i) The **Contractor** is the party whose Quotation to carry out the Works has been accepted by the Employer.
 - (j) The **Contractor's Quotation** is the completed quotation document submitted by the Contractor to the Employer.

- (k) The **Contract Price** is the Accepted Contract Amount stated in the Letter of Award of Contract and thereafter as adjusted in accordance with the Contract.
- (1) Days are calendar days; months are calendar months.
- (m) **Dayworks** are varied work inputs subject to payment on a time basis for the Contractor's employees and Equipment, in addition to payments for associated Materials and Plant.
- (n) A **Defect** is any part of the Works not completed in accordance with the Contract.
- (o) The **Defects Liability Certificate** is the certificate issued by Project Manager upon correction of defects by the Contractor.
- (p) The **Defects Liability Period** is the period specified in CC 2.12 and calculated from the Completion Date.
- (q) **Drawings** means the drawings of the Works, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) the Employer in accordance with the Contract, include calculations and other information provided or approved by the Project Manager for the execution of the Contract.
- (r) The **Employer** is the party who employs the Contractor to carry out the Works, **as specified in CC 2.1.**
- (s) **Equipment** is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.
- (t) "In writing" or "written" means hand-written, typewritten, printed or electronically made, and resulting in a permanent record.
- (u) The **Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works as specified in **CC 2.1.**
- (v) **Materials** are all supplies, including consumables, used by the Contractor for incorporation in the Works.
- (w) **Plant** is any integral part of the Works that shall have a mechanical, electrical, chemical, or biological function.
- (x) The **Project Manager** is the person named in **CC 2.1** (or any other competent person appointed by the Employer and notified to the Contractor, to act in replacement of the Project Manager) who is responsible for supervising

- the execution of the Works and administering the Contract.
- (y) The Site is the area defined as such in the CC 2.1.
- (z) **Site Investigation Reports** are those, if any, that were included in the request for quotations documents and are factual and interpretative reports about the surface and subsurface conditions at the Site.
- (aa) **Specifications** means the Specifications of the Works included in the Contract and any modification or addition made or approved by the Project Manager.
- (bb) The **Start Date** is **given in CC 2.1**. It is the latest date when the Contractor shall commence execution of the Works.
- (cc) A **Subcontractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract, which includes work on the Site.
- (dd) **Temporary Works** are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works.
- (ee) A Variation is an instruction given by the Project Manager which varies the Works.
- (ff) The **Works** are what the Contract requires the Contractor to construct, install, and turn over to the Employer, as defined in the **CC 2.1.**
- (gg) "Contractor's Personnel" refers to all personnel whom the Contractor utilizes on the Site or other places where the Works are carried out, including the staff, labor and other employees of each Subcontractor.
- (hh) "Key Personnel" means the positions (if any) of the Contractor's personnel that are included in the contract.
- (ii) "Sexual Exploitation and Abuse" "(SEA)" means the following:

Sexual Exploitation is defined as any actual or attempted abuse of position of vulnerability, differential power or trust, for sexual purposes, including, but not limited to, profiting monetarily, socially or politically from the sexual exploitation of another;

- **Sexual Abuse** is defined as the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions;
- (jj) "Sexual Harassment" "(SH)" is defined as unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature by the Contractor's Personnel with other Contractor's or Employer's Personnel; and
- (kk) "Employer's Personnel" refers to the Project Manager and all other staff, labor and other employees (if any) of the Project Manager and of the Employer engaged in fulfilling the Employer's obligations under the Contract; and any other personnel identified as Employer's Personnel, by a notice from the Employer or the Project Manager to the Contractor.

2. Contract Specific Information

2.1 General

- (a) The Employer is: <u>[insert name, address, and name of authorized representative]</u>
- (b) The **Intended Completion Date** for the whole of the Works shall be: **[insert date]**
 - <u>Works by section ("sectional completion" or milestones), these dates should be listed here!</u>
- (c) The Project Manager is: [insert name, address, and name of authorized representative]
- (d) The **Site** is located at **[insert address of Site]** and is defined in drawings No. **[insert numbers]**
- (e) The Start Date shall be: [insert date].
- (f) The Works consist of: [insert brief summary, including relationship to other contracts under the Project]
- 2.2 Any notice given by one Party to the other pursuant to the Contract shall be in writing to the address hereafter using the quickest available method such as electronic mail with proof of receipt.

Address for notices to the Employer:

[insert the name of officer authorized to receive notices]
[title/position]
[department/work unit]
[address]

[Electronic mail address]

Address for notices to the Contractor:

[insert the name of officer authorized to receive notices]
[title/position]
[department/work unit]
[address]

[Electronic mail address]

- 2.3 In accordance with CC 3.2, Sectional Completions are: [insert nature and dates, if appropriate; otherwise delete]
- 2.4 The language of the contract is <u>[insert name of the language</u>. The language shall be that of the Quotation].
- 2.5 The Contract shall be governed by the law of *[state: "the Employer's Country"*, unless any other law shall apply].

The contract specific information for the listed Conditions of Contract (CC) clauses follows:

- 2.6 **CC 12**: The minimum **insurance** amounts and deductibles shall be:
 - (a) for loss or damage to the Works, Plant and Materials: [insert amounts].
 - (b) For loss or damage to Equipment: [insert amounts].
 - (c) for loss or damage to property (except the Works, Plant, Materials, and Equipment) in connection with Contract *[insert amounts]*.
 - (d) for personal injury or death: of the Contractor's employees: *[amount]* of other people: *[amount]*.
- 2.7 CC 13: Site Data are: [list Site Data].
- 2.8 CC 18: Site Possession Date(s) shall be: [insert location(s) and date(s)]
- 2.9 **CC 21: Appointing Authority** of Adjudicator: *[insert name of Authority].*
- 2.10 **CC 25.1**: A **Program** for the Works shall be submitted within: *[insert: number]* days from the date of the Letter of Award of Contract.
- 2.11 CC 25.2: The period for submission of progress reports is: finsert period].
- 2.12 **CC 33**: The **Defects Liability Period** shall be: *[insert number]* days from the date of Completion.

