

**REPUBLIC OF RWANDA**



**MINISTRY OF AGRICULTURE AND ANIMAL RESOURCES**

**KAYONZA IRRIGATION AND INTEGRATED WATERSHED MANAGEMENT PROJECT  
(KIIWP 2)**

**TENDER FOR CIVIL WORKS OF KANYEGANYEGE DAM AND IRRIGATION  
INFRASTRUCTURE (150HA) ON BEHALF OF KIIWP II**

<b>TENDER TITLE:</b>	<b>TENDER FOR CIVIL WORKS OF KANYEGANYEGE DAM AND IRRIGATION INFRASTRUCTURE (150HA) ON BEHALF OF KIIWP II</b>
<b>TENDER REFERENCE NUMBER:</b>	N° .....
<b>PROCUREMENT METHOD:</b>	<b>INTERNATIONAL COMPETITIVE BIDDING</b>
<b>PUBLICATION DATE:</b>	<b>Juin, 2024</b>

# Foreword

This Standard Bidding Document (“SBD”) for the procurement of large works has been prepared by the International Fund for Agricultural Development (“the Fund” or “IFAD”) for use by project entities when procuring works that are financed in whole or in part by IFAD.

It is intended to be used for works under the ICB procurement method where simpler conditions of contract than those of FIDIC are deemed suitable for the nature of works being bid and also offering the opportunity to use either admeasurement (unit price or unit rate) type of contract or lump sum contract.

Lump sum contracts may be used for works where the engineering design has been completed with full definition of the works’ physical and qualitative characteristics before bids are invited, or where the risks of substantial design variations and unforeseen underground conditions are minimal. In lump-sum contracts, the concept of priced “activity schedules” is used, to enable payments to be made on the basis of the percentage completion of each activity schedule.

This SBD is consistent with the IFAD Procurement Guidelines, the IFAD Procurement Handbook and the IFAD Social, Environmental and Climate Assessment Procedures (SECAP) 2020.

This SBD assumes that no prequalification has taken place before bidding and that postqualification of the bidder submitting the bid with the best value for money will take place as per the bidder’s qualification forms enclosed in Section III.

# Summary Description

This standard bidding document for procurement of large works shall be used under international competitive bidding (ICB) for procurement of works estimated at around USD 5 million but under 10 million USD or its equivalent. This SBD can be used in projects where environmental, social and climate risks are categorised as high or substantial or moderate or low under IFAD- SECAP. A brief description of this standard bidding document is given below.

## Request for Bids for Procurement of Large Works

### Part 1 – Bidding and Selection Procedures

#### Section I Instructions to Bidders (“ITB”)

This section provides information to help prospective bidders prepare their bids; it also provides information on the submission, opening, and evaluation of bids and on the award of contracts. The text of the clauses in this section shall not be modified.

#### Section II Bid Data Sheet (“BDS”)

This section sets out the particular requirements for the specific procurement and supplements the information included in Section I. instructions to bidders.

#### Section III Bid Examination, Bid Evaluation and Bidder Qualification Requirements

This section describes the criteria and requirements to determine the responsive bid offering the best value for money to the employer plus the forms to verify the qualifications of the bidder to perform the contract.

#### Section IV Bidding Forms

This section contains the forms which are to be completed by the bidders and submitted as part of their bids.

### Part 2 – Works Requirements

#### Section V Works Requirements

This section contains the description the works (scope of works) to be procured and includes the following sub-sections:

##### *Scope of Works*

This sub-section describes the scope of the works, a description of the works sections and different lots (if applicable).

**Technical specifications**  
This sub-section and presents a clear statement of the required standards for materials, plant, supplies, and workmanship to be provided as developed by the design engineer.

**Environmental and Social (ES) requirements**  
The ES requirements reference applicable standards and codes, key personnel requirements, and environmental, social, health, and safety requirements to be satisfied by the contractor in executing the works. These requirements shall also include the environmental and social standards (ESS) requirements that are derived from the

project's overall environmental and social management plan (ESMP) prepared by the borrower/recipient as well as include the employer's requirements with respect to sexual harassment, sexual exploitation and abuse, health and safety on site as well as the code of conduct for contractor's personnel.

***Drawings***

This sub-section contains construction drawings in sufficient detail to allow bidders to understand the type and complexity of the work involved and to price the bill of quantities or activity schedule.

**Part 3 – Conditions of Contract and Contract Forms**

**Section VI General Conditions of Contract (“GCC”) and Appendices**

This section contains the form of contract proposed to be entered into between the employer and contractor. The text of the general conditions of contract clauses in this section shall not be modified.

The appendices are:

Appendix A: revised IFAD Anti-Corruption Policy;

Appendix B: environmental and social reporting metrics (requirements) by the winning contractor in its periodic reports.

**Section VII Particular Conditions of Contract (“PCC”)**

This section contains the contract data (particular conditions of contract) that supplement the GCC clauses and that are to be completed by the employer for each procurement of works.

**Section VIII Contract Forms**

This section contains forms which, once completed, will be part of the contract. The forms for letter of acceptance, contract agreement, performance security, self-certification form for contractors, advance payment security, when required, shall be completed only by the successful bidder after contract award.

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## Invitation for Bids

**TENDER NOTICE N° See Umucyo e-Procurement System**

**TITLE: TENDER FOR CIVIL WORKS OF KANYEGANYEGE DAM AND  
IRRIGATION INFRASTRUCTURE (150HA) ON BEHALF OF KIIWP 2**

**CLIENT: RAB/KAYONZA IRRIGATION AND INTEGRATED WATESHED  
MANAGEMENT PROJECT KIIWP 2**

**FUNDING: IFAD**

1. Kayonza Irrigation and Integrated Watershed Management Project (KIIWP 2) hereinafter called “Client” funded by International Fund for Agricultural Development (IFAD) towards the cost of Execution of civil works of Kanyeganyege dam and irrigation infrastructure (150ha) on behalf of KIIWP 2 .The Client intends to apply a portion of the funds to eligible payments under the tender for execution of works.
2. The Kayonza Irrigation and Integrated Watershed Management Project (KIIWP 2) now invites, by the present tender notice, bids from eligible and qualified bidders for Execution of civil works of Kanyeganyege dam and irrigation infrastructure (150ha) on behalf of KIIWP 2. The execution period is estimated to Eighteen (18) months.
3. Bidding will be conducted through International Competitive Bidding(ICB) and is open to all eligible companies under category A for Marshland development, marshland and hillside irrigation on the RPPA categorization list into force at the time of bidding for local companies.
4. Qualifications requirements include those set out in the tender documents. A margin of preference of 10% for eligible national bidders/joint ventures shall apply.
5. Tender Documents in English may be obtained through Umucyo E-procurement system, via [www.umucyo.gov.rw](http://www.umucyo.gov.rw) from the date of publication. The interested bidder shall pay a non-refundable fee of ten thousand Rwandan Francs (10,000Frw) and the sum is to be deposited on any account number of RRA open in any commercial bank operating in Rwanda. **A compulsory site visit is scheduled on 31/07/2024** and will be conducted by KIIWP2 irrigation team The venue for departure is fixed at 10:00 am local time at KIIWP2 Kayonza Office (located near SILENT Hotel).
6. All bids shall be accompanied by a **bid security in Rwanda Francs of amount indicated in Umucyo system**, or an equivalent amount in a freely convertible currency, issued by a reputable bank or other financial institution operating in Rwanda.
7. Enquiries regarding this tender shall be sent to RAB/KIIWP 2 through E-Procurement system, via [www.umucyo.gov.rw](http://www.umucyo.gov.rw) in the window “**Request for Clarifications**” within two third (2/3) of the deadline period for the submission of tenders as of the date of tender notice publication.

8. A contractor will be selected using the international competitive bidding (ICB) method in accordance with the IFAD Procurement Handbook accessible at [www.ifad.org/project-procurement](http://www.ifad.org/project-procurement) . The ICB process will include a review and verification of qualifications and past performance, including a reference check, prior to the contract award.
9. An optional site visit is scheduled on the date **indicated in E-Procurement System** and all prospective bidders are advised to participate. The venue for departure is Kayonza District headquarters, at 10: 00 am local time (8:00 GMT).
10. Bids shall be submitted through Umucyo E-Procurement system, via [www.umucyo.gov.rw](http://www.umucyo.gov.rw) not later than the date as **indicated in E-Procurement System**
11. Bids will be opened automatically in Umucyo E-Procurement system via [www.umucyo.gov.rw](http://www.umucyo.gov.rw) on the date as **indicated in E-Procurement System**.

**Done at Kigali, on ...../.../2024**

**RWAMULANGWA Stephen**  
**SPIU Coordinator**

## **Part 1: Bidding and Selection Procedure**

# Section I. Instructions to Bidders

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## Instructions to Bidders

### A. General

#### 1. Scope of bid

1.1 The employer as **identified in the BDS** has issued an invitation for bids along with this bidding document for the procurement of works as specified in Part 2, Works Requirements. The name and identification number of the contract, and number description of the lot(s), are **specified in the BDS**.

1.2 The successful bidder shall be expected to complete the works within the construction period duration specified in the BDS.

1.3 Throughout this bidding document:

- a) The term “in writing” means communicated in written form with proof of receipt;
- b) If the context so requires, “singular” means “plural” and vice versa;
- c) “Day” means calendar day, unless otherwise specified as “business day”. A business day is any day that is official working day of the borrower.
- d) “IFAD” or “the Fund” means the International Fund for Agricultural Development.
- e) “Bid” means a bid for the provision of the works submitted by a bidder in response to this bidding document.
- f) “Bid security” or “bid securing declaration” means the security a bidder may be required to furnish as part of its bidder in accordance with ITB clause 22.
- g) “Bidder” means any eligible entity or person, including any associate of such eligible entity or person that submits a bid.
- h) “borrower/recipient” means the Government, Government agency or other entity that signs the Financing Agreement with the Fund. It connotes that this entity signed an agreement for a loan.
- i) “SECAP” means IFAD’s Social Environmental and Climate Assessment Procedures (SECAP).

## 2. Source of funds

2.1 The borrower or recipient (hereinafter called “borrower”) **specified in the BDS** has received (or in appropriate cases “has applied for”) a financing from the International Fund for Agricultural Development. Development (“the Fund”) in various currencies equivalent to the amount **specified in the BDS** towards the cost of the project **named in the BDS**, and intends to apply a portion of the proceeds of this loan/grant to eligible payments under this contract. Payment by IFAD will be made only at the request of borrower and upon approval by IFAD, and will be subject, in all respects, to the terms and conditions of the financing agreement. The financing agreement prohibits a withdrawal from the loan and/or grant account for the purpose of any payment to persons or entities, or any payment prohibited by a decision of the United Nations Security Council taken under chapter VII of the Charter of the United Nations.

## 3. Prohibited practices

3.1 The Fund requires that all beneficiaries of IFAD funding, including the employer and any bidders, implementing partners, service providers, suppliers, sub-suppliers, contractors, sub-contractors, consultants, sub-consultants, and any of their agents (whether declared or not) and personnel observe the highest standards of ethics during the procurement and execution of such contracts, and comply with IFAD’s Policy on Preventing Fraud and Corruption in its activities and operations, revised on 12 December 2018 and attached as Appendix A to Section VI General Conditions of Contract (EB 2018/125/R.6, hereinafter “IFAD’s Anti-Corruption Policy”).

3.2 For the purposes of these provisions, and consistent with IFAD’s Anticorruption Policy, the terms set forth below are defined as follows, and sometimes referred to collectively as “prohibited practices”:

- (a) “corrupt practice” is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value in order to improperly influence the actions of another party;
- (b) “fraudulent practice” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party in order to obtain a financial or other benefit or to avoid an obligation;
- (c) “collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose,

including improperly influencing the actions of another party;

- (d) “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of any party, to improperly influence the actions of that or another party;
- (e) “obstructive practice” is (i) deliberately destroying, falsifying, altering or concealing evidence that may be material to an investigation by the Fund or making false statements to investigators in order to materially impede an investigation by the Fund; (ii) threatening, harassing or intimidating any party in order to prevent that party from disclosing its knowledge of matters relevant to an investigation by the Fund or from pursuing such an investigation; and/or (iii) the commission of any act intended to materially impede the exercise of the Fund’s contractual rights of audit, inspection and access to information.

3.3 The Fund will deny approval of a proposed contract award if it determines that the firm or individual recommended for award, or any of its personnel or agents, or its sub-consultants, sub-contractors, service providers, suppliers, sub-suppliers and/or any of their personnel or agents, has, directly or indirectly, engaged in any of the prohibited practices in connection with an IFAD-financed and/or IFAD-managed activity or operation, including in competing for the contract.

3.4 In accordance with IFAD’s Anticorruption Policy, the Fund has the right to sanction firms and individuals, including by declaring them ineligible, either indefinitely or for a stated period of time, to participate in any IFAD-financed and/or IFAD-managed activity or operation. This may include ineligibility to: (i) be awarded or otherwise benefit from any IFAD-financed contract, financially or in any other manner; (ii) be a nominated sub-contractor, consultant, manufacturer, supplier, sub-supplier, agent or service provider of an otherwise eligible firm being awarded an IFAD-financed contract; and (iii) receive the proceeds of any loan or grant provided by the Fund.<sup>1</sup> The Fund also has the right to unilaterally recognize debarments by any of the International financial Institutions that are members to the agreement for mutual enforcement of debarment decisions if

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<sup>1</sup> 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.

such debarments meet the requirements for mutual recognition under the agreement for mutual enforcement of debarment decisions.

3.5 In addition, the Fund has the right to, at any time, declare a misprocurement and/or the ineligibility of any expenditures associated with a procurement process or contract if it determines that prohibited practices occurred in connection with this procurement process or contract and that the borrower/recipient has not taken timely and appropriate action, satisfactory to the Fund, to address such practices when they occur.

3.6 Bidders, suppliers, consultants, contractors, and their sub-contractors, sub-consultants, service providers, suppliers, agents and personnel, are required to fully cooperate with any investigation conducted by the Fund into possible prohibited practices, including by making personnel available for interviews and by providing full access to any and all accounts, premises, documents and records (including electronic records) relating to the relevant IFAD-financed and/or IFAD-managed operation or activity and to have such accounts, premises, records and documents audited and/or inspected<sup>2</sup> by auditors and/or investigators appointed by the Fund.

3.7 The bidder is obliged to disclose relevant prior sanctions and criminal convictions and any commissions or fees paid or are to be paid to any agents or other party in connection with this procurement process or the execution of the contract.

3.8 The bidder shall keep all records and documents, including electronic records, relating to this procurement process available for a minimum of three (3) years after notification of completion of the process or, in case the bidder is awarded the contract, execution of the contract.

- 4. Sexual harassment, sexual exploitation and abuse** 4.1 The Fund requires that all beneficiaries of IFAD Funding, including the employer and any bidders, implementing partners, service providers, suppliers, sub-suppliers, contractors, sub-contractors, consultants, sub-consultants, and any of their agents (whether declared or not) and personnel comply with IFAD's Policy on Preventing and Responding to Sexual Harassment, Sexual Exploitation and Abuse. For the purpose of this provision, and consistent with IFAD's Policy on Preventing and Responding

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<sup>2</sup> Inspections include all fact-finding activities deemed relevant by the Fund to address allegations or other indications of possible prohibited practices. Such fact-finding activities may include, but are 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 or information (whether in hard copy or electronic format) deemed relevant for the investigation or audit, and making copies thereof as relevant; interviewing staff and other relevant individuals; performing physical inspections and site visits; and obtaining third party verifications of information. It is the responsibility of the firm or individual under inspection to ensure effective compliance with their duty to cooperate vis-à-vis any potential local laws or regulations or other potentially conflicting obligations.

to Sexual Harassment, Sexual Exploitation and Abuse as it may be amended from time to time, the terms set forth below are defined as follows:

- (a) Sexual harassment means “any unwelcome sexual advance, request for sexual favour or other verbal, non-verbal or physical conduct of a sexual nature that unreasonably interferes with work, alters or is made a condition of employment, or creates an intimidating, hostile or offensive work environment.
- (b) Sexual exploitation and abuse means “any actual or attempted abuse of a 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 others (sexual exploitation); the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions (sexual abuse)”.

4.2 Employers, suppliers and bidders shall take all appropriate measures to prevent and prohibit sexual harassment and sexual exploitation and abuse on the part of their personnel and subcontractors or anyone else directly or indirectly employed by them or any of subcontractors in the performance of the contract. Purchasers, suppliers and bidders shall immediately report to the purchaser or IFAD any incidents of sexual harassment and sexual exploitation and abuse arising out of or in connection with the performance of the contract or prior to its execution, including convictions, disciplinary measures, sanctions or investigations. The purchaser may take appropriate measures, including the termination of the contract, on the basis of proven acts of sexual harassment, sexual exploitation and abuse arising out of or in connection with the performance of the contract.

4.3 The bidder or subcontractor or supplier is required to disclose any relevant prior sanctions, convictions, disciplinary measures or criminal records.

- 5. Money laundering and terrorist financing** 5.1 The Fund requires that all beneficiaries of IFAD funding or funds administered by IFAD, including the employer, any bidders, implementing partners, service providers and suppliers, observe the highest standards of integrity during the procurement and execution of such contracts, and commit to combat money laundering and terrorism financing consistent with IFAD’s Anti-Money Laundering and Countering the Financing of Terrorism Policy.

**6. SECAP performance standards**

6.1 The resulting contract will be implemented in a manner consistent with IFAD's Social, Environmental and Climate Assessment Procedures (SECAP), available on <https://www.ifad.org/en/secap>.

**7. Eligible bidders and conflict of interest**

7.1 This invitation for bids is open to all bidders from eligible source countries. A bidder may be a private firm, a government-owned enterprise subject to ITB 7.8 or any combination of such entities in the form of a joint venture under an existing agreement or with the intent to enter into such an agreement supported by a letter of intent.

7.2 In the case where a bidder is or proposes to be a JV

(a) all members shall be jointly and severally liable for the execution of the contract; and

(b) the JV shall nominate a representative who will have the authority to conduct all business for and on behalf of any and all the members of the JV.