- 2.13 CC 43: The retention amount shall be [insert percentage].
- 2.14 **CC 44.1**: The **liquidated damages** for the whole of the Works shall be: *[insert percentage]* of the final Contract Price per day..
- 2.15 CC 44.1: The maximum amount of liquidated damages for the whole of the Works is: *[insert percentage]* of the final Contract Price.
- 2.16 CC 44.3: the Bonus for the whole of the Works is: [insert percentage] of the final Contract Price per day. The maximum amount of Bonus for the whole of the Works is [insert percentage] of the final Contract Price. [If early completion would provide benefits to the Employer, this clause should remain; otherwise delete. The Bonus is usually numerically equal to the liquidated damages.]
- 2.17 CC 45: The Advance Payment shall be: [insert %] of the Accepted Contract Amount and shall be paid to the Contractor no later than [insert number of days] after the Contractor submits an acceptable Bank Guarantee. [The Employer may decide to waive the requirement for a bank guarantee for advance payments not exceeding 10% of the Accepted Contract Amount.]

[The Employer may decide to waive the requirement for Performance Security for the subject emergency procurement. If a Performance Security is required, insert the following:

- 2.18 CC 46: The Performance Security amount shall be for an amount of: [insert %] of the Accepted Contract Amount. [insert percentage; not exceeding 10% for Bank guarantee and 30% for performance bonds.]
- 2.19 **CC 52.1**: The date by which operating and maintenance manuals are required is *[insert date]*. In accordance with **CC 52.1**, the date by which "as built" drawings are required is *[insert date]*.
- 2.20 CC 52.2: The amount to be withheld: [insert amount].
- 2.21 CC 54.1: The percentage to apply to the value of the work not completed is: [insert percentage]. [insert percentage, considering the Employer's additional cost for completing the Works]

3. Interpretation

3.1 In interpreting these CC, words indicating one gender include all genders. Words indicating the singular also include the plural and words indicating the plural also include the singular. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically

- defined. The Project Manager shall provide instructions clarifying queries about these CC.
- 3.2 If sectional completion is specified in CC 2.3, references in the CC to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).
- 3.3 The documents forming the Contract shall be interpreted in the following order of priority:
 - (a) the Contract Agreement,
 - (b) The Letter of Award of Contract
 - (c) The Contractor's Quotation,
 - (d) the Conditions of Contract, including Appendices
 - (e) the Specifications,
 - (f) the Drawings,
 - (g) the Bill of Quantities, and
 - (h) any other document [include other documents if any].

4. Prohibitions

- 4.1 Throughout the execution of the Contract, the Contractor shall comply with the import of goods and services prohibitions in the Employer's country when
 - (a) as a matter of law or official regulations, the Borrower's country prohibits commercial relations with that country;
 or
 - (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's Country prohibits any import of goods from that country or any payments to any country, person, or entity in that country.
- 5. Project Manager's Decisions
- 5.1 Except where otherwise specifically stated, the Project Manager shall decide contractual matters between the Employer and the Contractor in the role representing the Employer.
- 6. Subcontracting
- 6.1 The Contractor may subcontract with the approval of the Project Manager but may not assign the Contract without the approval of the Employer in writing. Subcontracting shall not alter the Contractor's obligations.

In lump-sum contracts, delete "Bill of Quantities" and replace with "Activity Schedule."

7. Cooperation

7.1 The Contractor shall cooperate with and allow appropriate opportunities for other contractors, public authorities, utilities, and the Employer, to carry out on or near the Site work, if any, not included in the Contract.

8. Personnel and Equipment

- 8.1 The Contractor shall employ the Key Personnel and use the Equipment identified in its quotation, to carry out the Works or other personnel and Equipment approved by the Project Manager. The Project Manager shall approve any proposed replacement of Key Personnel and Equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the quotation.
- 8.2 The Project Manager may require the Contractor to remove (or cause to be removed) any person employed on the Site or Works, including the Key Personnel (if any), who:
 - (a) persists in any misconduct or lack of care;
 - (b) carries out duties incompetently or negligently;
 - (c) fails to comply with any provision of the Contract;
 - (d) persists in any conduct which is prejudicial to safety, health, or the protection of the environment;
 - (e) engages in Sexual Harassment, Sexual Exploitation, Sexual Abuse or in any form of sexual activity with individuals under the age of 18 except in case of pre-existing marriage;
 - (f) based on reasonable evidence, is determined to have engaged in Fraud and Corruption during the execution of the Works; or
 - (g) has been recruited from the Employer's Personnel.

As appropriate, the Contractor shall then promptly appoint (or cause to be appointed) a suitable replacement with equivalent skills and experience.

8.3 Labor

- 8.3.1 Engagement of Staff and Labor. The Contractor shall provide and employ on the Site for the execution of the Works such skilled, semi-skilled and unskilled labor as is necessary for the proper and timely execution of the Contract. The Contractor is encouraged, to the extent practicable and reasonable, to employ staff and labor with appropriate qualifications and experience from sources within the Country.
- 8.3.2 Labor Laws. The Contractor shall comply with all the relevant labor laws applicable to the Contractor's Personnel, including laws relating to their employment, health, safety, welfare, immigration and emigration, and shall allow them all their legal rights.:

- 8.3.3 Facilities for Staff and Labor. [if facilities for staff and labor are to be provided by the Contractor, insert this sub-clause; otherwise delete] The Contractor shall provide and maintain all necessary accommodation and welfare facilities for the Contractor's Personnel.
- 8.3.4 Supply of Foodstuffs. [if food to its personnel is to be provided by the Contractor, insert this sub-clause; otherwise delete]

 The Contractor shall arrange for the provision of a sufficient supply of suitable food at reasonable prices for the Contractor's Personnel for the purposes of or in connection with the Contract.
- 8.3.5 Supply of Water. [if water to its personnel is to be provided by the Contractor, insert this sub-clause; otherwise delete] The Contractor shall, having regard to local conditions, provide on the Site an adequate supply of drinking and other water for the use of the Contractor's Personnel.
- 8.3.6 Forced *Labor*. The Contractor, including its Subcontractors, shall not employ or engage forced labor. Forced labor *consists* of any work or service, not voluntarily performed, that is exacted from an individual under threat of force or penalty, and includes any kind of involuntary or compulsory labor, such as indentured labor, bonded labor or similar labor-contracting arrangements.

No persons shall be employed or engaged who have been subject to trafficking. Trafficking in persons is defined as the recruitment, transportation, transfer, harboring or receipt of persons by means of the threat or use of force or other forms of coercion, abduction, fraud, deception, abuse of power, or of a position of vulnerability, or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purposes of exploitation.

8.3.7 Child Labor. The Contractor, including its Subcontractors, shall *not* employ or engage a child under the age of 14 unless the national law specifies a higher age (the minimum age).

The Contractor, including its Subcontractors, shall not employ or engage a child between the minimum age and the age of 18 in a manner that is likely to be hazardous, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development.

The Contractor including its Subcontractors, shall only employ or engage children between the minimum age and the age of 18 after an appropriate risk assessment has been conducted by the Contractor with the Project Manager's

approval. The Contractor shall be subject to regular monitoring by the Project Manager that includes monitoring of health, working conditions and hours of work.

Work considered hazardous for children is work that, by its nature or the circumstances in which it is carried out, is likely to jeopardize the health, safety, or morals of children. Such work activities prohibited for children include work:

- (a) with exposure to physical, psychological or sexual abuse;
- (b) underground, underwater, working at heights or in confined spaces;
- (c) with dangerous machinery, equipment or tools, or involving handling or
- (d) transport of heavy loads;
- (e) in unhealthy environments exposing children to hazardous substances, agents, or processes, or to temperatures, noise or vibration damaging to health; or
- (f) under difficult conditions such as work for long hours, during the night or in confinement on the premises of the employer.
- 8.3.8 Employment Records of Workers. The Contractor shall keep complete and accurate records of the employment of labor at the Site.
- 8.3.9 Non-Discrimination and Equal Opportunity. The Contractor shall not make decisions relating to the employment or treatment of Contractor's Personnel on the basis of personal characteristics unrelated to inherent job requirements. The Contractor shall base the employment of Contractor's Personnel on the principle of equal opportunity and fair treatment, and shall not discriminate with respect to any aspects of the employment relationship.
- 8.3.10 Contractor's Personnel Grievance Mechanism. The Contractor shall have a proportionate grievance mechanism for Contractor's Personnel.
- 8.3.11 Awareness of Contractor's Personnel. The Contractor shall provide appropriate awareness to relevant Contractor's Personnel on any applicable environmental and social aspects of the Contract, including on health, safety and prohibition of SEA and SH.

9. Employer's and Contractor's Risks

9.1 The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.

10. Employer's Risks

- 10.1 From the Start Date until the Defects Liability Certificate has been issued, the following are Employer's risks:
 - (a) The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to
 - (i) use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable result of the Works or
 - (ii) negligence, breach of statutory duty, or interference with any legal right by the Employer or by any person employed by or contracted to him except the Contractor.
 - (b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Employer or in the Employer's design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed.
- 10.2 From the Completion Date until the Defects Liability Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is an Employer's risk except loss or damage due to
 - (a) a Defect which existed on the Completion Date,
 - (b) an event occurring before the Completion Date, which was not itself an Employer's risk, or
 - (c) the activities of the Contractor on the Site after the Completion Date.

11. Contractor's Risks

11.1 From the Starting Date until the Defects Liability Certificate has been issued, the risks of personal injury, death, and loss of or damage to property (including, without limitation, the Works, Plant, Materials, and Equipment) which are not Employer's risks are Contractor's risks.

12. Insurance

12.1 The Contractor shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles specified in **CC 2.6**, for listed events which are due to the Contractor's risks:

- 12.2 Policies and certificates for insurance shall be delivered by the Contractor to the Project Manager for the Project Manager's approval before the Start Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.
- 12.3 If the Contractor does not provide any of the policies and certificates required, the Employer may effect the insurance which the Contractor should have provided and recover the premiums the Employer has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.
- 12.4 Alterations to the terms of an insurance shall not be made without the approval of the Project Manager.
- 12.5 Both parties shall comply with any conditions of the insurance policies.

13. Site Data

- 13.1 The Contractor shall be deemed to have examined any Site Data referred to in **CC 2.7**, supplemented by any information available to the Contractor.
- 14. Contractor to Construct the Works
- 14.1 The Contractor shall construct and install the Works in accordance with the Specifications and Drawings.

15. Approval by the Project Manager

- 15.1 The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Project Manager, for his approval.
- 15.2 The Contractor shall be responsible for design of Temporary Works.
- 15.3 The Project Manager's approval shall not alter the Contractor's responsibility for design of the Temporary Works.
- 15.4 The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.
- 15.5 All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Project Manager before this use.