**Conflict of interest**

7.3 A bidder shall not have any actual, potential or reasonably perceived conflict of interest. A bidder shall declare in the letter of Bid any actual, potential or reasonably perceived interest, regardless of its nature, that affects, may affect, or might reasonably be perceived by others to affect, impartiality in any matter relevant to the procurement process, including the selection process and the execution of the contract. A bidder with an actual, potential or reasonably perceived conflict of interest shall be disqualified, unless otherwise explicitly approved by the Fund. The employer requires that the bidder and the supplier hold the project's interests as paramount at all times, strictly avoiding any actual, potential or reasonably perceived conflicts of interest, including actual, potential or reasonably perceived conflicts with other assignments or their own personal and/or corporate interests, and act without any consideration for any other ongoing or future work. Without limitation on the generality of the foregoing, a bidder or supplier, including all parties constituting the bidder or supplier and their respective personnel and affiliates, as well as any subcontractors for any part of the contract, including related services, and their respective personnel and affiliates, may be considered to have an actual, potential or reasonably perceived conflict of interest and disqualified or terminated if they:

(i) have, may have or might reasonably appear to have at least one controlling partner in common with one or more other parties in the process contemplated by this bidding document or the execution of the contract; or

- (ii) have, may have or might reasonably appear to have the same legal representative as another bidder for purposes of this bid or execution of the contract; or
- (iii) have, may have or might reasonably appear to have a relationship, directly or through common third parties, that puts them in a position to have access to undue or undisclosed information about or influence over the bid process and the execution of the contract, or influence the decisions of the purchaser regarding the selection process for this procurement or during the execution of the contract; or
- (iv) participate, may participate or might reasonably appear to participate in more than one bid in this process; participation by a bidder in more than one bid shall result in the disqualification of all bids in which the party is involved; however, this provision does not limit the inclusion of the same subcontractor in more than one bid; or are themselves, may be or might reasonably appear to be, or
- (v) have, may have or might reasonably appear to have a business or family relationship with, a member of the purchaser's board of directors or its personnel, the Fund or its personnel, or any other individual was, has been or might reasonably be directly or indirectly involved in any part of (i) the preparation of this bidding document, (ii) the selection process for this procurement, or (iii) execution of the contract, unless the actual, potential or reasonably-perceived conflict stemming from this relationship has been explicitly authorized by the Fund.

7.4 A bidder that has been engaged by the employer to provide goods, works or non-consulting services for a project, its personnel and any of its affiliates, shall be disqualified from providing consulting services related to those goods, works or services. Conversely, a bidder hired to provide consulting services for the preparation or implementation of a project, its personnel and any of its affiliates, shall be disqualified from subsequently providing goods, works or non-consulting services resulting from or directly related to such consulting services for such preparation or implementation.

7.5 A bidder and the supplier shall have an obligation to disclose any situation of actual, potential or perceived conflict of interest that impacts, may impact, or might reasonably appear to be perceived by others to impact, their capacity to serve the best interest of the purchaser. Failure to properly disclose any of said situations may lead to appropriate actions, including the



disqualification of the bidder, the termination of the contract and any other as appropriate under the IFAD Revised Policy on Preventing Fraud and Corruption in its projects and operations.

7.6 A bidder or supplier, all parties constituting the bidder or supplier, and any subcontractors for any part of the contract, including related services, and their respective personnel and affiliates, will not be any person or entity under a declaration of ineligibility by the Fund for having engaged in prohibited practices as contemplated by ITB clause 3 above or under suspension from bidding by the employer as a result of the enforcement of a bid securing declaration. The Fund also has the right to unilaterally recognize debarments by any of the International Financial Institutions that are members to the agreement for mutual enforcement of debarment decisions if such debarments meet the requirements for mutual recognition under the agreement for mutual enforcement of debarment decisions.

7.7 A bidder or supplier, all parties constituting the bidder or supplier, and any subcontractors for any part of the contract, including related services, and their respective personnel and affiliates not otherwise made ineligible for a reason described in this ITB clause 7 will nonetheless be excluded if:

- (a) as a matter of law or official regulation, the Government prohibits commercial relations with the country of the bidder or supplier (including any associates, subcontractors and any respective affiliates) provided that the Fund 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 Government prohibits the issuance of a payment.

7.8 Bidders that are Government-owned enterprises or institutions in the employer's country may participate only if they can establish that they (i) are legally and financially autonomous (ii) operate under commercial law, and (iii) are not dependent agencies of the employer. To be eligible, a government-owned enterprise or institution shall establish to the IFAD's satisfaction, through all relevant documents, including its charter and other information the IFAD may request, that it: (i) is a legal entity separate from the government (ii) does not currently receive substantial subsidies or budget support; (iii) operates like any commercial enterprise, and, inter alia, is not obliged to pass on its surplus to the government, can acquire rights and liabilities, borrow funds and be liable for repayment of its debts, and can be declared bankrupt; and (iv) is not bidding for a contract to be awarded by the

department or agency of the government which under their applicable laws or regulations is the reporting or supervisory authority of the enterprise or has the ability to exercise influence or control over the enterprise or institution.

- 8. Eligible materials, equipment and services** 8.1 The materials, equipment and services to be supplied under the Contract and financed by IFAD may have their origin in any country and must be supplied by an eligible provider. At the employer's request, bidders will be required to provide evidence of the origin of materials, equipment and services.

8.2 For purposes of ITB Clause 8.1, "origin" means the place where the materials and equipment are mined, grown, cultivated, produced, manufactured or processed, and from which the services are provided. Materials and equipment are produced when, through manufacturing, processing, or substantial or major assembling of components, a commercially recognized article results that differs substantially in its basic characteristics, purposes or utility from its underlying components.

8.3 The origin of materials, equipment and services is distinct from the nationality of the bidder.

## **B. Contents of Bidding Document**

- 9. Section of bidding document** 9.1 This bidding document consists of parts 1, 2, and 3, which include all the sections indicated below and should be read in conjunction with any addenda issued in accordance with ITB clause 11.

### **Part 1 – Bidding and selection procedures**

Section I. Instructions to bidders

Section II. Bid data sheet

Section III. Bid Examination, bid evaluation and bidder qualification criteria

Section IV. Bidding forms

### **Part 2 – Works requirements**

Section V:

(a) Scope of works

(b) Technical specifications

(c) Environmental and Social (ES) requirements

(d) Drawings

### **Part 3 – Conditions of Contract and Contract forms**

Section VI. General conditions of contract and appendices

Section VII. Particular conditions of contract

Section VIII. Contract forms

9.2 The invitation for bids issued by the employer is not part of the bidding document.

9.3 The employer is not responsible for the completeness of this bidding document and its addenda if they were not obtained directly from the source stated by the employer in the invitation for bids.

9.4 The bidder is expected to examine all instructions, forms, terms, and works requirements in this bidding document. Failure to furnish all information or documentation required by this bidding document may result in the rejection of the bid.

**10. Clarification of bidding document, site visit, pre-bid meeting** of 10.1 A prospective bidder requiring any clarification of this bidding document shall contact the employer in writing, by email or fax at the employer's address indicated in the BDS. The employer will respond to any request for clarification, provided that such a request is received no later than the number of days indicated in the BDS prior to the deadline for submission of bids. The employer shall send written copies of the responses, including a description of the inquiry but without identifying its source, to bidders who have registered or obtained the bidding document directly from the employer by the date specified in the BDS. The employer will also post a copy of the responses and inquiry descriptions to the employer's website indicated in the BDS. Should the clarification result in changes to the essential elements of this bidding document, the employer shall amend this bidding document following the procedure under ITB clause 11.

10.2 The bidder is advised to visit and examine the site of works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and entering into a contract for construction of the works. The costs of visiting the site shall be at the bidder's own expense.

10.3 The bidder and any of its personnel or agents will be granted permission by the employer to enter upon its premises and lands for the

purpose of such visit, but only upon the express condition that the bidder, its personnel, and agents will release and indemnify the employer and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.

10.4 The bidder's designated representative is invited to attend a pre-bid conference, **if provided for in the BDS**. The purpose of the conference will be to clarify the issues and to answer questions on any matter that may be raised at that stage.

**11. Amendment of bidding document** 11.1 At any time prior to the deadline for submission of bids, the employer may amend this bidding document by issuing addenda.

11.2 All addenda issued shall be part of this bidding document and shall be communicated in writing to all bidders that have obtained the bidding document directly from the employer.

11.3 To give prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the employer may extend the deadline for the submission of bids at its sole discretion.

## **C. Preparation of Bids**

**12. Cost of bidding** 12.1 The bidder shall bear all costs associated with the preparation and submission of its bid and contract finalization, and the employer shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

**13. Language of bid** 13.1 The bid, as well as all correspondence and documents relating to the bid exchanged by the bidder and the employer, shall be written in the language **specified in the BDS**. Supporting documents and printed literature that are part of the bid may be in another language provided they are accompanied by an accurate translation of the relevant passages into the language **specified in the BDS**, in which case, for purposes of interpretation of the bid, such translation shall govern.

**14. Documents comprising the bid** 14.1 The bid submitted by the bidder shall comprise the following:

- (a) Letter of bid in accordance with ITB 15;
- (b) completed schedules as required in Section IV, Bidding Forms, including priced bill of quantities in accordance with ITB 15 and 16;

- (c) Bid security or bid-securing declaration, in accordance with ITB clause 22;
- (d) Alternative bids, if permissible, in accordance with ITB 16;
- (e) written confirmation authorizing the signatory of the bid to commit the bidder, in accordance with ITB clause 23.1;
- (f) documentary evidence in accordance with ITB 20 establishing the bidder's qualifications to perform the contract if its bid is accepted;
- (g) Technical proposal in accordance with ITB 19.1; and
- (h) any other document as **specified in the BDS**.

14.2 In addition to the requirements under ITB 14.1, bids submitted by a JV shall include a copy of the joint venture agreement entered into by all members. Alternatively, a letter of intent to execute a joint venture agreement in the event of a successful bid shall be signed by all members and submitted with the bid, together with a copy of the proposed agreement.

14.3 The bidder shall furnish in the letter of bid information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this bidding document or its bid or to contract execution if the bidder is awarded the contract.

14.4 The bidder shall furnish in the letter of bid the name of the potential adjudicator and attach its curriculum vitae. The name of the potential adjudicator proposed by the employer in ITB BDS 49.1 and by the bidder (letter of bid) shall be subject to IFAD's no-objection.

## **15. Letter of bid and schedules**

15.1 The letter of bid and schedules, including the bills of quantities (or activity schedule) and technical offer information, shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. These forms must be completed without any alterations to its text, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested.

## **16. Alternative bids**

16.1 Unless otherwise specified **in the BDS**, alternative bids shall not be considered.

16.2 When alternative times for completion are explicitly invited, a statement to that effect will be **included in the BDS**, as will the method of evaluating different times for completion.

16.3 Except as provided under ITB 16.4 below, bidders wishing to offer

technical alternatives to the requirements of the bidding Documents must first price the employer's design as described in the bidding documents and shall further provide all information necessary for a complete evaluation of the alternative by the employer, including drawings, design calculations, technical specifications, breakdown of prices, and proposed construction methodology and other relevant details. Only the technical alternatives, if any, of the lowest evaluated bidder conforming to the basic technical requirements shall be considered by the employer.

16.4 **When specified in the BDS**, bidders are permitted to submit alternative technical solutions for specified parts of the works, and such parts shall **be identified in the BDS**, then the method for their evaluation will be stipulated in Section III, Bid examination, Bid Evaluation and Bidder Qualification Requirements based on potential alternatives described in Section V, Works Requirements.

**17. Bid prices and discounts** 17.1 The prices and discounts quoted by the bidder in the letter of bid and in the bill of quantities (or activity schedule) shall conform to the requirements **set in the BDS** and as specified below.

17.2 The bidder shall fill in rates and prices for all items of the works described in the bill of quantities (or activity schedule). Items against which no rate or price is entered by the bidder will not be paid for by the employer, and shall be deemed covered by the rates for other items and prices in the bill of quantities (or activity schedule).

17.3 The price to be quoted in the letter of bid, in accordance with ITB 15.1, shall be the total price of the bid, excluding any discounts offered.

17.4 The bidder shall quote any unconditional discounts and the methodology for their application in the letter of bid, in accordance with ITB 15.1.

17.5 Unless otherwise **specified in the BDS** and the contract, the rates and prices quoted by the bidder are subject to adjustment during the performance of the contract in accordance with the provisions of the conditions of contract. In such a case, the bidder shall furnish the indices and weightings for the price adjustment formula in the schedule of adjustment data and the employer may require the bidder to justify its proposed indices and weightings.

17.6 If so specified in ITB 1.1, bids are being invited for individual lots or for any combination of lots (packages). Bidders wishing to offer any price reduction for the award of more than one lot shall specify in their bid the price reductions applicable to each package, or, alternatively, to individual lots within the package. Price reductions or discounts shall be submitted in

accordance with ITB 17.4, provided the bids for all lots are submitted and opened at the same time.

17.7 All duties, taxes, and other levies payable by the Contractor under the contract, or for any other cause, as of the date 28 days prior to the deadline for submission of bids, shall be included in the rates and prices<sup>3</sup> and the total Bid price submitted by the Bidder.

**18. Currencies of bid** 18.1 The currency(ies) of the bid shall be as **specified in the BDS**.

18.2 Bidders may be required by the employer to justify, to the employer's satisfaction, their local and foreign currency requirements, and to substantiate that the amounts included in the unit rates and prices and shown in the schedule of adjustment data are reasonable<sup>4</sup>, in which case a detailed breakdown of the foreign currency requirements shall be provided by bidders.

**19. Documents comprising the technical proposal** 19.1 The bidder shall furnish a technical proposal including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in Section IV, Bidding Forms, in sufficient detail to demonstrate the adequacy of the bidders' proposal to meet the work's requirements and the completion time. The bidder shall include in its technical proposal its Management Strategy and Implementation Plan (MSIP) which shall indicate its conformance with ESS requirements and Health and Safety Management Plans (HSMP).

**20. Documents establishing the qualifications of the bidder** 20.1 In accordance with Section III, Bid examination, Bid Evaluation and Bidder Qualification Requirements, to establish that the bidder's qualifications meet the requirements established in this Section, the bidder shall provide all information, requested in the corresponding information sheets and forms included in Section IV, Bidding Forms.

**21. Period of validity of bids** 21.1 Bids shall remain valid for the period **specified in the BDS** after the bid submission deadline date prescribed by the employer. A bid valid for a shorter period shall be rejected by the employer as non-responsive.

21.2 In exceptional circumstances, prior to the expiration of the bid validity period, the employer may request bidders to extend the period of validity of their bids. The request and the bidder's responses shall be made in writing. If required, the bid security shall also be extended for a period of twenty-eight (28) days beyond the deadline of the extended bid validity period. A bidder may refuse the request without forfeiting its bid security. A bidder granting

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<sup>3</sup> In lump sum contracts, delete "rates and prices and the."

<sup>4</sup> For lump sum contracts, delete "unit rates and prices and shown in the Schedule of Adjustment Data are reasonable" and replace with "Lump Sum."

the request shall not be required or permitted to modify its bid, except as provided in ITB 21.3.

21.3 If the award is delayed by a period exceeding sixty (60 days) beyond the expiry of the initial bid validity, the following conditions shall apply:

- (i) in the case of fixed price contracts, the contract price shall be the bid price adjusted by the factor **specified in the BDS**;
- (ii) in the case of adjustable price contracts, no adjustment shall be made; or
- (iii) in any case, bid evaluation shall be based on the bid price without taking into consideration the applicable correction from those indicated above.

## 22. Bid security

22.1 The bidder shall submit as part of its bid, either a bid security or a bid-securing declaration, as **specified in the BDS**, in original form. If a bid security, it shall be in the amount and currencies **specified in the BDS** and shall:

- (a) at the bidder's option, be in the form of either irrevocable letters of credit, a bond or a bank guarantee substantially in the format of form of bid security (bank guarantee) included in Section IV, Bidding Forms;
- (b) be issued by a reputable institution selected by the bidder and located in any eligible country (as determined in accordance with ITB 7);
- (c) be payable promptly upon written demand by the employer in case the conditions listed in ITB clause 22.2 are invoked;
- (d) be submitted in its original form; copies will not be accepted;
- (e) remain valid for a period of twenty-eight (28) days beyond the original validity period of bids, or beyond any period of extension subsequently requested under ITB clause 21.2.

22.2 If a bid security is specified pursuant to ITB 22.1, the bid security of unsuccessful bidders shall be returned as promptly as possible upon the successful bidder's signing the contract and furnishing the performance security and if required in the BDS, the environmental and social (ES) performance security pursuant to ITB 42.



22.3 Any bid not accompanied by a compliant bid security (if required) in accordance with ITB clause 22.1 shall be rejected by the employer as nonresponsive. The bid security may be forfeited:

- (a) if a bidder withdraws its bid during the period of bid validity specified by the bidder in the letter of bid or any extended date provided by the bidder; or
- (b) if a bidder does not accept the correction of its bid price pursuant to ITB clause 34; or
- (c) if the successful bidder fails within the specified time to:
  - furnish the required performance security/ies as described in ITB clause 47; or
  - sign the contract in accordance with ITB clause 46

22.4 The bid security of a joint venture must be in the name of the joint venture that submits the bid. If the joint venture has not been legally constituted at the time of bidding, the bid security shall be in the names of all future partners, or in the name of the designated representative (partner in charge or lead member) as named in the letter of intent or similar document in connection with the formation of the joint venture.

22.5 A bid-securing declaration shall use the form included in Section IV, Bidding Forms.

**23. Format  
signing of bid**

**and** 23.1 A bidder shall prepare one (1) original set of the documents comprising the bid pursuant to ITB clause 14 and clearly mark it “original.” The original shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the bidder. This authorization shall consist of a written confirmation as **specified in the BDS** and shall be attached to the bid. The person or persons signing the bid shall initial all pages of the bid where entries and amendments have been made.

23.2 In addition, the bidder shall prepare copies of the bid (photocopies of the signed original are acceptable), in the number **specified in the BDS** and clearly mark them “copy.” In the event of discrepancy between the original and the copies, the original shall prevail.

23.3 The bid shall contain no alterations or additions, except those made to comply with the instructions issued by the employer, or as necessary to correct errors made by the bidder, in which case such corrections shall be initialled by the person or persons signing the bid.