16. Health, Safety and Protection of the Environment

- 16.1 The Contractor shall be responsible for the safety of all activities on the Site, and for taking care of the health and safety of all persons entitled to be on the Site and any other place where the Works are being executed.
- 16.2 The Contractor shall comply with all applicable health and safety regulations and laws.

16.3 Protection of the environment

- (a) The Contractor shall take all necessary measures to: protect the environment (both on and off the Site); and
- (b) limit damage and nuisance to people and property resulting from pollution, noise and other results of the Contractor's operations and/ or activities.

In the event of damage to the environment, property and/or nuisance to people, on or off Site as a result of the Contractor's operations, the Contractor shall agree with the Project Manager the appropriate actions and time scale to remedy, as practicable, the damaged environment to its former condition. The Contractor shall implement such remedies at its cost to the satisfaction of the Project Manager.

17. Archaeological and Geological **Findings**

- 17.1 All fossils, coins, articles of value or antiquity, structures, groups of structures, and other remains or items of geological, archaeological, paleontological, historical, architectural or religious interest found on the Site shall be placed under the care and custody of the Employer.
- 18. Possession of the Site
- 18.1 If possession of a part is not given by the date stated in CC 2.8, the Employer shall be deemed to have delayed the start of the relevant activities, and this shall be a Compensation Event.
- 19. Access to the Site 19.1 The Contractor shall allow the Project Manager and any person authorized by the Project Manager access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.

20. Instructions, Inspections and Audits

- 20.1 The Contractor shall carry out all instructions of the Project Manager which comply with the applicable laws where the Site is located.
- 20.2 The Contractor shall keep and shall make all reasonable efforts to cause its Subcontractors and subconsultants to keep, accurate and systematic accounts and records in respect of the Works in such form and details as will clearly identify relevant time changes and costs.
- 20.3 Inspections & Audit by the Bank

Pursuant to paragraph 2.2 e. of Appendix A to the CC- Fraud and Corruption, the Contractor shall permit and shall cause its agents (where declared or not), subcontractors, subconsultants, service providers, suppliers, and personnel, to permit, the Bank and/or persons appointed by the Bank to inspect the site and/or the accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have such accounts, records and other documents audited by auditors appointed by the Bank. The Contractor's and its Subcontractors' and subconsultants' attention is drawn to CC 23.1 (Fraud and Corruption) which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Bank's prevailing sanctions procedures).

21. Appointment of the Adjudicator

- 21.1 The Employer and the Contractor shall jointly appoint an adjudicator with relevant experience, within 7 (seven) days of contract signature. In case of disagreement between the Employer and the Contractor on the appointment of the Adjudicator within this period, either party will request the Appointing authority stated in CC 2.9, to appoint the Adjudicator within 7 (seven) days of receipt of such request.
- 21.2 Should the Adjudicator resign or die, or should the Employer and the Contractor agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator shall be jointly appointed by the Employer and the Contractor. In case of disagreement between the Employer and the Contractor, within 14 (fourteen) days, the Adjudicator shall be designated by the Appointing Authority stated in CC 2.9, at the request of either party, within 7 (seven) days of receipt of such request.

22. Procedure for Disputes

- 22.1 If the Contractor believes that a decision taken by the Project Manager was either outside the authority given to the Project Manager by the Contract or that the decision was wrongly taken, the decision shall be referred to the Adjudicator within 14 (fourteen) days of the notification of the Project Manager's decision.
- 22.2 The Adjudicator shall give a decision in writing within 14 (fourteen) days of receipt of a notification of a dispute. The adjudicator's cost (hourly fee and reimbursable expenses) shall be divided equally between the Employer and the Contractor, whatever decision is reached by the Adjudicator.
- 22.3 Both parties shall attempt to settle the dispute amicably before commencement of arbitration. If the dispute is not settled amicably within 14 (fourteen) days of the Adjudicator's written decision, either party may refer a decision of the Adjudicator to an Arbitrator. If neither party refers the dispute to arbitration within 28 (twenty eight) days of the Adjudicator's written

decision, the Adjudicator's decision shall be final and binding. The arbitration shall be conducted in accordance with the following arbitration procedures. [For smaller contracts, the institution is usually from the Employer's Country. For larger contracts, and contracts that are likely to be awarded to international contractors, it is recommended that the arbitration procedure of an international institution is used]

[CC 22.3(a) shall be retained in the case of a Contract with a foreign Contractor and CC 22.3 (b) shall be retained in the case of a Contract with a national of the Employer's Country.]

(a) Contract with foreign Contractor:

[unless the Employer chooses the commercial arbitration rules of another international arbitral institution, the following sample clause should be inserted:]

All disputes arising out of or in connection with the present contract shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said Rules.

(b) Contracts with Contractor national of the Employer's Country:

In the case of a dispute between the Employer and a Contractor who is a national of the Employer's Country, the dispute shall be referred to adjudication or arbitration in accordance with the laws of the Employer's Country.]

23. Fraud and Corruption

- 23.1 The Bank requires compliance with the Bank's Anti-Corruption Guidelines and its prevailing sanctions policies and procedures as set forth in the WBG's Sanctions Framework, as set forth in Appendix A to the CC.
- 23.2 The Employer requires the Contractor to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the to the request for quotations or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee.

24. Security of the Site

- 24.1 [Insert the following where the Contractor is responsible for the security of the Site] The Contractor shall be responsible for the security of the Site, and:
 - (a) for keeping unauthorized persons off the Site;

(b) authorized persons shall be limited to the Contractor's Personnel, the Employer's Personnel, and to any other personnel identified as authorized personnel (including the Employer's other contractors on the Site), by a notice from the Employer or the Project Manager to the Contractor.

The Contractor shall require the security personnel to act within the applicable Laws.

B. Time Control

25. Program and Progress Reports

- 25.1 The Contractor shall submit for approval a Program for the Works, within the period stated in CC 2.10. The Contractor may revise the Program and submit it to the Project Manager again at any time. A revised Program shall show any effect of Variations and Compensation Events.
- 25.2 The Contractor shall monitor progress of the Works and submit progress reports to the Project manager at intervals no longer than the period stated in **CC 2.11**.
- 25.3 In addition to the progress reports stated in **CC 2.11**, the Contractor shall inform the Project Manager immediately of any allegation, incident or accident in the Site, which has or is likely to have a significant adverse effect including, but is not limited to, any incident or accident causing fatality or serious injury; significant adverse effects or damage to private property; or any allegation of SEA and/or SH.

The Contractor shall provide full details of such incidents or accidents to the Project Manager within the timeframe agreed with the Project Manager.

26. Extension of the Completion Date

- 26.1 The Project Manager shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work, which would cause the Contractor to incur additional cost.
- 26.2 If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

27. Acceleration

27.1 When the Employer wants the Contractor to finish before the Intended Completion Date, the Project Manager shall obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Employer accepts these proposals, the

- Intended Completion Date shall be adjusted accordingly and confirmed by both the Employer and the Contractor.
- 27.2 If the Contractor's priced proposals for an acceleration are accepted by the Employer, they are incorporated in the Contract Price and treated as a Variation.

28. Delays Ordered by the Project Manager

- 28.1 The Project Manager may instruct the Contractor to delay the start or progress of any activity within the Works.
- 29. Management Meetings
- 29.1 Either the Project Manager or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.

30. Early Warning

- 30.1 The Contractor shall warn the Project Manager at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price, or delay the execution of the Works.
- 30.2 The Contractor shall cooperate with the Project Manager in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Project Manager.

C. Quality Control

31. Identifying Defects

31.1 The Project Manager shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Project Manager may instruct the Contractor to search for a Defect and to uncover and test any work that the Project Manager considers may have a Defect.

32. Tests

32.1 If the Project Manager instructs the Contractor to carry out a test not specified in the Specifications to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect, the test shall be a Compensation Event.

33. Correction of Defects

33.1 The Project Manager shall give notice to the Contractor of any Defects before the end of the Defects Liability specified in CC 2.12. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.

33.2 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Project Manager's notice.

34. Uncorrected Defects

34.1 If the Contractor has not corrected a Defect within the time specified in the Project Manager's notice, the Project Manager shall assess the cost of having the Defect corrected, and the Contractor shall pay this amount.

D. Cost Control

35. Contract Price²

35.1 The Bill of Quantities shall contain priced items for the Works to be performed by the Contractor. The Bill of Quantities is used to calculate the Contract Price. The Contractor will be paid for the quantity of the work accomplished at the rate in the Bill of Quantities for each item.

36. Changes in the Contract Price³

- 36.1 If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 25 percent, provided the change exceeds 1 percent of the Accepted Contract Amount, the Project Manager shall adjust the rate to allow for the change. The Project Manager shall not adjust rates from changes in quantities if thereby the Accepted Contract Amount is exceeded by more than 15 percent, except with the prior approval of the Employer.
- 36.2 If requested by the Project Manager, the Contractor shall provide the Project Manager with a detailed cost breakdown of any rate in the Bill of Quantities.

37. Variations

- 37.1 All Variations shall be included in updated Programs⁴ produced by the Contractor.
- 37.2 The Contractor shall provide the Project Manager with a quotation for carrying out the Variation when requested to do so by the Project Manager. The Project Manager shall assess the quotation, which shall be given within 7 (seven) days of the

In lump-sum contracts, replace CC 35.1 as follows:

In lump-sum contracts, replace entire CC 36 with new CC 36.1, as follows:

^{35.1} The Contractor shall provide updated Activity Schedules within 7 (seven) days of being instructed to by the Project Manager. The Activity Schedule shall contain the priced activities for the Works to be performed by the Contractor. The Activity Schedule is used to monitor and control the performance of activities on which basis the Contractor will be paid. If payment for materials on site shall be made separately, the Contractor shall show delivery of Materials to the Site separately on the Activity Schedule.

^{36.1} The Activity Schedule shall be amended by the Contractor to accommodate changes of Program or method of working made at the Contractor's own discretion. Prices in the Activity Schedule shall not be altered when the Contractor makes such changes to the Activity Schedule.

In lump-sum contracts, add "and Activity Schedules" after "Programs."

- request or within any longer period stated by the Project Manager and before the Variation is ordered.
- 37.3 If the Contractor's quotation is unreasonable, the Project Manager may order the Variation and make a change to the Contract Price, which shall be based on the Project Manager's own forecast of the effects of the Variation on the Contractor's costs.
- 37.4 If the Project Manager decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.
- 37.5 The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning.
- 37.6 If the work in the Variation corresponds to an item description in the Bill of Quantities and if, in the opinion of the Project Manager, the quantity of work above the limit stated in **CC 36.1** or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work. ⁵

38. Payment Certificates

- 38.1 The Contractor shall submit to the Project Manager monthly statements of the estimated value of the work executed less the cumulative amount certified previously.
- 38.2 The Project Manager shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.
- 38.3 The value of work executed shall be determined by the Project Manager.
- 38.4 The value of work executed shall comprise the value of the quantities of work in the Bill of Quantities that have been completed.⁶
- 38.5 The value of work executed shall include the valuation of Variations and Compensation Events.
- 38.6 The Project Manager may exclude any item certified in a previous certificate or reduce the proportion of any item

In lump-sum contracts, delete this paragraph.