## D. Submission and Opening of Bids

**24. Sealing and marking of bids** 24.1 Bidders may submit their bids by mail or by hand. When so **specified in the BDS**, bidders shall have the option of submitting their bids electronically. Bidders are reminded that distance and customs formalities may require longer than expected delivery times.

(a) For all bids submitted in hard copy, bidders shall enclose the original and each copy of the bid in separate sealed envelopes, duly marking the envelopes as “original” and “copy.” These envelopes containing the original and the copies shall then be enclosed in one single envelope.

(b) Bidders submitting bids electronically, **if so permitted in BDS**, shall follow the electronic bid submission procedures **specified in the BDS**.

24.2 The inner and outer envelopes containing bids shall:

(a) bear the name and address of the bidder;

(b) be addressed to the employer at the address **specified in the BDS**;

(c) bear the specific identification number of this contract as indicated in ITB clause 1.1 and any additional identification marks as **specified in the BDS**;

(d) bear a warning “not to be opened before the time and date for bid opening”; and

(e) be marked “bid submission or bid inside.”

24.3 If all envelopes are not sealed and marked as required, the employer will assume no responsibility for the misplacement or premature opening of the bid.

**25. Deadline for submission of bids** 25.1 Bids must be received by the Employer at the address and no later than the date and time **specified in the BDS**.

25.2 The employer may, at its discretion, extend the deadline for the submission of bids by issuing an amendment in accordance with ITB clause 11, in which case all rights and obligations of the employer and the bidders previously subject to the original deadline shall then be subject to the deadline as extended.

## 26. Late bids

26.1 The employer shall not consider any bid that arrives after the deadline for submission of bids, in accordance with ITB clause 25. Any bid received by the employer after the deadline for submission of bids shall be declared late, rejected and returned unopened at the request and cost of the bidder. In cases where the bidder fails to request the return of a late bid, the bid will be kept unopened in a safe place.

## 27. Withdrawal, substitution, and modification of bid

27.1 A Bidder may withdraw, substitute, or modify its bid prior to the deadline for the submission of bids by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization of the person signing in accordance with ITB clause 23.1, (except that no copies of the withdrawal notice are required). The corresponding substitution or modification of the bid must accompany the respective written notice. All notices must be:

(a) submitted in accordance with ITB clauses 23 and 24 (except that withdrawal notices do not require copies), and in addition, the respective envelopes shall be clearly marked “withdrawal,” “substitution,” or “modification,” and

(b) received by the employer prior to the deadline prescribed for submission of bids, in accordance with ITB clause 25

27.2 Bids requested to be withdrawn in accordance with this ITB clause shall be returned unopened to the bidders, at the cost of the bidders.

27.3 No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the bidder on the bid submission form or any extension thereof.

## 28. Bid opening

28.1 The employer shall open and read-out the bids in accordance with ITB 28.3 in the presence of bidders’ representatives as well as anyone who chooses to attend at the time and in the place **specified in the BDS**. Any specific opening procedures required if electronic Bidding is permitted in accordance with the BDS, shall be as **specified in the BDS**.

28.2 First, submissions marked “withdrawal” shall be opened and read out, while bids for which an acceptable notice of withdrawal has been submitted pursuant to ITB clause 25 shall not be opened and shall be returned unopened to the bidder, at the bidder’s cost. No bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at bid opening. Next, submissions marked “substitution” shall be opened and read out and exchanged with the corresponding Bid being substituted, and the substituted

bid shall not be opened, but returned unopened to the bidder, at the bidder's request and cost. No bid substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at bid opening. Submissions marked "modification" shall be opened and read out with the corresponding bid. No bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at bid opening. Only submissions that are opened and read out at bid opening shall be considered further.

28.3 All other envelopes shall be opened one at a time, reading out: the bidders' names, the bid prices, the total amount of each bid and of any alternative bid (if requested or permitted in BDS), any discounts, substitutions, or modifications, the presence or absence of bid security and such other details as the employer may consider appropriate. No bid shall be rejected at bid opening except for the late bids pursuant to ITB clause 26. Substitutions and modifications submitted pursuant to ITB clause 27 which are not opened and read out at bid opening shall not be considered for further evaluation regardless of the circumstances. Late, withdrawn and substituted bids shall be returned unopened at the request and cost of the bidder.

28.4 The employer shall prepare a record of the bid opening that shall include, as a minimum: the name of the bidder and whether there is a withdrawal, substitution, or modification; the bid price, per lot (contract) if applicable, including any discounts and alternative bids; and the presence or absence of a bid security, if one was required. The bidders' representatives who are present shall be requested to sign the record. The omission of a bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all bidders, and shall be posted on the employer's website.

## **E. Submission and Opening of Bids**

### **29. Confidentiality**

29.1 Information relating to the examination, clarification, evaluation, and comparison of bids and recommendations for the award of the contract shall not be disclosed to the bidders or any other persons not officially concerned with such process until the notice of intent to award has been issued pursuant to ITB clause 43.

29.2 Any attempt or effort by a bidder to influence the employer in the evaluation of bids or contract award decisions may subject the bidder to the provisions of the government's, the employer's, and the Fund's Anti-fraud and Corruption Policy and the application of other sanctions and remedies to the extent applicable.

29.3 Notwithstanding the above, from the time of bid opening to the time of contract award, if any bidder wishes to contact the employer on any matter related to the bidding process, it shall do so in writing.

**30. Clarification of bids**

30.1 To assist in the examination, evaluation, and comparison of bids, the employer may, at its discretion, ask any bidder for a clarification of its bid. Any clarification submitted by a bidder that is not in response to a request by the employer shall not be considered. The employer's request for clarification and the bidder's response shall be in writing. No change in the prices or substance of the bid shall be sought, offered, or permitted except to confirm the correction of arithmetic errors discovered by employer in the evaluation of the bids in accordance with ITB clause 34.

30.2 If a bidder does not provide clarifications of its bid by the date and time set in the employer's request for clarification, its bid may be rejected.

**31. Deviations, reservations, and omissions**

31.1 During the evaluation of bids, the following definitions apply:

- "Deviation" is a departure from the requirements specified in the bidding documents;
- "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the bidding documents; and
- "Omission" is the failure to submit part or all of the information or documentation required in the bidding documents

**32. Determination of responsiveness**

32.1 The employer's determination of a bid's responsiveness is to be based on the contents of the bid itself, as defined in ITB 14.

32.2 A substantially responsive bid is one that conforms to all the terms, conditions, and specifications of the bidding document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:

(a) if accepted, would:

- (i) affect in any substantial way the scope, quality, or performance of the Works specified in the Contract; or
- (ii) limit in any substantial way, inconsistent with this bidding document, the employer's rights or the bidder's obligations under the proposed contract; or

- (b) if rectified, would unfairly affect the competitive position of other bidders presenting substantially responsive bids.

32.3 The employer shall examine the technical aspects of the bid submitted in accordance with ITB 19, technical proposal, in particular, to confirm that all requirements of Section V, Works Requirements have been met without any material deviation, reservation or omission.

32.4 If a bid is not substantially responsive to the requirements of the bidding document, it shall be rejected by the employer, and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

**33. Non-material  
nonconformities**

33.1 Provided that a bid is substantially responsive, the employer may waive any nonconformities in the bid.

33.2 Provided that a bid is substantially responsive, the employer may request that the bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the bid. Failure of the bidder to comply with the request may result in the rejection of its bid.

33.3 Provided that a bid is substantially responsive, the employer shall rectify quantifiable nonmaterial nonconformities related to the bid price. To this effect, the bid price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component. The average price of the item quoted by substantially responsive bidders will be added to the bid price and equivalent total cost of the bid so determined will be used for price comparison purposes only

**34. Correction  
of arithmetic errors**

34.1 Provided that the bid is substantially responsive, the employer shall correct arithmetical errors on the following basis:

- (a) only for admeasurement contracts, if there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of the employer there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected;
- (b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and

(c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

34.2 Bidders shall be requested to accept the correction of arithmetic errors. Failure to accept the correction in accordance with ITB 34.1 shall result in rejection of the bid and forfeiture of the bid security in accordance with ITB clause 22.2(b) or alternatively the bid securing declaration is enforced by the employer.

**35. Conversion to single currency** 35.1 For evaluation and comparison purposes, the currency(ies) of the bids shall be converted into a single currency **as specified in the BDS**.

**36. Domestic preference** 36.1 Unless otherwise specified in the BDS, a margin of preference for domestic bidders<sup>5</sup> shall not apply.

**37. Subcontractors** 37.1 Unless otherwise **stated in the BDS**, the employer does not intend to execute any specific elements of the works by subcontractors selected in advance by the employer.

37.2 The subcontractor's qualifications shall not be used by the bidder to qualify for the works unless their specialized parts of the works were previously **designated by the employer in the BDS** as can be met by subcontractors referred to hereafter as 'specialized subcontractors', in which case, the qualifications of the specialized subcontractors proposed by the bidder may be added to the qualifications.

37.3 Bidders may propose subcontracting up to the percentage of the total value of contracts or the volume of works as **specified in the BDS**. Subcontractors proposed by the bidder shall be fully qualified for their parts of the works.

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<sup>5</sup> An individual firm is considered a domestic bidder for purposes of the margin of preference if it is registered in the country of the employer, has more than 50 percent ownership by nationals of the country of the employer, and if it does not subcontract more than 10 percent of the contract price, excluding provisional sums, to foreign contractors. JVs are considered as domestic bidders and eligible for domestic preference only if the individual member firms are registered in the country of the employer or have more than 50 percent ownership by nationals of the country of the employer, and the JV shall be registered in the country of the borrower. The JV shall not subcontract more than 10 percent of the contract price, excluding provisional sums, to foreign firms. JVs between foreign and national firms will not be eligible for domestic preference.

**38. Bid examination and bid evaluation** 38.1 The employer shall use the criteria and methodologies listed in this clause, as supplemented by the provisions of the BDS and Section III, Bid examination, Bid Evaluation and Bidder Qualification Requirements in order to determine the bid that offers the “best value for money”. No other evaluation criteria or methodologies shall be permitted.

38.2 To evaluate a bid, the employer shall consider the following:

- (a) the bid price, excluding provisional sums and the provision, if any, for contingencies in the summary bill of quantities, but including dayworks’ items, where priced competitively;
- (b) price adjustment for correction of arithmetic errors in accordance with ITB 34.1;
- (c) price adjustment due to discounts offered in accordance with ITB 17.4;
- (d) converting the amount resulting from applying (a) to (c) above, if relevant, to a single currency in accordance with ITB 35;
- (e) price adjustment due to quantifiable nonmaterial nonconformities in accordance with ITB 33.3;
- (f) Apply the prescribed margin for domestic preference if applicable as per ITB 36.1;
- (g) the additional evaluation factors are specified in Section III, bid examination, bid bidder qualification criteria.

38.3 If so **indicated in the BDS** and/or Section III, employer’s price (financial) evaluation of a bid may require the consideration of other factors, in addition to the bid price quoted in accordance with ITB clause 17. These factors may be related to the characteristics, performance, and terms and conditions of the procurement of the works. The effect of the factors selected, if any, shall be expressed in monetary terms to facilitate comparison of bids, unless otherwise specified in Section III. Bid examination, bid evaluation and bidder qualification criteria.

38.4 If so **indicated in the BDS**, the bidding document shall allow bidders to quote separate prices for one or more lots, and shall allow the employer to award one or multiple lots to more than one bidder. The methodology of evaluation to determine the combination of lots that provides the best value for money is specified in Section III.



38.5 The estimated effect of the price adjustment provisions of the conditions of contract, applied over the period of execution of the contract, shall not be taken into account in bid evaluation.

38.6 If the bid, which results in the best value for money, is seriously unbalanced or front loaded in the opinion of the employer, the employer may require the bidder to produce detailed price analysis for any or all items of the bill of quantities, to demonstrate the internal consistency of those prices with the construction methods and implementation schedule proposed. After evaluation of the price analysis, taking into consideration the schedule of estimated contract payments, the employer may require that the amount of the performance security be increased at the expense of the bidder to a level sufficient to protect the employer against financial loss in the event of default of the successful bidder under the contract.

**39. Comparison of bids** 39.1 The employer shall compare all substantially responsive bids to determine the bid that provides the best value for money, in accordance with ITB clause 38

**40. Post-qualification of the winning bidder** 40.1 The employer shall determine to its satisfaction whether the bidder who is selected as having submitted the bid that provides the best value for money and which is considered substantially responsive to this bidding document is qualified to perform the contract satisfactorily.

40.2 The determination shall be based upon an examination of the documentary evidence of a bidder's qualifications submitted by a bidder and the qualification criteria indicated in Section III.

40.3 An affirmative determination shall be a prerequisite for award of the contract to a bidder. A negative determination shall result in disqualification of the bid, in which event the employer shall proceed to the next best evaluated bid to make a similar determination of that bidder's capabilities to perform satisfactorily.

**41. Employer's right to accept any bid, and to reject any award or all bids** 41.1 The employer reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to bidders. In case of annulment, all bids submitted and specifically, bid securities, shall be promptly returned to the bidders.

## **F. Award of contract**

**42. Best value for money award** 42.1 Subject to ITB clause 38, the employer shall award the contract to the bidder whose bid provides the best value for money and is considered

**criteria**

substantially responsive to this bidding document, provided that the bidder is determined to be qualified to perform the contract satisfactorily.

**43. Notice of intent to award**

43.1 Prior to the expiration of the period of bid validity, the employer shall send the notice of intent to award to the successful bidder. The notice of intent to award shall include a statement that the employer shall issue a formal notification of award and draft contract agreement after expiration of the period for filing a bid protest and the resolution of any bid challenges that are submitted. Delivery of the notice of Intent to award shall not constitute the formation of a contract between the employer and the successful bidder and no legal or equitable rights will be created through the delivery of the notice of intent to award.

43.2 At the same time as it issues the notice of intent to award, the employer shall also notify, in writing, all other bidders of the results of the bidding exercise. The employer shall promptly respond in writing to any unsuccessful bidder who, after receiving notification of the bidding results, makes a written request for a debriefing, or submits a formal protest as provided in the IFAD Procurement Handbook.

**44. Bid protests**

44.1 Bidders may protest the results of a procurement only according to the rules established in the module m of the IFAD Procurement Handbook.

**45. Notification of award (letter of acceptance)**

45.1 Upon expiration of the period for timely filing and the resolution of any bid protests (and appeals, as applicable) that are submitted, the employer shall send the notification of award to the successful bidder. This notification in the form of the letter of acceptance shall specify the sum that the employer will pay the contractor in consideration of the execution and completion of the works (hereinafter and in the conditions of contract and contract forms called “the contract price). The notification of award along with its written acceptance, shall constitute a binding contract until a formal contract is prepared and executed.

**46. Signing of Contract**

46.1 Promptly upon notification, the employer shall send the successful bidder the contract agreement.

46.2 Within twenty-eight (28) days of receipt of the contract agreement, the successful bidder shall sign, date, and return it to the employer.

**47. Performance security**

47.1 Within twenty-eight (28) days of the receipt of the notification of award from the employer, the successful bidder shall furnish the performance security and, **if required in the BDS**, the environmental and social (ES) performance security in accordance with the general conditions of contract, using for that purpose the performance security and ES performance security forms included in Section VIII, Contract Forms, or another form acceptable to the employer. If the performance security

furnished by the successful bidder is in the form of a bond, it shall be issued by a bonding or insurance company that has been determined by the successful bidder to be acceptable to the employer. A foreign institution providing a bond shall have a correspondent financial institution located in the employer's country.

47.2 Failure of the successful bidder to submit the above-mentioned performance security and, if required in the BDS, the environmental and social (ES) performance security or sign the contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security. In that event the employer may award the contract to the next best evaluated bidder whose offer is substantially responsive and is determined by the employer to be qualified to perform the contract satisfactorily.

**48. Publication of award and return of bid securities** 48.1 Upon receipt of the signed contract agreement and a valid performance security/ies, the employer shall return the bid securities of unsuccessful bidders and shall publish in UNDB online, and on the IFAD's website, the results identifying the bid and the following information:

- (a) the name of the winning bidder;
- (b) the price of the winning bid and the price of the contract award if different; and
- (c) the duration and the summary scope of the contract awarded.

**49. Adjudicator** 49.1 The employer proposes the person named **in the BDS** to be appointed as adjudicator under the contract, at the hourly fee specified **in the BDS**, plus reimbursable expenses. If the bidder disagrees with this proposal, the bidder should so state in his bid. If, in the letter of acceptance, the employer does not agree on the appointment of the adjudicator, the employer will request the appointing authority designated in the particular conditions of contract (PCC) pursuant to clause 23.1 of the general conditions of contract (GCC), to appoint the adjudicator.

## Section II. Bid Data Sheet (BDS)

### Bid Data Sheet

<b>A. General</b>	
ITB clause 1.1	The “employer” means <b>Rwanda Agriculture and Animal Resources Board (RAB) /Kayonza Irrigation and Watershed Management Project (KIIWP 2)</b>
ITB clause 1.1	<p>The name and identification of the proposed contract is:  <b>CIVIL WORKS OF KANYEGANYEGE DAM AND IRRIGATION INFRASTRUCTURES (150HA) ON BEHALF OF KIIWP2.</b></p> <p>The number and description of the lot(s) is: One indivisible lot</p>
ITB clause 2.1	<p>The borrower/recipient is: <b>Civil works of Kanyeganyege dam and irrigation infrastructure (150ha) on behalf of KIIWP2.</b></p> <p>Other donor than IFAD: <b>N/A</b></p> <p>Total amount of financing: <b>N/A</b></p> <p>The name of the project is: <b>Kayonza Irrigation and Watershed Management Project-Phase 2 (KIIWP 2)</b></p>
<b>B. Contents of bidding documents</b>	
ITB clause 10.1	<p>Clarifications may be requested through umucyo system not later than 10days before the deadline for submission of bids, so that responses can be issued to all bidders not later 5 days prior to the deadline for submission of bids.</p> <p>The address for requesting clarifications is: The proposal submission address is:  <b>SPIU Coordinator</b>  <b>Through Umucyo E procurement system</b></p>
ITB clause 10.4	A pre-bid conference will not be held.
<b>C. Preparation of bids</b>	
ITB clause 13.1	The bid shall be written in English.
ITB clause 14.1(h)	<p>A bidder shall submit with its bid the following additional documents which will comprise a part of the bid:</p> <ol style="list-style-type: none"> <li>1) Bid form according to the form in annex</li> <li>2) A company registration certificate</li> </ol>

	<ol style="list-style-type: none"> <li>3) A company full registration certificate/company incorporation certificate</li> <li>4) Online tax clearance certificate from RRA, still valid (Local bidders)</li> <li>5) Online clearance certificate from Rwanda Social Security Board RSSB, still valid (Local bidders)</li> <li>6) Bid security of Twenty Million Nine Hundred Sixty One Thousand Nine Hundred Eighty Rwandan Francs (20,961,980) or equivalent amount in any freely convertible currency in accordance with the model annexed hereto;</li> <li>7) Proof of purchase the tender document</li> <li>8) Site visit certificate (A compulsory site visit is scheduled on <b>31/07/2024</b> and will be conducted by KIIWP2 irrigation team The venue for departure is fixed at 10:00 am local time at KIIWP2 Kayonza Office (located near SILENT Hotel).</li> <li>9) Bill of unit price initialized and stamped on each page</li> <li>10) Estimated bill of quantity.</li> <li>11) Planning of execution works.</li> <li>12) Financial capacity of at least 3,500,000,000 FRW or its equivalent in any freely convertible currency (for international bidders) as average of the last three (3) fiscal years proven by audited financial statements.</li> <li>13) At least two good completion certificates in construction of marshland with Dam Irrigation Projects with their respective contracts with minimum amount of 1,450,000,000 FRW ( or its equivalent in any freely convertible currency) from 1<sup>st</sup> Jan 2013 till bid submission date.</li> <li>14) IFAD self-certification form-signed (see the form on the page 224)</li> <li>15) Joint-venture agreement signed before the notary of the organ in charge of registration of companies. (for the JV, this is a compulsory document). Also for JV, each partner must provide the document listed in 2,3,4 &amp; 5).and JV agreement must comply to requirements of Ministerial order n° Special of 10/10/2023 in its art. 41 (8), from point (a) to (e).</li> <li>16) Being in <b>category A</b> for Marshland development, marshland and hillside irrigation on the RPPA categorization list into force at the time of bidding for local companies.</li> </ol>
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	<p>17) Written confirmation authorizing the signatory of the Bid to commit the Bidder (if required)</p> <p><b>Note:</b> 1. Performance guarantee and bid security must be delivered by bank or other financial institution recognized by National Bank of bidder's country.</p> <p>2. The bidder who is not registered in e-procurement system are advised to register. Please visit <a href="http://www.umucyo.gov.rw">www.umucyo.gov.rw</a> for more information;</p>
ITB clause 16.1, 16.2 and 16.4	Alternative bids <i>shall not</i> be considered
ITB clause 17.1	Discounts <i>shall not</i> be considered.
ITB clause 17.1	<p>The bid price shall be quoted by the bidder in: <b>Rwandan Franc ( Frw)</b></p> <p>A bidder expecting to incur expenditures in other currencies for inputs to the works supplied from outside the employer's country (referred to as the "foreign currency requirements") and wishing to be paid accordingly, shall indicate up to three foreign currencies of their choice expressed as a percentage of the bid price, together with the exchange rates used in the calculations in the appropriate form(s) included in Section IV, Bidding Forms.</p>
ITB clause 17.5	The prices quoted by the bidder <i>shall not</i> be subject to adjustment

ITB clause 18.1	<p>The currency(ies) of the bid and the payment currency(ies) shall be in accordance with alternative A as described below:</p> <p><b>Alternative A (Bidders to quote entirely in local currency):</b></p> <p><b>(a)</b> The unit rates and the prices shall be quoted by the bidder in the bill of quantities, entirely in <b>Rwandan Francs</b>, the name of the currency of the employer's country, and further referred to as "the local currency". A bidder expecting to incur expenditures in other currencies for inputs to the works supplied from outside the employer's country (referred to as "the foreign currency requirements") shall indicate in the Appendix to Bid - Table C, the percentage(s) of the bid price (excluding provisional sums) needed by the bidder for the payment of such foreign currency requirements, limited to no more than three foreign currencies.</p> <p><b>(b)</b> The rates of exchange to be used by the bidder in arriving at the local currency equivalent and the percentage(s) mentioned in (a) above shall <b>be the selling rates for similar transactions established by the Rwanda National Bank(BNR)</b>, and shall apply for all payments under the contract so that no exchange risk will be borne by the successful bidder.</p>
ITB clause 21.1	The bid validity period is <b>120 days</b> .
ITB clause 21.3	For fixed price contracts the bid price shall be adjusted by the following factor(s): ____N/A____
ITB clause 22.1	<p>A bid-securing declaration <i>is not</i> required to be submitted with a bid.</p> <p>A bid security <i>is</i> required to be submitted with a bid.</p> <p>The bid security shall be in the amount of twenty-three million four hundred thirty-six thousand (23,436,000) RWF or equivalent in freely convertible currency in accordance with the model annexed hereto;</p>
ITB clause 23.1	<p>The written confirmation of authorization to sign on behalf of and bind the bidder shall consist of:</p> <p><b>A letter signed and stamped by the Managing Director to sign on his behalf . This letter shall be sent electronically together with bid through Umucyo system.</b></p>
ITB clause 23.2	The number of copies of the bid submitted shall be: <b>N/A</b> .
<b>D. Submission and opening of bids</b>	
ITB clause 24.1 and 24.1 (b)	<p>Bids will be submitted electronically.</p> <p>Bidders have the option of submitting their bids electronically.</p> <p><i>(Cfr umucyo system)</i></p> <p>The address for the electronic submission of bids is: <i>Cfr umucyo system)</i></p>

	<p>Any bid submitted electronically must be received at this address before the deadline for submission of bids specified in ITB sub-clause 25.1.</p> <p>Bidders are advised that the employer is not responsible for any delays or defects in the receipt or download of any bid submitted electronically.</p>
ITB clause 24.2 (b)	<u>For hard copy submission of bids only</u> , the employer's address is: <b>N/A</b>
ITB clause 24.2 (c)	<p>Invitation for bids title and procurement number: <b>Civil works of kanyeganyege dam and irrigation infrastructure (150ha) on behalf of KIIWP II</b></p> <p>Identification marks on the envelopes shall include: <b>N/A</b></p>
ITB clause 25.1	The deadline for submission of bids is as follows: <b>See Umucyo electronic system</b>
<b>E. Evaluation and comparison of bids</b>	
ITB clause 28.1	<p>For bid opening purposes only, the employer's address is: <b>See Umucyo system</b></p> <p>For bids submitted electronically in accordance with ITB clause 25.1(b), the bid opening procedures shall be: <b>automatically (See Umucyo system)</b></p>
ITB clause 35.1	<p>The currency that shall be used for bid evaluation and comparison is: <b><i>Rwandan Francs.</i></b></p> <p>The basis for conversion shall be: <b>National Bank of Rwanda- selling rate on the date of opening of the bids.</b></p>
ITB clause 36.1	<p>Domestic preference (<b>10%</b>) <i>shall</i> be a factor in evaluation.</p> <p>If domestic preference applies, the application methodology shall be defined in Section III, Bid examination, Bid Evaluation and Bidder Qualification Requirements .</p>
ITB clause 37.1	<p>The employer : <b><i>does not intend to have pre-selected contractors for the following parts of the works</i></b></p> <p><b><i>List the parts: N/A</i></b></p>
ITB clause 37.2	The parts of the works for which the employer permits bidders to propose specialized subcontractors are designated as follows: <b>N/A</b>
ITB clause 37.3	The maximum allowable percentage for subcontracting is: <b>N/A</b>



ITB clause 38.3	<p>a) Time for completion : <b>N/A</b></p> <p>b) Cost to the employer of any admissible early payment requests by the bidder in its bid (e.g. faster interim payments or a higher advance payment) :<b>N/A</b></p> <p>c) Domestic preference : <b>Yes</b> of 10 %</p> <p>d) Quality of the technical proposal and MSIP and HSMP: <b>N/A</b></p>
ITB clause 38.4	Bidders shall quote separate prices for the following lots: <b>N/A</b>
<b>F. Award of contract</b>	
ITB clause 47.1	In addition to the performance security, the employer also requires the successful bidder to present an environmental and social performance Security. The cumulative value of both performance securities shall not exceed <b>10%</b> with <b>3 %</b> for the environmental and social performance security.
ITB clause 49.1	<p>The adjudicator proposed by the employer is: <b>To be determined during contract signature.</b></p> <p>The hourly fee for this proposed adjudicator shall be: <b>To be determined during contract signature.</b></p> <p>The biographical data of the proposed adjudicator is as follows: <b>To be determined during contract signature.</b></p>

## **Section III. Bid Examination, Bid Evaluation and Bidders Qualification Criteria**

*[This section may be modified by the employer to meet the needs of the particular procurement.]*

This section contains all the criteria that the employer shall use to examine and evaluate bids, qualify bidders and select the winning bid. In accordance with ITB 38, no other factors, methods or criteria shall be used. The bidder shall provide all the information requested in the forms included in Section IV, Bidding Forms. This review shall be based on the information provided by the bidder in these forms with the employer's right to verify the data presented by the bidder's including through contact of the bidder's references and other sources in order to verify records of past performance and other bidder's qualifications and representations in its bid.

The employer shall undertake the following steps in bid examination and bid evaluation:

### **A. Preliminary examination**

This examination is conducted to determine whether the bid is complete, all required documents are included and all forms are included and are completed. The bidder may be requested to submit additional information or documentation within a reasonable period of time and/or to correct nonmaterial nonconformities in the bid related to documentation requirements.

Determinations made during this examination include:

- Determine if the bid is sealed and signed as per the requirements of ITB 23 and ITB 24;
- Determine if the bid security (or bid-securing declaration) is in the correct format, validity and amount;
- Determine the eligibility of the bidder; and
- Determine if all required forms are included and completed.

### **B. Responsiveness determination**

This review will be conducted to determine if the bid is substantially responsive as explained in ITB 32 and 33. A substantially responsive bid is one that meets the technical specifications and other requirements of the bidding document without material deviation, reservation, or omission. If a bid is not substantially responsive to the requirements of the bidding document, it shall be rejected by the employer and may not be subsequently made responsive by correction of the material deviation, reservation, or omission. However, the employer may request any bidder to clarify its bid according to the procedures set out in ITB 30.

The responsiveness determination also includes the review of the documents comprising the technical offer. The bidder shall furnish a technical offer including a statement of work methods, equipment, personnel, implementation schedule, and other information as stipulated in Section IV, Bidding Forms,

in sufficient detail to demonstrate the adequacy of the bidder's bid to meet the works' requirements and the completion time.

Review of the bidder's technical offer will include an assessment of the bidder's technical methods and its approach to mobilize key equipment and personnel for the contract consistent with the requirements stipulated in Part 2, Works Requirements. The review of the technical offer will also include an assessment of the bidder's personnel, method and approach to satisfy the required environmental and social standards as reflected in the bidder's MSIP (management strategy and implementation plan) as well as the bidder's health and safety management plan (HSMP) in compliance with the works' requirements - Part 2.

### **C. Financial bid evaluation**

The evaluation is conducted to determine the evaluated bid price of each bid and is focusing only on price and price-related criteria. The overall evaluation criteria to determine the winning bid shall be the bid offering the best value for money among the responsive bids submitted by qualified bidders.

The "evaluated bid price" shall be the bid price adjusted in accordance with in ITB clause 38 including the application of domestic preference, if so specified in the BDS. Typical price evaluation criteria that may be used are as follows:

Alternative completion times, if permitted under ITB 16.2 : *N/A*

Technical alternatives, if permitted under ITB 16.4 : *N/A*

Payment deviations (against faster processing of payments by the employer to the contractor or against a higher advance payment, if acceptable to the employer) will be evaluated as follows: *N/A*

In the case of multiple contracts/lots, if permitted under ITB 38.4: *N/A*  
bids will be evaluated as follows:

### **D. Domestic preference**

A margin of preference of 10 % (ten percent) may be granted to domestic contractors, if so stipulated in the BDS. It will be applied in favour of the domestic bidders whose status is already established at the time of prequalification as eligible for such domestic preference. The application of the domestic preference shall be in accordance with, and subject to, the following provisions:

- (a) Contractors applying for such preference shall be asked to provide, as part of the data for qualification, such information, including details of ownership, as shall be required to determine whether, according to the classification established by the borrower and accepted by IFAD, a particular contractor or group of contractors qualifies for a domestic preference.
- (b) After bids have been received and reviewed by the borrower, responsive bids shall be classified into the following groups:
  - (i) **Group A: bids offered by domestic contractors eligible for the preference.**
  - (ii) **Group B: bids offered by other contractors.**

All evaluated bids in each group shall, as a first evaluation step, be compared to determine the lowest bid, and the lowest evaluated bids in each group shall be further compared with each other. If, as a result of this comparison, a bid from group A is the lowest, it shall be selected for the award. If a bid from group B is the lowest, as a second evaluation step, all bids from group B shall then be further compared with the lowest evaluated bid from Group A. For the purpose of this further comparison only, an amount equal to 10% (ten percent) of the respective bid price corrected for arithmetical errors, including unconditional discounts but excluding provisional sums and the cost of dayworks, if any, shall be added to the evaluated price offered in each bid from group B. After the above adjustments and corrections are made, the employer will convert the evaluated bid price to a single currency in accordance with ITB 35.

If the bid from group A is the lowest, it shall be selected for award. If not, the lowest evaluated bid from group B based on the first evaluation step shall be selected.

In case the technical proposal of the bidder is evaluated on pass/fail (responsive/non-responsive basis) then the bidder with the lowest evaluated cost based on above-mentioned price criteria shall be the one offering the best value for money and is to be recommended for award, subject to post-qualification.

**E. Post-qualification**

This process will be conducted to determine if the bidder satisfies the post-qualification requirements as listed in ITB 40 and the requirements below:

Update of information

The bidder shall continue to meet the criteria used at the time of prequalification. In case of multiple lots the bidder must bid for the same number of lots for which it was prequalified.

**Specialized subcontractors**

Only the specialized subcontractors as approved by the employer in ITB 37 will be considered. The specialized subcontractor shall continue to meet the criteria used at the time of prequalification. The general experience and financial resources of the specialized sub-contractors shall not be added to those of the bidder for purposes of qualification of the bidder.

**Financial resources**

Using the forms FIN-4.1, FIN-4.3, FIN-4.4 of Section IV, Bidding Forms, the bidder must demonstrate access to, or availability of, financial resources such as liquid assets, unencumbered real assets, lines of credit, and other financial means, other than any contractual advance payments to meet:

(i) the following cash-flow requirement (for all lots the bidder is submitting its bid) :

.....

and

(ii) the overall cash flow requirements for this contract and its current works commitment.

#### Contractor's representative and key personnel

The bidder must demonstrate that it will have a suitably qualified contractor's representative and suitably qualified (and in adequate numbers) key personnel, as described in the specification.

The bidder shall provide details of the contractor's representative and key personnel and such other key personnel that the bidder considers appropriate to perform the contract, together with their academic qualifications and work experience. The bidder shall complete the relevant forms in Section IV, Bidding Forms.

#### Equipment

The bidder must demonstrate that it has access to the key equipment listed hereafter:

No.	Equipment Type and Characteristics	Minimum Number required
1	Bulldozer of at least 180kW equipped with scarifier of at least three fork with proof of ownership	2
2	Wheel loader of 130kW, with the standard bucket of about 1m3 with proof of ownership	2
3	Grader of about 100kW with scarifying fork, hydraulic system with proof of ownership	1
4	Compactor with smooth drum of at least 15 tons with proof of ownership	1
5	Compactor with sheep foot of at least 15 tons with proof of ownership	1
6	Damp truck of at least 220 kW	5
7	Excavator of at least 120 kW	2
8	Compressor of at least 120 kW	1
9	Concrete mixer of at least 5 kW of mixing motor and at least 8 m3 capacity	2

The above equipment are to be owned or rented (rental contract would be valid during execution period)

The bidder shall provide further details of proposed items of equipment using the relevant form in Section IV, Bidding Forms.

This section contains all the criteria that the employer shall use to evaluate bids and qualify bidders. In accordance with ITB 38 and ITB 40, no other factors, methods or criteria shall be used. The bidder shall provide all the information requested in the forms included in Section IV, Bidding Forms.

Wherever a bidder is required to state a monetary amount, bidders should indicate the USD equivalent using the rate of exchange determined as follows:

- For construction turnover or financial data required for each year: exchange rate prevailing on the last day of the respective calendar year (in which the amounts for the year that is to be converted were originally established).
- Value of single contract: exchange rate prevailing on the date of the contract.

Exchange rates shall be taken from the publicly available source identified in the ITB 35.1. Any error in determining the exchange rates in the bid may be corrected by the employer.

*[In the case that no prequalification was undertaken, the bidder must complete all the bidding forms and the employer must fill the blank spaces of the requirements columns of the qualification assessment table below.]*

**Qualification Assessment Table**

Eligibility and Qualification Criteria				Compliance Requirements			Documentation
No	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All parties combined	Each Member	One Member	
1. Eligibility							
1.1	Nationality	Nationality in accordance with ITB 7	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI 1.1 and ELI 1.2 with attachments
1.2	Conflict of interest	No conflict of interest in accordance with ITB 7	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Letter of Bid
1.3	Eligibility as per IFAD	Not having been declared ineligible by IFAD, declaration of all other sanctions in line with ITB 7	Must meet requirement and must make declaration	Must meet requirement.	Must meet requirement and must make declaration	N/A	Letter of Bid
1.4	Government Owned Entity of the Borrower country	Meets conditions of ITB 7	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI 1.1 and ELI 1.2 with attachments

1.5	United Nations resolution or Borrower's country law	Not having been excluded as a result of prohibition in the borrower's country laws or official regulations against commercial relations with the bidder's country, or by an act of compliance with UN Security Council resolution, both in accordance with ITB 7	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forma ELI 1.1 and ELI 1.2 with attachments
<b>2. Historical Contract Non Performance</b>							
2.1	History of non performing contracts	Non performance of a contract <sup>6</sup> did not occur as a result of contractor default since 1 <sup>st</sup> January <b>2020</b>	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Form CON-2
2.2	Suspension based on execution of bid securing declaration by the employer or withdrawal of the bid within bid	Not under suspension based on execution of a bid securing declaration pursuant to ITB 7.6	Must meet requirement	Must meet requirement	Must meet requirement <sup>7</sup>	N/A	Letter of Bid

<sup>6</sup> Non performance, as decided by the employer, shall include all contracts where (a) non performance was not challenged by the contractor, including through referral to the dispute resolution mechanism under the respective contract, and (b) contracts that were so challenged but fully settled against the contractor. Non performance shall not include contracts where employers decision was overruled by the dispute resolution mechanism. Non performance must be based on all information on fully settled disputes or litigation, i.e. dispute or litigation that has been resolved in accordance with the dispute resolution mechanism under the respective contract and where all appeal instances available to the bidder have been exhausted.