In lump-sum contracts, replace this paragraph with the following: "The value of work executed shall comprise the value of completed activities in the Activity Schedule."

previously certified in any certificate in the light of later information.

39. Payments

- 39.1 Payments shall be adjusted for deductions for advance payments and retention. The Employer shall pay the Contractor the amounts certified by the Project Manager within 28 (twenty eight) days of the date of each certificate. If the Employer makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. The interest rate shall be at the prevailing rate of interest for commercial borrowing for each of the currencies in which payments are made.
- 39.2 Items of the Works for which no rate or price has been entered in shall not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.

40. Compensation Events

- 40.1 The following shall be Compensation Events:
 - (a) The Employer does not give access to a part of the Site by the Site Possession Date pursuant to **CC 2.8**.
 - (b) The Project Manager orders a delay or does not issue Drawings, Specifications, or instructions required for execution of the Works on time.
 - (c) The Project Manager instructs the Contractor to uncover or to carry out additional tests upon work, which is then found to have no Defects.
 - (d) The Project Manager unreasonably does not approve a subcontract to be let.
 - (e) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Letter of Award of Contract from the information issued to Contractors (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site.
 - (f) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety or other reasons.
 - (g) Other contractors, public authorities, utilities, or the Employer does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.
 - (h) The advance payment is delayed.
 - (i) The effects on the Contractor of any of the Employer's Risks.

- (j) The Project Manager unreasonably delays issuing a Certificate of Completion.
- 40.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Project Manager shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.
- 40.3 As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it shall be assessed by the Project Manager, and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Project Manager shall adjust the Contract Price based on the Project Manager's own forecast. The Project Manager shall assume that the Contractor shall react competently and promptly to the event.
- 40.4 The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor's not having given early warning or not having cooperated with the Project Manager.
- 41. Tax
- 41.1 The Project Manager shall adjust the Contract Price if taxes, duties, and other levies are changed between the date of submission of quotations for the Contract and the date of the last Completion certificate. The adjustment shall be the change in the amount of tax payable by the Contractor.
- 42. Price Adjustment
- 42.1 Prices shall not be adjusted for any fluctuations in the cost of inputs.
- 43. Retention
- 43.1 The Employer shall retain from each payment due to the Contractor the proportion stated in **CC 2.13** until Completion of the whole of the Works.
- 43.2 Upon the issue of a Certificate of Completion of the Works by the Project Manager, in accordance with **CC 49.1**, half the total amount retained shall be repaid to the Contractor and half when the Defects Liability Period has passed and the Project Manager has certified that all Defects notified by the Project Manager to the Contractor before the end of this period have been corrected. The Contractor may substitute retention money with an "on demand" Bank guarantee.

44. Liquidated Damages and Bonuses

- 44.1 The Contractor shall pay liquidated damages to the Employer at the rate per day stated in **CC 2.14** for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount defined in **CC 2.15**. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's liabilities.
- 44.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in CC 39.1.
- 44.3 The Contractor shall be paid a Bonus calculated at the rate per calendar day stated in CC 2.16 for each day (less any days for which the Contractor is paid for acceleration) that the Completion is earlier than the Intended Completion Date. The Project Manager shall certify that the Works are complete, although they may not be due to be complete

45. Advance Payment

- 45.1 The Employer shall make advance payment to the Contractor in the amount specified in **CC 2.17**, against provision by the Contractor, if required in **CC 2.17**, of an Unconditional Bank Guarantee in a form and by a bank acceptable to the Employer in amounts and currencies equal to the advance payment. The Guarantee shall remain effective until the advance payment has been repaid, but the amount of the Guarantee shall be progressively reduced by the amounts repaid by the Contractor.
- 45.2 The Contractor is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilization expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Project Manager.
- 45.3 The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or Liquidated Damages.

46. Performance Security

46.1 The Performance Security, if required in CC 2.18, shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount specified in CC 2.18, by a bank or surety acceptable to the Employer, and denominated in the types and proportions of the currencies in which the Contract Price is payable. The Performance Security shall be valid until a date 28 days from the date of issue of the Certificate of Completion in the case of a Bank Guarantee, and until one year from the date of issue of the Certificate of Completion in the case of a Performance Bond.

47. Dayworks

- 47.1 If applicable, the Dayworks rates in the Contractor's Quotations shall be used only when the Project Manager has given written instructions in advance for additional work to be paid for in that way.
- 47.2 All work to be paid for as Dayworks shall be recorded by the Contractor on forms approved by the Project Manager. Each completed form shall be verified and signed by the Project Manager within two days of the work being done.
- 47.3 The Contractor shall be paid for Dayworks subject to obtaining signed Dayworks forms.

48. Cost of Repairs

48.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

E. Finishing the Contract

49. Completion

49.1 The Contractor shall request the Project Manager to issue a Certificate of Completion of the Works, and the Project Manager shall do so upon deciding that the whole of the Works is completed.

50. Taking Over

50.1 The Employer shall take over the Site and the Works within 7 (seven) days of the Project Manager's issuing a Certificate of Completion.

51. Final Account

51.1 The Contractor shall supply the Project Manager with a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within 56 (fifty six) days of receiving the Contractor's account if it is correct and complete. If it is not, the

Project Manager shall issue within 56 (fifty six) days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Project Manager shall decide on the amount payable to the Contractor and issue a payment certificate.

52. Operating and Maintenance Manuals

- 52.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in **CC 2.19**.
- 52.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in **CC 2.19**, or they do not receive the Project Manager's approval, the Project Manager shall withhold the amount stated in **CC 2.20** from payments due to the Contractor.

53. Termination

- 53.1 The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.
- 53.2 Fundamental breaches of Contract shall include, but shall not be limited to, the following:
 - (a) the Contractor stops work for 28 (twenty eight) days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Project Manager;
 - (b) the Project Manager instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within 28 (twenty eight) days;
 - (c) the Employer or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
 - (d) a payment certified by the Project Manager is not paid by the Employer to the Contractor within 84 (eighty four) days of the date of the Project Manager's certificate;
 - (e) the Project Manager gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager;
 - (f) the Contractor does not maintain a Security, which is required;
 - (g) the Contractor has delayed the completion of the Works for which the maximum amount of liquidated damages can be paid, as specified in **CC 2.15**; or

- (h) if the Contractor, in the judgment of the Employer has engaged in Fraud and Corruption, as defined in paragraph 2.2 a of the Appendix A to the CC, in competing for or in executing the Contract, then the Employer may, after giving 14 (fourteen) days written notice to the Contractor, terminate the Contract and expel him from the Site.
- 53.3 Notwithstanding the above, the Employer may terminate the Contract for convenience.
- 53.4 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.
- 53.5 When either party to the Contract gives notice of a breach of Contract to the Project Manager for a cause other than those listed under **CC** 53.2 above, the Project Manager shall decide whether the breach is fundamental or not.

54. Payment upon Termination

- 54.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Project Manager shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate and less the percentage specified in *CC* 2.21 to apply to the value of the work not completed. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be a debt payable to the Employer.
- 54.2 If the Contract is terminated for the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Project Manager shall issue a certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works, and less advance payments received up to the date of the certificate.

55. Property

55.1 All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Employer if the Contract is terminated because of the Contractor's default.

56. Release from Performance

56.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Employer or the Contractor, the Project Manager shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this

certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment was made.

57. Suspension of Bank Loan or Credit

- 57.1 In the event that the Bank suspends the Loan or Credit to the Employer, from which part of the payments to the Contractor are being made:
 - (a) The Employer is obligated to notify the Contractor of such suspension within 7 (seven) days of having received the Bank's suspension notice.
 - (b) If the Contractor has not received sums due to it within the 28 (twenty eight) days for payment provided for in CC 39.1, the Contractor may immediately issue a 14 (fourteen)-day termination notice.

APPENDIX A TO CONTRACT CONDITIONS

Fraud and Corruption

(Text in this Appendix shall not be modified)

1. Purpose

1.1 The Bank's Anti-Corruption Guidelines and this annex apply with respect to procurement under Bank Investment Project Financing operations.

2. Requirements

2.1 The Bank requires that Borrowers (including beneficiaries of Bank financing); bidders (applicants/proposers), consultants, contractors and suppliers; any sub-contractors, sub-consultants, service providers or suppliers; any agents (whether declared or not); and any of their personnel, observe the highest standard of ethics during the procurement process, selection and contract execution of Bank-financed contracts, and refrain from Fraud and Corruption.

2.2 To this end, the Bank:

- a. Defines, for the purposes of this provision, the terms set forth below as follows:
 - i. "corrupt practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
 - ii. "fraudulent practice" is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation;
 - iii. "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
 - iv. "coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
 - v. "obstructive practice" is:
 - (a) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive, or collusive practice; and/or threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

- (b) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under paragraph 2.2 e. below.
- b. Rejects a proposal for award if the Bank determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
- c. In addition to the legal remedies set out in the relevant Legal Agreement, may take other appropriate actions, including declaring misprocurement, if the Bank determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement process, selection and/or execution of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;
- d. Pursuant to the Bank's Anti- Corruption Guidelines and in accordance with the Bank's prevailing sanctions policies and procedures, may sanction a firm or individual, either indefinitely or for a stated period of time, including by publicly declaring such firm or individual ineligible (i) to be awarded or otherwise benefit from a Bank-financed contract, financially or in any other manner;1 (ii) to be a nominated2 sub-contractor, consultant, manufacturer or supplier, or service provider of an otherwise eligible firm being awarded a Bank-financed contract; and (iii) to receive the proceeds of any loan made by the Bank or otherwise to participate further in the preparation or implementation of any Bank-financed project;
- e. Requires that a clause be included in bidding/request for proposals documents and in contracts financed by a Bank loan, requiring (i) bidders(applicants/proposers), consultants, contractors, and suppliers, and their sub-contractors, sub-consultants, service providers, suppliers, agents personnel, permit the Bank to inspect³ all accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have them audited by auditors appointed by the Bank.

For the avoidance of doubt, a sanctioned party's ineligibility to be awarded a contract shall include, without limitation, (i) applying for pre-qualification, expressing interest in a consultancy, and bidding, either directly or as a nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider, in respect of such contract, and (ii) entering into an addendum or amendment introducing a material modification to any existing contract.

A nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider (different names are used depending on the particular bidding document) is one which has been: (i) included by the bidder in its prequalification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.

Inspections in this context usually are investigative (i.e., forensic) in nature. They involve fact-finding activities undertaken by the Bank or persons appointed by the Bank to address specific matters related to investigations/audits, such as evaluating the veracity of an allegation of possible Fraud and Corruption, through the appropriate mechanisms. Such activity includes but is not limited to: accessing and examining a firm's or individual's financial records and information, and making copies thereof as relevant; accessing and examining any other documents, data and information (whether in hard copy or electronic format) deemed relevant for the investigation/audit, and making copies thereof as relevant; interviewing staff and other relevant individuals; performing physical inspections and site visits; and obtaining third party verification of information.