<sup>7</sup> This requirement also applies to contracts executed by the bidder as JV member

	validity						
2.3	Pending litigation	Bidder's sound financial position and prospective long term profitability according to criteria established in 3.1 below and assuming that all pending litigation will be resolved against the bidder	Must meet requirement	N/A	Must meet requirement	N/A	Form CON -2
2.4	Litigation history	No consistent history of court/arbitral award decisions against the bidder <sup>8</sup> <b>since 1st January 2020</b>	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Form CON- 2
2.5	Declaration : environmental and social (ES) past performance	Declare any civil work contracts that have been suspended or terminated and/or performance security called by an employer for reasons of breach of	Must make the declaration. Where there are specialized sub-contractor/s , the specialized sub-contractor/s	N/A	Each must make the declaration. Where there are specialized sub-contractor/s, the specialized sub-contractor/s must also make the	N/A	Form ES-3 ES performance declaration

<sup>8</sup> The bidder shall provide accurate information on the letter of bid about any litigation or arbitration resulting from contracts completed or ongoing under its execution over the last five years. A consistent history of court/arbitral awards against the bidder or any member of a joint venture may result in disqualifying the bidder.



		environmental, or social (including sexual exploitation and abuse) contractual obligations in the past five years. <sup>9</sup>	must also make the declaration		declaration		
<b>3. Financial Situation and Performance</b>							
3.1	Financial capabilities	(i) The bidder shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the construction cash flow requirements estimated as <b>600.000.000 Rwf as credit line</b> ( <i>Six hundred million Rwandan francs</i> ) for the subject contract(s) net of the bidders other	Must meet requirement	Must meet requirement	N/A	N/A	

<sup>9</sup> The employer may use this information to seek further information or clarifications in carrying out its due diligence

		commitments.					
		(ii) The bidders shall also demonstrate to the satisfaction of the employer that it has adequate sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments.	Must meet requirement	Must meet requirement	N/A	N/A	Form FIN 4.1 with attachments
		(iii) <b>The audited financial statement signed and stamped for each page by both parties (bidder and auditor), for the last three (3) years</b> shall be submitted and must demonstrate the current soundness of the Bidder's financial position and indicate its prospective long-term profitability.	Must meet requirement	N/A	Must meet requirement	N/A	
3.2	Average annual construction turnover	Minimum average annual construction turnover of Frw <b>3,500,000,000</b> Frw for last three (3 )	Must meet requirement	Must meet requirement	Must meet fifty <b>50%</b> , of the requirement	Must meet <b>seventy 70%</b> , of the requirement	Form FIN 4.2

		<b>years( 2021-2022 and 2023 years)</b>					
<b>4. Experience</b>							
4.1(a)	General construction experience	Experience under construction contracts in the role of prime contractor, JV member, sub-contractor, or management contractor for at least the last <b>11 years, starting 1st January 2013</b>	Must meet requirement	N/A	Must meet requirement	N/A	Form EXP 5.1
4.2(a)	Specific construction & contract management experience	(i) A minimum number of <b>Two (2)</b> similar <sup>10</sup> contracts specified below that have been satisfactorily and substantially <sup>11</sup> completed as a prime contractor, joint venture member, <sup>12</sup> management contractor or sub-contractor between <b>1st January 2013</b> and bid submission deadline:  (i) <b>Two (2) contracts</b> , each of minimum value	Must meet requirement	Must meet requirement <sup>13</sup>	N/A	Must meet the following requirements for the key activities listed below :  1.) onstruction of Dam  2.) onstruction	Form EXP 5.2 (a)

<sup>10</sup> The similarity shall be based on the physical size, complexity, methods/technology and/or other characteristics described in Section VII, Works Requirements. Summation of number of small value contracts (less than the value specified under requirement) to meet the overall requirement will not be accepted.

<sup>11</sup> Substantial completion shall be based on 80% or more works completed under the contract.

<sup>12</sup> For contracts under which the bidder participated as a joint venture member or sub-contractor, only the bidder's share, by value, shall be considered to meet this requirement.

<sup>13</sup> In the case of JV, the value of contracts completed by its members shall not be aggregated to determine whether the requirement of the minimum value of a single contract has been met. Instead, each contract performed by each member shall satisfy the minimum value of a single contract as required for single entity. In determining whether the JV meets the requirement of total number of contracts, only the number of contracts completed by all members each of value equal or more than the minimum value required shall be aggregated

		<p><b>1,450,000,000 Frw with good completion certificates issued by recognized public institutions, the references from private institutions must be supported by contracts signed by both parties ;</b></p> <p><b>The similarity of the contracts shall be based on the following :</b></p> <p>1.) Construction of Dam</p> <p>2.) Construction of Irrigation network (infield Irrigation)</p>				n of Irrigation network (infield Irrigation)	
4.2 (b)		<p>For the above and any other contracts completed and under implementation as prime contractor, joint venture member, management contractor or sub-contractor<sup>14</sup> between <b>January 1<sup>st</sup> 2013</b> and bid submission deadline a minimum construction experience in the following key activities</p>	Must meet requirements	Must meet requirements	N/A	<p>Must meet the following requirements for the key activities listed below<sup>16</sup> :</p> <p>volume capacity of dam reservoir at least 800,000m<sup>3</sup></p>	Form EXP 5.2

<sup>14</sup> For contracts under which the bidder participated as a joint venture member or sub-contractor, only the bidder's share shall be counted to meet this requirement.

		successfully completed <sup>15</sup> : volume capacity of dam reservoir at least 800,000m3					
4.2(c)	Specific experience in managing ES aspects	For the contracts in 4.2 (a) above and/or any other contracts as prime contractor, joint venture member, or Subcontractor between <b>1st January 2013</b> and Application submission deadline, experience in managing ES risks and impacts in the following aspects: <i>[Based on the ES assessment, specify, as appropriate, specific experience requirements to manage ES aspects.]</i>	Must meet requirements	Must meet requirement	Must meet the following requirements: N/A	Must meet the following requirements: N/A	Form EXP 5.2

<sup>16</sup> Requirement can be met through a specialized sub-contractor.

<sup>15</sup> Volume, number or rate of production of any key activity can be demonstrated in one or more contracts combined if executed during same time period. The rate of production shall be the annual production rate for the key construction activity (or activities).

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## Section IV. Bidding Forms

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## Letter of Bid

*(A separate letter of bid shall be prepared for each alternative proposed by the bidder)*

**Date:** \_\_\_\_\_

Procurement no: \_\_\_\_\_

Invitation for bid no: \_\_\_\_\_

Alternative no: \_\_\_\_\_

To: **/insert complete name of employeur/**

---

We, the undersigned, declare that:

1. We have examined and have no reservations to the bidding document, including addenda issued in accordance with instructions to bidders (ITB11);
2. We have not been suspended nor declared ineligible by the employer based on execution of a bid securing declaration in the employer's country;
3. We offer to execute in conformity with the bidding documents the following works:

\_\_\_\_\_  
\_\_\_\_\_;

4. The total price of our bid, excluding any discounts offered in item 5 below is:

In case of only one lot, total price of the Bid: \_\_\_\_\_

In case of multiple lots, total price of each lot: \_\_\_\_\_

In case of multiple lots, total price of all lots (sum of all lots): \_\_\_\_\_;

5. The discounts offered and the methodology for their application are:

The discounts offered are: \_\_\_\_\_

The exact method of calculations to determine the net price after application of discounts is shown below:

\_\_\_\_\_  
\_\_\_\_\_;



- 
6. Our bid shall be valid until *[insert day, month and year in accordance with ITB 21.1]*, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
  7. If our bid is accepted, we commit to obtain a performance security *[and an environmental and social (ES) performance security; delete if not applicable]* in accordance with the bidding documents;
  8. We are not participating as a bidder or as a subcontractor, in more than one bid in this bidding process in accordance with ITB 7.3(d), other than alternative bids submitted in accordance with ITB 16;
  9. Our firm, its associates, including any subcontractors or suppliers for any part of the contract, have not been declared ineligible by the Fund and have not been subject to sanctions or debarments under the laws or official regulations of the purchaser's country or not been subject to a debarment recognized under the agreement for mutual enforcement of debarment decisions (the "cross-debarment agreement")<sup>17</sup> in accordance with ITB clause 7, beyond those declared in paragraph 13 of this letter of bid.
  10. We acknowledge and accept the IFAD Revised Policy on Preventing Fraud and Corruption in its Activities and Operations. We certify that neither our firm nor any person acting for us or on our behalf has engaged in any prohibited practices as provided in ITB clause 3. Further, we acknowledge and understand our obligation to report to [anticorruption@ifad.org](mailto:anticorruption@ifad.org) any allegation of prohibited practice that comes to our attention during the selection process or the contract execution. As part of this, we certify that:
    - (a) The prices in this bid have been arrived at independently, without any consultation, communication, or agreement with any other party, including another bidder or competitor, or for the purpose of restricting competition, relating to:
      - (i) those prices;
      - (ii) the intention to submit an offer; or
      - (iii) the methods or factors used to calculate the prices offered.
    - (b) The prices in this bid have not been and will not be knowingly disclosed by us, directly or indirectly, to any other bidder or competitor before bid opening unless otherwise explicitly required by law; and
    - (c) No attempt has been made or will be made by us to induce any other bidder to submit or not to submit an offer for the purpose of restricting competition.
  11. We acknowledge and accept the IFAD Policy on Preventing and Responding to Sexual Harassment, Sexual Exploitation and Abuse. We certify that neither our firm nor any person acting for us or on our behalf has engaged in any sexual harassment, sexual exploitation or abuse, as provided in ITB Clause 5. Further, we acknowledge and understand our obligation to

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<sup>17</sup> The cross-debarment agreement was entered into by the World Bank Group, the Inter-American Development Bank, the African Development Bank, the Asian Development Bank and the European Bank for Reconstruction and Development, additional information may be located at: <http://crossdebarment.org/>.

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report to [ethicsoffice@ifad.org](mailto:ethicsoffice@ifad.org) any allegation of sexual harassment, sexual exploitation and abuse that comes to our attention during the selection process or the contract execution.

12. The following commissions, gratuities, or fees have been paid or are to be paid with respect to the bid process: *[Insert complete name of each recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity]*.

Name of recipient	Address	Reason	Amount

(If none has been paid or is to be paid, indicate “none.”)

13. We declare that neither the bidder nor any of its directors, partners, proprietors, key personnel, agents, sub-consultants, sub-contractors, consortium and joint venture partners have any actual, potential or perceived conflict of interest as defined in ITB Clause 7.3 regarding this bid process or the execution of the contract. *[Insert if needed: “other than the following:” and provide a detailed account of the actual, potential or perceived conflict]*. We understand that we have an ongoing disclosure obligation on such actual, potential or perceived conflicts of interest and shall promptly inform the purchaser and the Fund, should any such actual, potential or perceived conflicts of interest arise at any stage of the procurement process or contract execution.
14. The following criminal convictions, administrative sanctions (including debarments) and/or temporary suspensions have been imposed on the bidder and/or any of its directors, partners, proprietors, key personnel, agents, sub-consultants, sub-contractors, consortium and joint venture partners:

Nature of the measure (i.e., criminal conviction, administrative sanction or temporary suspension)	Imposed by	Name of party convicted, sanctioned or suspended (and relationship to bidder)	Grounds for the measure (i.e., fraud in procurement or corruption in contract execution)	Date and time (duration) of measure

---

If no criminal convictions, administrative sanctions or temporary suspensions have been imposed, indicate “none”.

15. We acknowledge and understand that we shall promptly inform the purchaser about any material change regarding the information provided in this bid form.
16. We further understand that the failure to properly disclose any of information in connection with this bid form may lead to appropriate actions, including our disqualification as bidders, the termination of the contract and any other as appropriate under the IFAD Policy on Preventing Fraud and Corruption in its Projects and Operations.
17. We understand that this bid, together with your written acceptance thereof included in your Notification of Award, shall only constitute a binding contract between the firm and the purchaser subject to the preparation and execution of the appropriate contract.
18. We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.
19. Potential adjudicator: we accept the appointment of *[insert name proposed in bid data sheet]* as the adjudicator. *[or]*

We do not accept the appointment of *[insert name proposed in bid data sheet]* as the adjudicator, and propose instead that *[insert name]* **be appointed as adjudicator, whose daily fees and biographical data are attached.**

Name of the bidder

***[In the case of the bid submitted by joint venture specify the name of the joint venture as bidder]***

Name of the person duly authorized to sign the bid on behalf of the bidder\*\*

***[Person signing the bid shall have the power of attorney given by the bidder to be attached with the bid]***

Title of the person signing the bid

Signature of the person named above

Date signed \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_

## Schedules

### Bill of Quantities

Works item upload For Procuring Entities			
Item number	Designation	Unit	Qty
<b>100</b>	<b>General</b>		
101	Contractor's mobilization - small schemes - rehabilitation	Ls	1
102	Preparation of as built drawings: Establish as built plans of all the structures as described in Technical Specifications. To be submitted in 3 hard copies and a soft copy.	Ls	1
103	Contractor's demobilization	Ls	1
<b>S/total</b>	<b>Sub total of item 100</b>		
<b>200</b>	<b>Dam</b>		
201	Site clearing: Clear the sites of dam foundation of all loose materials, bush and vegetation including cutting of small trees in the zone of embankments as described in Specifications and removal to disposal area approved by the Engineer.	m <sup>2</sup>	19858
202	Temporary diversion for works in river: This price includes bush cutting and vegetation, removal of small trees, excavation of appropriate open canal for diversion, temporary bridge or pipe culvert if necessary. Before starting, the contractor should prepare its shop drawing to be approved by the Engineer	Ls	1
203	Earthwork for excavations in normal soil: Earthwork for excavations in normal material including clearing and removal to stockpile for re-use as fill material or to disposal area as described in Specifications and as directed and approved by the Engineer.	m <sup>3</sup>	20391
204	Earthwork for embankment filling: Obtain specified impermeable clay material from designated borrow pits, bush clearing, clearing up of top soil, material identification and preparation of access tracks and their maintenance. Material excavation, loading, transportation, process, spread, trim and compact to the Specification standards in the main embankment with specified addition of water to attain optimum moisture content and maximum dry density including all necessary haulage	m <sup>3</sup>	68435

205	Grassing for downstream embankment slope: Provide and plant approved local grass on the downstream embankment slope after laying organic top soil including adequate watering until the grass is fully established as described in Specifications.	m <sup>2</sup>	8051
206	Site excavation under water	m <sup>3</sup>	265
207	Upstream rock protection (rip-rap 0.30 and filter 0.15 gravel + sand 0.05)	m <sup>2</sup>	6536
208	Stone masonry including sand underlay	m <sup>3</sup>	272
209	Rock fill for abutment of backfill or filter device	m <sup>3</sup>	889
210	Fine granular material for filter	m <sup>3</sup>	1271
211	Raw granular material for filter	m <sup>3</sup>	2931
212	Geotextile - equivalent Bidim S71 or Kaytech U44	m <sup>2</sup>	8256
213	Geotextile - equivalent Bidim S51 or Kaytech U34	m <sup>2</sup>	8256
214	Laterite top layer backfill for the carriage way	m <sup>3</sup>	302
<b>S/total</b>	<b>Sub total of item 200</b>		
<b>300</b>	<b>Overflow spillway and stilling basin</b>		
301	Works excavation - light soil	m <sup>3</sup>	1386.8
302	Works excavation - compacted soil	m	1394.7
303	Stone pitching of 0.30 m on underlay of 0.10 m	m <sup>3</sup>	90
304	Underwork concrete measured at 150 kg/m <sup>3</sup>	m <sup>3</sup>	187.3
305	Reinforced concrete measured at 350 kg/m <sup>3</sup>	m <sup>3</sup>	17.2
306	Stone masonry including sand underlay	m <sup>3</sup>	267.8
307	Water stop joint	ml	312.7
308	Raw granular material for filter	m <sup>3</sup>	25
309	Stripped wooden logs 0.25 m for pedestrian bridge on main drains	ml	30.8
310	Balustrade for pedestrian bridge	kg	135
311	Rungs anchored in concrete	kg	94
<b>S/total</b>	<b>Sub total of item 300</b>		
<b>400</b>	<b>Outlet</b>		
401	Works excavation - light soil	m <sup>3</sup>	59.8
402	Site excavation under water	m <sup>3</sup>	94
403	Underwork concrete measured at 150 kg/m <sup>3</sup>	m <sup>3</sup>	2.4
404	Stone masonry including sand underlay	m <sup>3</sup>	52.3
405	Water stop joint	ml	38.4
406	Concrete culverts – Diam. 400 mm	m	160
407	Twin Sluice rack gate (h x l x e): 500 x 1000 x 8 mm with galvanized steel materials according to the size mentioned on drawings	pce	1
408	Sluice rack gate (h x l x e): 1000 x 1000 x 8 mm with galvanized steel materials according to the size mentioned on drawings	pce	1
409	Staff gage	ml	2.4

410	Metallic rack trap with locking device	kg	44.8
411	Galvanized iron pipe railing of 63 mm, 3 mm thickness well welded and anchored in concrete of 20x20cm (LXW) and height of 50cm ( 30cm below the ground and 20cm above the ground) the cost include Supply and installation of hollow steel or galvanized pipe including uploading, transportation, offloading, welding, painting as described in specifications or drawings of the design	ml	2500
<b>S/total</b>	<b>Sub total of item 400</b>		
<b>500</b>	<b>Access road</b>		
501	Carriage way earthworks - new road including ditches	ml	650
502	Laterite top layer backfill for the carriage way	m <sup>3</sup>	780
503	Culvert irrigation channel diameter 800mm	ml	21
504	Works excavation - light soil	m <sup>3</sup>	16
505	Underwork concrete measured at 150 kg/m <sup>3</sup>	m <sup>3</sup>	1.5
506	Reinforced concrete measured at 350 kg/m <sup>3</sup>	m <sup>3</sup>	1.8
507	Stone masonry including sand underlay	m <sup>3</sup>	12
<b>S/total</b>	<b>Sub total of item 500</b>		
<b>600</b>	<b>Bridge</b>		
601	Works excavation - light soil	m <sup>3</sup>	159.2
602	Underwork concrete measured at 150 kg/m <sup>3</sup>	m <sup>3</sup>	4.8
603	Reinforced concrete measured at 350 kg/m <sup>3</sup> including form work and scaffolding and re-bars not included	m <sup>3</sup>	1.4
604	Stone masonry including sand underlay	m <sup>3</sup>	100
605	Rip-rap - rocks 20-30 kg	m <sup>3</sup>	15.5
606	Wooden bridge deck logs 0.25 m diameter - joint together with #6 mm (Deck in reinforced concrete)	m <sup>3</sup>	18
607	Reinforcement bars	kg	185
<b>S/total</b>	<b>Sub total of item 600</b>		
<b>700</b>	<b>Open canal to connect dam to upland command area</b>		
701	Earthwork for excavations in normal soil including removal to stockpile and disposal of excess material or for direct use as fill material as described in Specifications	m <sup>3</sup>	1320
702	earthwork for excavations in under water soil: Earthwork for excavations in under water soil including removal to stockpile and disposal of excess material or for direct use as fill material as described in Specifications	m <sup>3</sup>	120
703	construction of offtakes in masonry structure with Portland cement 42.5 cement mortar of 1:3 ratio with offtake gate as specified in technical specifications	No	22
704	Lining of irrigation canal to existing rice scheme with plain concrete C 25(1:2:4), 0.1 m thick and smoothed surface with Portland cement grade 42.5	m <sup>3</sup>	459.41

705	rehabilitation and construction of new weirs in masonry structure with CIMERWA 42.5 cement mortar of 1:2 ratio with offtake gate as specified in technical specifications	m3	226
<b>S/total</b>	<b>Sub total of item 700</b>		
<b>800</b>	<b>Construction weirs</b>		
801	Soil excavation in all conditions, the price will be applied on excavation of soil in normal conditions, under water and in stony conditions except the rock bursting	m3	456
802	Stone stabilization of foundation with 0.5m thick compacted with stone of 0.3 to 0.5m diameter	m3	225
803	plain concrete 0.03 m thick on top of stone stabilization with plain concrete 350kg/cubic meter Portland cement 42.5	m3	13.5
804	construction of stilling basin and wing wall in stone masonry 0.5m thick on upstream and downstream with mortar of 350 kg per cubic meter	m3	109.2
805	Site condition with backfilling and compaction, disposal of remained materials	m3	30
<b>S/total</b>	<b>Sub total of item 800</b>		
<b>900</b>	<b>Construction of regulating reservoir</b>		
901	Excavation and site conditioning for regulating reservoir	m3	3600
902	Lining and intake construction of night storage with plain concrete of 0.07m thick and intake on regulating reservoir	ml	142
903	Fencing with wire mesh and concrete (0.7 depth, 0.4x0.4m on sides foundation on pillars 2m above ground metal pipes 45mm dia 2 mm thick	ml	320
<b>S/total</b>	<b>Sub total cost for regulating reservoir</b>		
<b>1000</b>	<b>Secondary Canal (HDPE Pipes) &amp; Hydrants</b>		
1001	Excavation of pipe trench	m3	4801
1002	Distribution Pipes including fittings and installation plus cost for Distribution pipes	ml	19201
1003	Hydrants with Concrete cover RCC 12mm dia bar , 15x15cm mesh	num	416
<b>S/total</b>	<b>Sub total cost secondary canal (HDPE Pipes) &amp; Hydrants</b>		
<b>1100</b>	<b>Land Husbandry for command area and marshland levelling</b>		
1101	Land husbandry	ha	46
1102	Marshland Levelling	ha	65
<b>S/total</b>	<b>Sub total landhusbandry</b>		
<b>1200</b>	<b>Post Harvest Infrastructures (warehouse)</b>		
1201	Fondation works: excavation to column bases	m3	168.48
1202	Excavation to foundation trenches	m3	115.2
1203	Termidal (Antitermite) treatment to sides, bottoms of excavation, and soffits of hard core	m2	1000

1204	50mm thick lean concrete mix for blinding 350kg/m <sup>3</sup>	m3	1.875
1205	Foundation in stones with cement mortar	m3	96
1206	Put DPC layer 200mm wide at the bottom of brick work	ml	98.8
<b>S/total</b>	<b>Sub total</b>		
<b>1300</b>	<b>Elevation works</b>		
1301	Reinforced concrete 400kg/m <sup>3</sup> to bases, columns, ground beam and lintels with plastering for main warehouse	m3	86.754
1302	Reinforced concrete 350kg/m <sup>3</sup> for access stairs inside the warehouse	m3	6
1303	Metallic tubes of 40x40x2mm for body guards at stairs	ml	36
1304	Wall 100mm thick clay factory bricks work outside courses with pointing and all necessary finishing	m3	73.25
1305	Wall 100mm thick burnt brick work inside courses with pointing and all necessary finishing	m3	73.25
1306	Vent Cement Blocks to wall in N form for aeration while preventing rainwater entrance with plastering finishing and fixed meshes with accessories	m2	720
1307	Metallic tubes of 100x100x2mm with all fixation accessories and oxide paint for supporting the trusses	ml	106.8
<b>S/total</b>	<b>Sub total</b>		
<b>1400</b>	<b>Pavement works</b>		
1401	Back filling and compaction to excavated areas	m3	1875
1402	Back filling and compaction with murram soil	m3	375
1403	20cm thick Hard core fill to the treated surfaces before ordinary concrete, interior warehouse and side walk pavement, at two entrances balzas	m3	180
1404	100mm thick of ordinary concrete interior warehouse and side walk pavement, to 350kg/m <sup>3</sup> Wood rough float finish	m3	79.9
<b>S/total</b>	<b>Sub total</b>		
<b>1500</b>	<b>Roofing works</b>		
1501	Roof truss of 80x40x2mm for frames	ml	1809.1
1502	Roof truss of 60x40x2mm for frames purlins and bracings for main warehouse and balza	ml	754.2
1503	Metallic tubes of 40x40x2mm for supporting the bending iron sheets	ml	470.3
1504	Provide a roof coverage of gauge 28 iron sheets (type autoportant) for warehouse and balza	m3	1428.4
1505	Supply and fix the Bending iron sheets 26 BG	m3	134.2
1506	Coverage Translucent sheets on top and gables	m3	154.4
1507	Supply and installation Cyclofans (600mm diam) ventilators for aeration system on roof with all accessories for fixation	pce	8



1508	Gutters 20x30cm in metallic sheets supply and installation with two coats paint and any other accessory for fixation	ml	108
1509	Supply and fixation 200 x 200mm metallic fascia or verge board with two coats paint and any other accessory for fixation for main warehouse	ml	71.04
<b>S/total</b>	<b>Sub total</b>		
<b>1600</b>	<b>Finishing works and painting</b>		
1601	20mm thick cement work to plinth walls for height of 200mm	ml	150
1602	Painting with the light color (weather guard) on columns, lintels and aeration claustrats	m3	277.68
1603	Supply and installation of wire mesh to prevent the birds to enter in, on top of walls elevation with fixation accessories	m3	54
<b>S/total</b>	<b>Sub total</b>		
<b>1700</b>	<b>Doors</b>		
1701	Provide and installation of metallic sliding door (5300*4200*3mm) with two coats paint and any other accessory for fixation	num	4
<b>S/total</b>	<b>Sub total</b>		
<b>1800</b>	<b>Earthing, tubing and bonding system of the building</b>		
1801	Supply and install the lightening protection system with the following technical specifications: -Lighting conductor device (Pulsar 45 Air terminal) - Air rod base in stainless steel - Flat tape conductor (tinned copper) - Digital flash lighting counter (detectable current between 1KA-100KA) - Minimum 5 earth rod (pointed copper bound with 1.5 of length and 14 mm of diameter) - Earth rod clamp - Galvanized steel elevation (minimum: 5m) - Surge protection device (4P, I <sub>max</sub> 70 KA, type I) - Residual Current Circuit Breaker (RCCB) 4P, 30 mA, AC.	pce	1
1802	Installation of led fluorescent tubes of 40 watts	pce	34
1803	Installation of led fluorescent tubes of 40 watts with water proof (etanche) and accessories	pce	9
1804	Installation of led projectors of 50 watts with water proof (etanche) and accessories	pce	4
1805	Simple switches	pce	4
1806	Double ignition switch	pce	4
1807	Electrical outlets	pce	6
1808	Supply and install the Power cable 4x6mm <sup>2</sup> coper type	ml	150
1809	Supply and install three phase sockets (male and female) of 32A with 5 pins connected with Power cable 4x6mm <sup>2</sup>	pce	4
1810	Supply and install Oman cables 2.5mm <sup>2</sup> (rouleau/100m)	roll	24

1811	Supply and install Oman cables 1.5mm <sup>2</sup> (rouleau/100m)	roll	23
1812	Supply and install the Distribution boxes	pce	24
1813	Fuse of offices 16 A with appropriate cover box	pce	6
<b>S/total</b>	<b>Sub total</b>		
<b>1900</b>	<b>External works</b>		
1901	Outside drainage works in stone hardcore and screed , around the building and u shape drain of 40cm depth	m3	45
1902	Leveling, Supply and compact marrum for parking yard and access roads	m3	102
1903	20 cm thick Hard core fill to the treated surfaces before ordinary concrete around warehouse	m3	12
1904	100mm thick of reinforced concrete around warehouse pavement for trucks, to 350kg/m <sup>3</sup> Wood rough float finish	m3	15
1905	Construction of stones masonry for water tanks stands with screeding finishing and pointing	m3	16.956
1906	Construction of stones masonry for retaining walls with screeding finishing and pointing applying water proof cement	m3	18
1907	Supply and installation of plastic water tank of 10,000L, pipes from gutters and all accessories (pipes ...), to be approved by client	pce	2
1908	Soakaway, 10 m deep including 10cm thick RC cover, 1m diameter including brick masonry before covering of 40cm depth, 20cm thickness	pce	2
<b>S/total</b>	<b>Sub total</b>		

## Schedule of Payment Currencies

For \_\_\_\_\_ *[insert name of section of the works]*

Separate tables may be required if the various sections of the works (or of the bill of quantities) will have substantially different foreign and local currency requirements. The employer should insert the names of each section of the works.

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
<b>Name of payment currency</b>	<b>Amount of currency</b>	<b>Rate of exchange to local currency</b>	<b>Local currency equivalent <math>C = A \times B</math></b>	<b>Percentage of -total bid price (TBP) <math>-100 \times C</math> TBP</b>
Local currency		1.00		
Foreign currency #1				
Foreign currency #2				
Foreign currency #3				
Total bid price				100.00
Provisional sums expressed in local currency		1.00		
Total bid price (Including provisional sum)				

## Schedule(s) of Adjustment Data

**Table A Local Currency**

Index Code	Index Description	Source of Index	Base Value and Date	Bidder's Local Currency Amount	Bidder's Proposed Weighting
	Nonadjustable A Adjustable B				A: 50% B: 50%
			Total		1.00

**Table B Foreign Currency**

Name of currency: \_\_\_\_\_

If the bidder wishes to quote in more than one foreign currency, this table should be repeated for each foreign currency.

Index Code	Index Description	Source of Index	Base Value and Date	Bidder's Currency in Type/Amount	Bidder's Proposed Weighting
	Nonadjustable				A: 50% B: 50%
			Total		1.00

The adjustment formula as per GCC 49 is of the type specified below and will be applied to each contract currency separately:

$$P_c = A_c + B_c \cdot I_{mc}/I_{oc}$$

where:

$P_c$  is the adjustment factor for the portion of the contract price payable in a specific currency “c.”

$A_c$  and  $B_c$  are coefficients<sup>18</sup> specified in the PCC, representing the nonadjustable and adjustable portions, respectively, of the contract price payable in that specific currency “c;” and

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<sup>18</sup> The sum of the two coefficients  $A_c$  and  $B_c$  should be 1 (one) in the formula for each currency. Normally, both coefficients shall be the same in the formulae for all currencies, since coefficient A, for the nonadjustable portion of the payments, is a very approximate figure (usually 0.15) to take account of fixed cost elements or other nonadjustable components. The sum of the adjustments for each currency are added to the contract price.

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Imc is the index prevailing at the end of the month being invoiced and Ioc is the index prevailing 28 days before bid opening for inputs payable; both in the specific currency “c.”

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## Daywork Schedules

### Schedule of Dayworks Rates: Contractor's Equipment

Item No.	Description	Nominal Quantity (hours)	Basic hourly rental rate	Extended amount
	Allow    percent <sup>19</sup> of subtotal for contractor's overhead, profit, etc			
Total for dayworks: contractor's equipment (carried forward to dayworks summary, p.       )				

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<sup>19</sup> To be entered by the bidder

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## Dayworks Summary

	<i>Amount</i> <sup>20</sup> (     )	<i>% Foreign</i>
1. Total for dayworks: labour		
2. Total for dayworks: materials		
3. Total for dayworks: contractor's equipment		
Total for dayworks (provisional sum) (carried forward to bid summary, p. ____)	_____	_____

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<sup>20</sup> The employer should insert local currency unit.

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## Forms of Bid Security

### Form of Bid Security (Bank Guarantee)

Bank: *[Bank's Name, and Address of Issuing Branch or Office]*

Beneficiary: *[Name and Address of Employer]*

Date: \_\_\_\_\_

BID GUARANTEE No.: \_\_\_\_\_

We have been informed that *[insert name of the bidder]* (hereinafter called "the bidder") has submitted to you its bid dated *[date of submission of bid]* for the execution of *[name of contract]* under invitation for bids no *[insert IFB number]* (hereinafter called "the Bid").

Furthermore we understand that, according to your conditions, bids must be supported by a bid guarantee.

At the request of the bidder, we *[insert name of bank]* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of *[insert amount in figures]* (*[insert amount in words]*) upon receipt by us of your first demand in writing accompanied by a written statement stating that the bidder is in breach of its obligation(s) under the bid conditions, because the bidder:

- (b) has withdrawn its bid after the bid submission deadline, but during the period of bid validity specified by the bidder in the letter of bid; or
- (c) having been notified of the acceptance of its bid by the employer during the period of bid validity, (i) fails or refuses to execute the contract, or (ii) fails or refuses to furnish the performance security, in accordance with the terms of the letter of acceptance and other applicable conditions of contract.

This guarantee will expire: (a) if the bidder is the successful bidder, upon our receipt of copies of the contract signed by the bidder and the performance security issued to you upon the instruction of the bidder; or (b) if the bidder is not the successful bidder, upon the earlier of (i) our receipt of a copy of your notification that the successful bidder has signed the contract and furnished the required performance security; or (ii) twenty-eight (28) days after the expiration of the bidder's bid validity period.

Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

*[Issuing bank to delete whichever is not applicable]. We confirm that [we are a financial institution legally authorized to provide this guarantee in the employer's country] [or] [we are a financial institution located outside the employer's country but have a correspondent financial institution located in the employer's country that will ensure the enforceability of this guarantee. The name of our correspondent bank and contact information is as follows: [provide name, address, phone number, and email address]].*

This guarantee is subject to the uniform rules for demand guarantees, 2010 revision, ICC publication No. 758, except as may otherwise be stated above.

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*[signature(s)]*

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## Form of Bid-Securing Declaration

*The bidder shall fill in this form in accordance with the instructions indicated.]*

Date: *[date (as day, month and year)]*

Bid ref. No.: *[insert]*

Alternative no.: *[insert identification no if this is a bid for an alternative]*

To: *[complete name of employer]*

We, the undersigned, declare that:

We understand that, according to your conditions, bids must be supported by a bid-securing declaration.

We accept that we will automatically be suspended from being eligible for bidding or submitting proposals in any contract with the employer for the period of time of *[number of months or years]* starting on *[date]*, if we are in breach of our obligation(s) under the bid conditions, because we:

- (a) have withdrawn our bid during the period of bid validity specified in the letter of bid; or
- (b) having been notified of the acceptance of our bid by the employer during the period of bid validity, (i) fail or refuse to sign the contract; or (ii) fail or refuse to furnish the performance security, if required, in accordance with the ITB.

We understand this bid securing declaration shall expire if we are not the successful bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder; or (ii) twenty-eight days after the expiration of our bid.

Name of the bidder\*

Name of the person duly authorized to sign the bid on behalf of the bidder\*\* \_\_\_\_\_

Title of the person signing the bid \_\_\_\_\_

Signature of the person named above \_\_\_\_\_

Date signed \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_

\*: In the case of the bid submitted by joint venture specify the name of the joint venture as bidder

\*\* : Person signing the bid shall have the power of attorney given by the bidder attached to the bid

*[Note: In case of a joint venture, the bid-securing declaration must be in the name of all members to the joint venture that submits the bid.]*

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# Technical Proposal

## Form PER-1: Key Personnel Schedule

Bidders should provide the names and details of the suitably qualified key personnel to perform the contract. The data on their experience should be supplied using the form PER-2 below for each candidate.