Attachment: Contract

Sample Letter of Award of Contract

[modify as appropriate]

[use letterhead paper of the Employer]

[date]
To: [name and address of the Contractor]
Subject: [Notification of Award Contract No]
This is to notify you that your Quotation dated [insert date] for execution of the
Please find enclosed herewith the Contract. You are requested to sign the contract within <i>[insert no of days]</i> .
[Insert the following only if Performance Security is required:] "You are also requested to furnish a Performance Security within [insert no of days] in accordance with the Conditions of the Contract, using for that purpose one of the Performance Security Forms attached to the Contract.
Authorized Signature:

[Delete if not applicable]

[If Performance Security applies, this is recommended]

Performance Security - Bank Guarantee

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: [insert name and Address of Employer]

Date: _[Insert date of issue]

PERFORMANCE GUARANTEE No.: [Insert guarantee reference number]

Guarantor: [Insert name and address of place of issue, unless indicated in the letterhead]

We have been informed that _[insert name of Contractor, which in the case of a joint venture shall be the name of the joint venture] (hereinafter called "the Applicant") has entered into Contract No. [insert reference number of the contract] dated [insert date] with the Beneficiary, for the execution of _ [insert name of contract and brief description of Works] (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of [insert amount in figures] [insert amount in words], such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the Day of, 2... ², and any demand for payment under it must be received by us at this office indicated above on or before that date.

The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Award of Contract less provisional sums, if any, and denominated either in the currency(ies) of the Contract or a freely convertible currency acceptable to the Beneficiary.

Insert the date twenty-eight days after the expected completion date as described in CC 49.1. The Employer should note that in the event of an extension of this date for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

[Delete if not applicable]

Performance Security - Performance Bond

By this Bond [insert name of Principal] as Principal (hereinafter called "the Contractor") and [insert name of Surety] as Surety (hereinafter called "the Surety"), are held and firmly bound unto [insert name of Employer] as Obligee (hereinafter called "the Employer") in the amount of [insert amount in words and figures], for the payment of which sum well and truly to be made in the types and proportions of currencies in which the Contract Price is payable, the Contractor and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS	the	Contract	or h	as entered in	to a w	ritter	ı Agree	ement v	with th	e Employ	er date	d the
		y of			_, 20		, for	[name	e of	contract	and	brief
description	of	Works]	in	accordance	with	the	docum	nents,	plans,	specific	ations,	and
amendments thereto, which to the extent herein provided for, are by reference made part hereof												
and are here	inaf	ter referr	ed t	o as the Con	tract.							

NOW, THEREFORE, the Condition of this Obligation is such that, if the Contractor shall promptly and faithfully perform the said Contract (including any amendments thereto), then this obligation shall be null and void; otherwise, it shall remain in full force and effect. Whenever the Contractor shall be, and declared by the Employer to be, in default under the Contract, the Employer having performed the Employer's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

- (1) complete the Contract in accordance with its terms and conditions; or
- obtain a Bid or Bids from qualified Bidders for submission to the Employer for completing the Contract in accordance with its terms and conditions, and upon determination by the Employer and the Surety of the lowest responsive Bidder, arrange for a Contract between such Bidder and Employer and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the Balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "Balance of the Contract Price," as used in this paragraph, shall mean the total amount payable by Employer to Contractor under the Contract, less the amount properly paid by Employer to Contractor; or
- (3) pay the Employer the amount required by Employer to complete the Contract in accordance with its terms and conditions up to a total not exceeding the amount of this Bond.

The Surety shall not be liable for a greater sum than the specified penalty of this Bond.

Any suit under this Bond must be instituted before the expiration of one year from the date of issue of the Certificate of Completion.

No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Employer named herein or the heirs, executors, administrators, successors, and assigns of the Employer.

Surety has caused these pre- signature of his legal represen	ontractor has hereunto set his hand and a sents to be sealed with his corporate sentative, this day of	al duly attested by the
SIGNED ON	on behalf of	
Ву	in the capacity of	
In the presence of		
SIGNED ON	on behalf of	
Ву	in the capacity of	
In the presence of		

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

Advance Payment Security

Demand Guarantee

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: [Insert name and Address of Employer]

Date: [Insert date of issue]

ADVANCE PAYMENT GUARANTEE No.: [Insert guarantee reference number]

Guarantor: [Insert name and address of place of issue, unless indicated in the letterhead]

We have been informed that [insert name of Contractor, which in the case of a joint venture shall be the name of the joint venture] (hereinafter called "the Applicant") has entered into Contract No. [insert reference number of the contract] dated [insert date] with the Beneficiary, for the execution of [insert name of contract and brief description of Works] (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum [insert amount in figures] () [insert amount in words] is to be made against an advance payment guarantee.

- (a) has used the advance payment for purposes other than the costs of mobilization in respect of the Works; or
- (b) has failed to repay the advance payment in accordance with the Contract conditions, specifying the amount which the Applicant has failed to repay.

A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the advance payment referred to above has been credited to the Applicant on its account number [insert number] at [insert name and address of Applicant's bank]..

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Applicant as specified in copies of interim statements or

The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency(ies) of the advance payment as specified in the Contract, or in a freely convertible currency acceptable to the Employer.

payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that ninety (90) percent of the Accepted Contract Amount, less provisional sums, has been certified for payment, or on the [insert day] day of [insert month], 2 [insert year], whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

Insert the expected completion date as described in CC 49.1. The Employer should note that in the event of an extension of the expected completion date of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months] [one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."