	Contract Manager	
	Duration of appointment	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment for this position	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]</i>
	Name of candidate	
	Duration of appointment	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment for this position	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]</i>
	Name of candidate	
	Duration of appointment	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment for this position	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]</i>
	Name of candidate	
	Duration of appointment	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment for this position	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]</i>
	Name of candidate	
	Duration of appointment	<i>[insert the whole period (start and end dates) for which this</i>

		<i>position will be engaged]</i>
	Time commitment for this position	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart]</i>
	Name of candidate	
	Duration of appointment	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment for this position	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart]</i>

## Form PER-2: Resume and Declaration of Key Personnel

Position [#1] : [title of position from Form PER 1]		
Personnel Information	Name	Date of Birth
	Address	E-mail
Professional qualifications:		
Academic Qualifications:		
Language Proficiency: <i>:[language and levels of speaking, reading and writing skills]</i>		
details		
Address of employer:		
	Telephone:	Contract (manager/personnel officer)
	Fax:	
	Job title:	Years with present employer

Summarize professional experience in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

Project	Role	Duration of involvement	Relevant experience
<i>[main project details]</i>	<i>[role and responsibilities on the project]</i>	<i>[time in role]</i>	<i>[describe the experience relevant to this position]</i>

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Declaration

I, the undersigned key personnel, certify that to the best of my knowledge and belief, the information contained in this Form PER-2 correctly describes myself, my qualifications and my experience. I confirm that I am available as certified in the following table and throughout the expected time schedule for this position as provided in the bid:

Commitment to duration of contract	<i>[insert period (start and end dates) for which this key personnel is available to work on this contract]</i>
Time commitment	<i>[insert the number of days/week/months/ that this key personnel will be engaged]</i>

I understand that any misrepresentation or omission in this form may:

- (a) be taken into consideration during bid evaluation;
- (b) my disqualification from participating in the bid;
- (c) my dismissal from the contract.

Name of key personnel: *[insert name]*

Signature: \_\_\_\_\_

Date: (day month year): \_\_\_\_\_

Countersignature of authorized representative of the bidder:

Signature: \_\_\_\_\_

Date: (day month year): \_\_\_\_\_

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## Equipment

The bidder shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment listed in Section III, Bid examination, Bid Evaluation and Bidder Qualification Requirements. A separate form shall be prepared for each item of equipment listed, or for alternative equipment proposed by the bidder. The bidder shall provide all the information requested below, to the extent possible.

Type of equipment		
Equipment information	Name of manufacturer	Model and power rating
	Capacity	Year of manufacture
Current status	Current location	
	Details of current commitments	
Source	Indicate source of equipment <input type="checkbox"/> Owned <input type="checkbox"/> Rented <input type="checkbox"/> Leased <input type="checkbox"/> Specially manufactured	

The following information shall be provided only for equipment not owned by the bidder

Owner	Name of owner	
	Address of owner	
	Telephone	Contact name and title
	Fax	Telex
Agreements	Details of rental / lease / manufacture agreements specific to the project	

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## **Site Organization**

*[insert site organization information]*

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## Method Statement

*[insert method statement]*



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## Mobilization Schedule

*[insert mobilization schedule]*

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## Construction Schedule

*[insert construction schedule]*

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## **ES Management Strategies and Implementation Plan (ES-MSIP)**

The bidder shall submit comprehensive and concise environmental and social management strategies and implementation plans (MSIP) as required by ITB 14.1 (h) of the bid data sheet. These strategies and plans shall describe in detail the actions, materials, equipment, management processes etc. that will be implemented by the contractor, and its subcontractors.

In developing these strategies and plans, the bidder shall have regard to the ES provisions of the contract including those as may be more fully described in the works requirements in Section V.

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## Code of Conduct for Contractor's Personnel (ES) Form

### Note to the employer:

The following minimum requirements shall not be modified. The employer may add additional requirements to address identified issues, informed by relevant environmental and social assessment.

The types of issues identified could include risks associated with: labor influx, spread of communicable diseases, and sexual exploitation and abuse (SEA), sexual harassment (SH) etc.

*[Delete this box prior to issuance of the bidding documents.]*

### Note to the bidder:

The minimum content of the code of conduct form as set out by the employer shall not be substantially modified. However, the bidder may add requirements as appropriate, including to take into account contract-specific issues/risks.

The bidder shall initial and submit the code of conduct form as part of its bid.

## Code of conduct for contractor's personnel

We are the contractor, *[enter name of contractor]*. We have signed a contract with *[enter name of employer]* for *[enter description of the works]*. These works will be carried out at *[enter the site and other locations where the works will be carried out]*. Our contract requires us to implement measures to address environmental and social risks related to the works, including the risks of sexual exploitation, sexual abuse and sexual harassment.

This code of conduct is part of our measures to deal with environmental and social risks related to the works. It applies to all our staff, laborers and other employees at the works site or other places where the works are being carried out. It also applies to the personnel of each subcontractor and any other personnel assisting us in the execution of the works. All such persons are referred to as "contractor's personnel" and are subject to this code of conduct.

This code of conduct identifies the behavior that we require from all contractor's personnel.

Our workplace is an environment where unsafe, offensive, abusive or violent behavior will not be tolerated and where all persons should feel comfortable raising issues or concerns without fear of retaliation.

## Required conduct

Contractor's personnel shall:

1. carry out his/her duties competently and diligently;

- 
2. comply with this code of conduct and all applicable laws, regulations and other requirements, including requirements to protect the health, safety and well-being of other contractor's personnel and any other person;
  3. maintain a safe working environment including by:
    - a. ensuring that workplaces, machinery, equipment and processes under each person's control are safe and without risk to health;
    - b. wearing required personal protective equipment;
    - c. using appropriate measures relating to chemical, physical and biological substances and agents; and
    - d. following applicable emergency operating procedures.
  4. report work situations that he/she believes are not safe or healthy and remove himself/herself from a work situation which he/she reasonably believes presents an imminent and serious danger to his/her life or health;
  5. treat other people with respect, and not discriminate against specific groups such as women, people with disabilities, migrant workers or children;
  6. not engage in sexual harassment, which means unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature with other contractor's or employer's personnel;
  7. not engage in sexual exploitation, which means 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;
  8. not engage in sexual abuse, which means the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions;
  9. not engage in any form of sexual activity with individuals under the age of 18, except in case of pre-existing marriage;
  10. complete relevant training courses that will be provided related to the environmental and social aspects of the contract, including on health and safety matters, and sexual exploitation and abuse (SEA), and sexual harassment (SH);
  11. report violations of this code of conduct; and
  12. not retaliate against any person who reports violations of this code of conduct, whether to us or the employer, or who makes use of the grievance mechanism for contractor's personnel or the project's grievance redress mechanism.

## **Raising concerns**

If any person observes behavior that he/she believes may represent a violation of this code of conduct, or that otherwise concerns him/her, he/she should raise the issue promptly. This can be done in either of the following ways:

1. Contact *[enter name of the contractor's social expert with relevant experience in handling gender-based violence, or if such person is not required under the contract, another individual designated by the contractor to handle these matters]* in writing at this address [ ] or by telephone at [ ] or in person at [ ]; or
2. Call [ ] to reach the contractor's hotline (if any) and leave a message.

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The person's identity will be kept confidential, unless reporting of allegations is mandated by the country law. Anonymous complaints or allegations may also be submitted and will be given all due and appropriate consideration. We take seriously all reports of possible misconduct and will investigate and take appropriate action. We will provide warm referrals to service providers that may help support the person who experienced the alleged incident, as appropriate. There will be no retaliation against any person who raises a concern in good faith about any behavior prohibited by this Code of Conduct. Such retaliation would be a violation of this Code of Conduct.

## **Consequences of violating the code of conduct**

Any violation of this code of conduct by contractor's personnel may result in serious consequences, up to and including termination and possible referral to legal authorities.

## **For contractors personnel**

I have received a copy of this code of conduct written in a language that I comprehend. I understand that if I have any questions about this code of conduct, I can contact *[enter name of contractor's contact person with relevant experience]* requesting an explanation.

Name of contractor's personnel: *[insert name]*

Signature: \_\_\_\_\_

Date: (day month year): \_\_\_\_\_

Countersignature of authorized representative of the contractor:

Signature: \_\_\_\_\_

Date: (day month year): \_\_\_\_\_

Attachment 1: Behaviors constituting sexual exploitation and abuse (SEA) and behaviors constituting sexual harassment (SH)

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## **Attachment 1 to the Code of Conduct Form**

Behaviors constituting sexual exploitation and abuse (SEA) and behaviors constituting sexual harassment (SH)

The following non-exhaustive list is intended to illustrate types of prohibited behaviors:

- (1) Examples of sexual exploitation and abuse include, but are not limited to:
  - A contractor's personnel tells a member of the community that he/she can get them jobs related to the work site (e.g. cooking and cleaning) in exchange for sex.
  - A contractor's personnel that is connecting electricity input to households says that he can connect women headed households to the grid in exchange for sex.
  - A contractor's personnel rapes, or otherwise sexually assaults a member of the community.
  - A contractor's personnel denies a person access to the site unless he/she performs a sexual favor.
  - A contractor's personnel tells a person applying for employment under the contract that he/she will only hire him/her if he/she has sex with him/her.
- (2) Examples of sexual harassment in a work context
  - Contractor's personnel comment on the appearance of another contractor's personnel (either positive or negative) and sexual desirability.
  - When a contractor's personnel complains about comments made by another contractor's personnel on his/her appearance, the other contractor's personnel comment that he/she is "asking for it" because of how he/she dresses.
  - Unwelcome touching of a contractor's or employer's personnel by another contractor's personnel.
  - A contractor's personnel tells another contractor's personnel that he/she will get him/her a salary raise, or promotion if he/she sends him/her naked photographs of himself/herself.

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## Bidder's Qualification Forms

To establish its qualifications to perform the contract in accordance with the qualification requirements set out in Section III, Bid examination, Bid Evaluation and Bidder Qualification Requirements, the bidder shall provide the information requested in the following forms.

### Form ELI-1.1: Bidder Information Form

Date: *[insert date]*

Procurement No.: *[insert number]*

Page *[insert page number]* of *[insert total number of pages]* pages

<b>Bidders' name</b>
In case of joint venture (JV), name of each member:
Bidder's actual or intended country of registration: <i>[indicate country of constitution]</i>
Bidder's actual or intended year of incorporation:
Bidder's legal address <i>[in country of registration]</i> :
Bidder's authorized representative information Name: _____ Address: _____ Telephone/Fax numbers: _____ E-mail address: _____
1. Attached are copies of original documents of <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above, in accordance with ITB 7.1. <input type="checkbox"/> In case of JV, letter of intent to form JV or JV agreement, in accordance with ITB 14.2. <input type="checkbox"/> In case of government-owned enterprise or institution, in accordance with ITB 7.8 documents establishing: <ul style="list-style-type: none"><li>• Legal and financial autonomy</li><li>• Operation under commercial law</li><li>• Establishing that the bidder is not dependent agency of the employer</li></ul>
2. Included are the organizational chart, a list of board of directors, and the beneficial ownership.



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## Form ELI-1.2: Bidder's JV Information Form

(to be completed for each member of bidder's JV)

Date: *[insert date]*

Procurement No.: *[insert number]*

Page *[insert page number]* of *[insert total number of pages]* pages

<b>Bidder's JV name:</b>
<b>JV member's member:</b>
<b>JV member's country of registration:</b>
<b>JV member's year of constitution:</b>
<b>JV member's legal address in country of constitution:</b>
<b>JV member's authorized representative information</b> <b>Name:</b> _____ <b>Address:</b> _____ <b>Telephone/Fax numbers:</b> _____ <b>E-mail address:</b> _____
1. Attached are copies of original documents of <ul style="list-style-type: none"><li>Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITB 7.1.</li><li>In case of a government-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and absence of dependent status, in accordance with ITB 7.8.</li></ul> 2. Included are the organizational chart, a list of board of directors, and the beneficial ownership

## Form CON-2: Historical Contract Non-Performance, Pending Litigation and Litigation History

Bidder's name: *[insert full name]*

Date: *[insert day, month, year]*

Joint Venture member's name: *[insert full name]*

Procurement No.: *[insert ICB number and title]*

Page *[insert page number]* of *[insert total number]* pages

Non-performed contracts in accordance with Section III, Bid examination, Bid Evaluation and Bidder Qualification Requirements			
<input type="checkbox"/> Contract non-performance did not occur since 1 <sup>st</sup> January <i>[insert year]</i> specified in Section III, Bid examination, Bid Evaluation and Bidder Qualification Requirements, requirement no. 2.1.			
<input type="checkbox"/> Contract(s) not performed since 1 <sup>st</sup> January <i>[insert year]</i> specified in Section III, Bid examination, Bid Evaluation and Bidder Qualification Requirements, requirement no. 2.1			
Year	Non-performed portion of contract	Contract identification	Total contract amount (current value, currency, exchange rate and US\$ equivalent)
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract identification: <i>[indicate complete contract name/ number, and any other identification]</i>  Name of employer: <i>[insert full name]</i>  Address of employer: <i>[insert street/city/country]</i>  Reason(s) for nonperformance: <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>
Pending litigation, in accordance with Section III, Bid examination, Bid Evaluation and Bidder Qualification Requirements			
<input type="checkbox"/> No pending litigation in accordance with Section III, Bid examination, Bid Evaluation and Bidder Qualification Requirements, requirement no. 2.3.			
<input type="checkbox"/> Pending litigation in accordance with Section III, Bid examination, Bid Evaluation and Bidder Qualification Requirements, requirement no. 2.3 as indicated below.			

Year of dispute	Amount in dispute (currency)	Contract identification	Total contract amount (currency), USD-equivalent (exchange rate)
		Contract identification: _____ Name of employer: _____ Address of employer: _____ Matter in dispute: _____ Party who initiated the dispute: _____ Status of dispute: _____	
Litigation history, in accordance with Section III, Bid examination, Bid Evaluation and Bidder Qualification Requirements			
<ul style="list-style-type: none"> <li>No litigation history in accordance with Section III, Bid examination, Bid Evaluation and Bidder Qualification Requirements, requirement no. 2.4.</li> <li>History of court/arbitral award decisions against the bidder in accordance with Section III, Bid examination, Bid Evaluation and Bidder Qualification Requirements, requirement no. 2.4 as indicated below.</li> </ul>			
Year of award	Outcome as percentage of net worth	Contract identification	Total contract amount (currency), USD equivalent (exchange rate)
		Contract identification: Name of employer: Address of employer: Matter in dispute: Party who initiated the dispute: Status of dispute:	

## Form ES–3: Environmental and Social (ES) Performance Declaration

*[The following table shall be filled in for the bidder, each member of a joint venture and each specialized subcontractor]*

Bidder's name: *[insert full name]*

Date: *[insert day, month, year]*

Joint Venture member's or specialized subcontractor's name: *[insert full name]*

Procurement No.: *[insert ICB number and title]*

Page *[insert page number]* of *[insert total number]* pages

<b>Environmental and social (ES) performance declaration in accordance with Section III, Bid examination, Bid Evaluation and Bidder Qualification Requirements</b>			
<input type="checkbox"/> No suspension or termination of contract: An employer has not suspended or terminated a contract and/or called the performance security for a contract for reasons related to environmental and social (ES) performance since the date specified in Section III, Bid examination, Bid Evaluation and Bidder Qualification Requirements, sub-factor 2.5.			
<input type="checkbox"/> Declaration of suspension or termination of contract: The following contract(s) has/have been suspended or terminated and/or performance security called by an employer(s) for reasons related to environmental and social (ES) performance since the date specified in Section III, Bid examination, Bid Evaluation and Bidder Qualification Requirements, sub-factor 2.5. Details are described below:			
<b>Year</b>	<b>Suspended or terminated portion of contract</b>	<b>Contract identification</b>	<b>Total contract amount (current value, currency, exchange rate and US\$ equivalent)</b>
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract identification: <i>[indicate complete contract name/ number, and any other identification]</i>  Name of employer: <i>[insert full name]</i>  Address of employer: <i>[insert street/city/country]</i>  Reason(s) for suspension or termination: <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract identification: <i>[indicate complete contract name/ number,</i>	<i>[insert amount]</i>

		<i>and any other identification</i> Name of employer: <i>[insert full name]</i> Address of employer: <i>[insert street/city/country]</i> Reason(s) for suspension or termination: <i>[indicate main reason(s)]</i>	
		<i>[list all applicable contracts]</i>	
Performance security called by an employer(s) for reasons related to ES performance			
<b>Year</b>	<b>Contract identification</b>	<b>Total contract amount (current value, currency, exchange rate and US\$ equivalent)</b>	
<i>[insert year]</i>	Contract identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of employer: <i>[insert full name]</i> Address of employer: <i>[insert street/city/country]</i> Reason(s) for calling of performance security: <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>	

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## Form FIN-4.1: Financial Situation and Performance

Bidder's name: *[insert full name]*

Date: *[insert day, month, year]*

Joint Venture member's name: *[insert full name]*

Procurement No.: *[insert ICB number and title]*

Page *[insert page number]* of *[insert total number]* pages

### 1. Financial data

Type of financial information in (currency)	Historic information for previous _____ years, _____ (amount in currency, currency, exchange rate*, USD equivalent)				
	Year 1	Year 2	Year 3	Year 4	Year 5
Statement of financial position (Information from balance sheet)					
Total assets (TA)					
Total liabilities (TL)					
Total equity/net worth(NW)					
Current assets(CA)					
Current liabilities (CL)					
Working capital(WC)					
Information from income statement					
Total revenue(TR)					
Profits before taxes(PBT)					
Cash flow information					
Cash flow from operating activities					

\*Refer to ITB 18 for the exchange rate

### 2. Sources of Finance

Specify sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments.

No.	Source of finance	Amount (US\$ equivalent)
1		
2		
3		

---

## 2. Financial documents

The bidder and its parties shall provide copies of financial statements for \_\_\_\_\_years pursuant Section III, sub-factor 3.1. The financial statements shall:

- (a) reflect the financial situation of the bidder or in case of JV member, and not an affiliated entity (such as parent company or group member).
  - (b) be independently audited or certified in accordance with local legislation.
  - (c) be complete, including all notes to the financial statements.
  - (d) correspond to accounting periods already completed and audited.
- Attached are copies of financial statements<sup>21</sup> for the \_\_\_\_\_years required above; and complying with the requirements

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<sup>21</sup> If the most recent set of financial statements is for a period earlier than 12 months from the date of bid, the reason for this should be justified.

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## Form FIN–4.2: Average Annual Construction Turnover

Bidder's Name: \_\_\_\_\_

Date: \_\_\_\_\_

JV Member's Name \_\_\_\_\_

ICB No. and title: \_\_\_\_\_

Page \_\_\_\_\_ of \_\_\_\_\_ pages

	Annual turnover data (construction only)		
Year	Amount Currency	Exchange rate	USD equivalent
<i>[indicate year]</i>	<i>[insert amount and indicate currency]</i>		
Average annual construction turnover			

\* See Section III, Bid examination, Bid Evaluation and Bidder Qualification Requirements, sub-factor 3.2.



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## Form FIN–4.3: Financial Resources

Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, net of current commitments, available to meet the total construction cash flow demands of the subject contract or contracts as specified in Section III, Bid examination, Bid Evaluation and Bidder Qualification Requirements

Financial resources		
No.	Source of financings	Amount(US\$ equivalent)
1		
2		
3		

---

## Form FIN–4.4: Current Contract Commitments / Works in Progress

Bidders and each member to a JV should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

Current contract commitments					
No.	Name of contract	Employer's contact address, tel, fax	Value of Outstanding Work [Current US\$ Equivalent]	Estimated Completion Date	Average Monthly Invoicing Over Last Six Months [US\$/month]
1					
2					
3					
4					
5					

**Form EXP-5.1: General Construction Experience**

Bidder's Name: \_\_\_\_\_  
Date: \_\_\_\_\_  
JV Member's Name \_\_\_\_\_  
Procurement No. : \_\_\_\_\_  
Page \_\_\_\_\_ of \_\_\_\_\_ pages

Starting year	Ending year	Contract identification	Role of bidder
		Contract _____ name:  Brief Description of the Works performed by the Bidder:  _____ Amount _____ of _____ contract:  Name _____ of _____ Employer:  Address: _____ _____	
		Contract _____ name:  Brief Description of the Works performed by the Bidder:  _____ Amount _____ of _____ contract:  Name _____ of _____ Employer:  Address: _____ _____	
		Contract _____ name:  Brief Description of the Works performed by the Bidder:  _____ Amount _____ of _____ contract:  Name _____ of _____ Employer:  Address: _____ _____	



## Form EXP-5.2 (a): Specific Construction and Contract Management Experience

Bidder's Name: \_\_\_\_\_

Date: \_\_\_\_\_

JV Member's Name \_\_\_\_\_

Procurement No. : \_\_\_\_\_

Page \_\_\_\_\_ of \_\_\_\_\_ pages

Similar contract no.	Information			
Contract identification				
Award date				
Completion date				
Role in contract	Prime contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management contractor <input type="checkbox"/>	Sub-contractor <input type="checkbox"/>
Total contract amount			US\$	
If member in a JV or sub-contractor, specify participation in total contract amount				
Employer's Name:				
Address: Telephone/fax number E-mail:				
Description of the similarity in accordance with sub-factor 4.2(a) of Section III, Bid examination, Bid Evaluation and Bidder Qualification Requirements:				
1. Amount				
2. Physical size of required works items				
3. Complexity				
4. Methods/technology				
5. Construction rate for key activities				
6. Other characteristics				

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## Form EXP-5.2 (b): Construction Experience in Key Activities

Bidder's Name: \_\_\_\_\_

Date: \_\_\_\_\_

Bidder's JV Member Name: \_\_\_\_\_

Sub-contractor's<sup>22</sup> Name (as per ITB 37.2 and 37.3): \_\_\_\_\_

ICB No. and title: \_\_\_\_\_

Page \_\_\_\_\_ of \_\_\_\_\_ pages

All Sub-contractors for key activities must complete the information in this form as per ITB 37.2 and 37.3 and Section III, Bid examination, Bid Evaluation and Bidder Qualification Requirements, sub-factor 4.2.

1. Key activity No. 1: \_\_\_\_\_

.	<b>Information</b>			
<b>Contract identification</b>				
<b>Award date</b>				
<b>Completion date</b>				
Role in contract	Prime contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management contractor <input type="checkbox"/>	Sub-contractor <input type="checkbox"/>
Total contract amount			US\$	
Quantity (volume, number or rate of production, as applicable) performed under the contract per year or part of the year	Total quantity in the contract (i)	Percentage participation (ii)	Actual quantity performed (i) x (ii)	
Year 1				
Year 2				
Year 3				
Year 4				
Employer's name				
Address: Telephone/fax number E-mail:				

*[add activities as required]*

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<sup>22</sup> If applicable

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	<b>Information</b>
Description of the key activities in accordance with sub-factor 4.2(b) of Section III:	

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## Form EXP-5.2 (c): Specific Experience in Managing ES aspects

*[The following table shall be filled in for contracts performed by the bidder, and each member of a Joint Venture]*

Bidder's name: *[insert full name]*

Date: *[insert day, month, year]*

Joint Venture member name: *[insert full name]*

Procurement no. : *[insert ICB number and title]*

Page *[insert page number]* of *[insert total number]* pages

1. Key Requirement no 1 in accordance with 4.2 (c): \_\_\_\_\_

.	<b>Information</b>			
<b>Contract identification</b>				
<b>Award date</b>				
<b>Completion date</b>				
Role in contract	Prime contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management contractor <input type="checkbox"/>	Sub-contractor <input type="checkbox"/>
Total contract amount			US\$	
Details of relevant experience				

2. Key Requirement no 2 in accordance with 4.2 (c): \_\_\_\_\_

3. Key Requirement no 3 in accordance with 4.2 (c): \_\_\_\_\_

4. ...



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## **Part 2: Works Requirements**

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## Section V. Works Requirements

<b>Scope of Works</b> .....	<b>107</b>
<b>Technical Specification</b> .....	<b>108</b>
<b>Environmental and Social (ES) requirements</b> .....	<b>158</b>
<b>Drawings</b> .....	<b>161</b>
<b>Supplementary Information</b> .....	<b>164</b>

This section contains the scope of works, technical specifications, environmental and social requirements, the drawings, and supplementary information that describe the works to be procured and includes the following sub-sections:

### **Scope of Works, Technical Specifications, ES requirements**

This sub-section describes the scope of the works and presents a clear statement of the required standards for materials, plant, supplies, and workmanship to be provided. The technical specifications also reference applicable standards and codes, key personnel requirements, and the ES requirements include the environmental, social, health, safety, and gender standards to be satisfied by the contractor in executing the works.

Please note that the winning contractor shall be required to prepare a site-specific “contractor’s environmental & social management plan” (“CESMP”) and a site-specific “health and safety management plan” (“HSMP”) based on the relevant environmental, social, health and safety specifications found in the technical specifications, the bill of quantities, drawings, and applicable country laws and regulations. Additional environmental, social, health and safety analyses and documents may be provided as reference to help bidders understand what will be required to implement the environmental and social mitigation measures associated with the project.

### **Drawings**

This sub-section contains design drawings in sufficient detail to allow bidders to understand the type and complexity of the work involved and to price the bill of quantities / schedule of activity.

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## Scope of Works

*[Insert here the description of the Scope of Works (provide description of works' Sections, Lots etc... )]*

The proposed project consists of four upstream sub-catchments and one common command area. Dam reservoir will be constructed on one of the four sub-catchments, and on the remaining three, the derivation weir intake structures will be constructed to supplement water from the dam via the main open canal. From the dam, there will be the open lined canal on both sides, on which a secondary network in HDPE pipes is perpendicular to the main canal alongside the slope. Hosepipes and/or ditches will be used as tertiary and are parallel to the main canal. The valley bottom --marshland-- has paddy rice, which will have three intakes' structures at different locations, in general after 2km alongside the mainstream to recollect water and divert it to the periphery network channels. The washout of secondary pipes (for the hillside) will also feed up the marshland primary canal as an additional water supply to recycle water and thus increase the water use efficiency.

Mainly the irrigation project encompasses the development of both a lower section consisting of marshland and an upper section comprising upland terrain. This irrigation system is designed to extend over an area exceeding 150 hectares of net command area. The construction will comprises building a 12-meter-high earth dam embankment along with associated water structures and a dam reservoir. Additionally, it will involve erecting irrigation networks and drainage systems for both sections, as well as constructing post-harvest infrastructures and implementing land husbandry measures within the command area

## Technical Specification

*[Insert here the technical specifications as prepared by the design engineer with reference to international and equivalent national standards.]*

The Contractor must demonstrate that it will have access to the key Contractor's equipment listed hereafter:

No.	Equipment Type and Characteristics	Minimum required	Number
1	Bulldozer of at least 180kW equipped with scarifier of at least three fork with proof of ownership	2	
2	Wheel loader of 130kW, with the standard bucket of about 1m <sup>3</sup> with proof of ownership	2	
3	Grader of about 100kW with scarifying fork, hydraulic system with proof of ownership	1	
4	Compactor with smooth drum of at least 15 tons with proof of ownership	1	
5	Compactor with sheep foot of at least 15 tons with proof of ownership	1	
6	Dump truck of at least 220 kW	5	
7	Excavator of at least 120 kW	2	
8	Water tank truck of at least 250 kW	1	
9	Manual vibrating compactor of at least 10 kN impact force	2	
10	Jumping type compactor of at least 12 kN impact force	2	
11	Compressor of at least 120 kW	1	
12	Concrete mixer of at least 5 kW of mixing motor and at least 8 m <sup>3</sup> capacity	2	
13	Surveying equipments including Total Station	1	
14	Double cabin pick up of at least 70 kW	2	
15	Complete set of equipments for measuring compaction on field quickly - Troxler 3430	1	
16	Well-equipped material testing laboratory to carry out soil and concrete testing. Details of the requirements are given in Appendix C of the Technical Specification.	1	
17	Complete set of welding machine of at least 10 kW (for 1 m diameter and 7.1 mm thick steel pipe)	1	

Standardization

The design and the calculations of the reinforced concrete works and the steel structures shall be in conformity with the technical regulations in force and applicable in Rwanda. All plant, materials and workmanship shall comply with international standards (EN, DIN, BS, ISO etc) or those of the appropriate national standards body where no other standard is given, for both manufacturing and testing. Where no comment is made against an item the Contractor shall assume that these standards are to be complied with.

Where specific Standards are referred to in the Specification, the Standard referred to shall be the most recent issue or revision of that Standard and where the Standard has been withdrawn the reference shall be taken to refer to the Standard, which has replaced it. The Contractor shall obtain for use on Site at least one copy of each applicable Standard. It is the Contractor's responsibility to ensure availability of all standards referred to in the Contract, when requested by the Engineer. An indicative list of the required Standards is given in Appendix A. All materials and workmanship not fully specified herein or covered by an approved standard shall be of such a kind as is used in first class work and suitable to the local techniques and to climate in the area of the Site.

#### Setting out

In accordance with the supplied plans, the Contractor shall carry out:

Establishment of the general axes.

Setting out of the works.

Staking necessary to the execution of the works according to the specifications hereafter:

Site reconnaissance in the presence of the Engineer.

Identifying in the field, of the basic terminals and reference marks which were used for the execution of the topographical surveys.

Staking of the works with stakes out of wooden or steel in the following way:

- 1 stake every 200 m in straight lines,
- 1 stake at each angle,
- 1 stake with each entry and exit of curve,
- 1 stake every 25 m in the curves,
- 1 stake with each intersection,
- 1 stake with each work of civil engineering,

The Contractor shall be responsible for the care of the terminals, principal and secondary; he shall restore them or replace them with his expenses, in particular if the progress of the work does not make it possible to preserve them, and give to the Engineer the co-ordinates of the new terminals as well as the plan of location and fastening. The Contractor shall be solely responsible for the setting out notwithstanding the possible checks of the Engineer.

The tolerances setting out shall be:

X and Y: tolerances taken in a horizontal plane, according to the axis of layout, and in the perpendicular direction.

Z: tolerance in altitude.

Table 1/1: Setting out – Tolerances.

Description	Tolerance		
	in x (mm)	in y (mm)	in z (mm)

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Canals (axis canal)	± 100 mm	± 50 mm	± 20 mm
Works	± 50 mm	± 50 mm	± 20 mm
Track (axis)	± 100 mm	± 100 mm	± 30 mm

Laying out the site perimeter by the Contractor

The Contractor shall submit to the Engineer within 4 weeks starting from the date of order to begin work, his project of layout of the site. He shall include the overall plans and details as well as the implementation plan of works requested here before. He shall define in particular:

(a) Expenses relating to the supply and the removal of the material,

Fixed installations of concreting (silo, concrete batching and mixing plant, etc.).

Fixed installations of treatment of materials: crushing, sifting, washing, storage, etc.

Construction in durable material of all offices, laboratory etc. as hereafter described. The Client shall allocate freely at the disposal of the Contractor, the ground necessary for the site office layout. On the other hand, the Contractor shall make personal arrangements for the clearing development of this ground.

The equipment of the office by suitable furniture; this equipment being approved by the Project Manager.

Fencing of the entire construction work site (at least with metallic posts with wire mesh).

(b) Materials assigned to various works and their period of use.

The Contractor shall also specify in his project of installation of the site all that relates to the supply in electricity and water, the reserves and means of storage of fuel and the means of communication necessary (radio, telephone etc). The quality of the water shall be approved and suitable for the purpose for which it is intended. Wastewater shall be disposed of clear of the Site to the satisfaction of the Engineer so as to cause no damage or complaint. The Contractor shall give free access of his installations to the Client and his representatives, the representatives of the Administration and the line Ministries and to any other person approved by the Client, who shall be able to also use freely the communication gadgets of the Company. The installations shall be regarded as destined exclusively to the works which is the object of this invitation to tender. The Contractor shall not use them for any other work without the written agreement of Client or the Engineer.

Offices, Instruments and Facilities for Client's Representative

The Contractor shall provide offices, services and instruments described herein and in Appendix B. The accommodation and offices etc shall be located in positions to be approved by the Engineer's Representative. Ownership of the offices and equipment will revert to the Contractor at the conclusion of the Contract except the laboratory equipment which shall become the property of the Client.

The Contractor shall submit to the Engineer for approval, details of his proposals regarding the offices, equipment, instruments, etc to be provided before construction is commenced.

The offices, equipment and instruments shall be provided complete before any construction commences and shall be maintained to the satisfaction of the Engineer's Representative throughout the duration of the Contract.

The Contractor shall be responsible for providing and maintaining all temporary services including gas, electricity, potable water and telephones as may be required. The Contractor shall also ensure that the offices are cleaned every day and guarded at night.

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The Contractor shall make available such labour and materials as the Engineer's Representative may require for survey work including sampling and other field work in connection with the Works.

The Contractor shall provide at his own expense any necessary tackle, test equipment, access, labour, staff and any other thing the Engineer's Representative may reasonably require in order that he may conveniently and quickly carry out such inspections as he deems necessary at any time during the Contract.

The Contractor shall purchase on behalf of the Employer four mobile radio hand sets and ancillary equipment with a minimum working range of 5 km. The equipment supplied shall comply with any current applicable regulations of the Government of Rwanda and the approval of the Engineer shall be obtained prior to placing an order for the equipment. The equipment shall also include two battery chargers and three sets of spare batteries. The Contractor shall maintain the equipment throughout the duration of the Contract. The Contractor shall provide for the Engineer, his Representatives and staff, visitors etc the protective and special clothing or requirement listed in Appendix B for the proper discharge of their duties on site.

#### Materials Testing Laboratory

The Contractor shall provide and maintain for the duration of the Contract a concrete and materials (soil) testing laboratory, as specified in Appendix C, in an approved position near to the main office of the Engineer's Representative on site.

The laboratory shall be watertight, weatherproof, and insect-proof, properly ventilated, heated and shall be adequately wired for electric light and power, with sufficient light and power points for the efficient use of the equipment installed. The Contractor shall ensure a continuous supply of electric power and water to the laboratory at all hours including nights, weekends and public holidays.

As specified in Appendix C, the laboratory shall contain suitable benches, shelves and cupboards, and sinks, and be provided with a piped water supply and drain.

The Materials Testing Laboratory shall be ready for use at an early stage in the Contract and not later than six weeks after the award of the Contract to enable the programme of preliminary tests to be carried out in advance of the start of constructional work.

The laboratory shall be operated by the Contractor with the approval of supervising Engineer. The Contractor shall provide small tools and equipment and all necessary labour, to enable the Engineer's Representative to carry out the full range of tests required, including sampling and in situ testing.

Details of the Contractor's proposed layout of the laboratory shall be submitted for the approval of the Engineer's Representative before its construction is started.

The Contractor shall be responsible for the security, maintenance, and daily cleaning of the materials testing laboratory.

#### Work site sign board

At the entry of the site, the contractor shall install, in the 10 days following the date of the opening of the work site, project identifying sign. Its exact location shall be determined after agreement between the Supervision Firm and beneficiaries on the issue.

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This work includes manufacturing and installing sign board on adequate foundations.

The measurements of the sign board shall be 1.20 m × 2.40 m and supports shall be in metal hollow sections with buttresses well fixed in soil.

The text, (non-restrictive) shall be painted in black or in dark brown on white background and shall read notably:

**REPUBLIC OF RWANDA:**

**PROJECT:**

**CONTRACTING AUTHORITY:**

**CONTRACTING AUTHORITY DELEGATE:**

**FUNDED BY:**

**SUPERVISING FIRM:**

**CONTRACTOR:**

**PERIOD OF EXECUTION:**

The background is to be in white color (oil painting), the texts are painted in black on a height of 8 cm. No any other advertisement can be displayed on the work site without prior authorization by the Contracting Authority.

Site equipment

All the plant necessary for the successful completion of the works and the smooth operation of the general installations shall be provided by the Contractor. This equipment shall be used, kept and maintained in operating state by the Contractor who will also ensure the supply of the consumables, maintenance and spare parts necessary for its operation throughout the execution period.

The list of the equipment that form part of the offer of the Contractor shall not be regarded as restrictive and the Contractor shall not raise any complaint, nor to claim for a prolongation of the completion period, if, during work, modification or supplements to his equipment is sought to fulfil his obligations.

The state of the equipment presents on the site, whether owned by the Contractor, rented or placed at his disposal by the Client or his representative, shall be checked daily by the Contractor and shall be presented to the Engineer weekly.

The equipment supplied to the site shall be regarded as intended exclusively for the works. The Contractor shall not have the right to withdraw it (except for interior displacements to the site) without the written assent of the Engineer. The Engineer shall not refuse its authorization without valid reason.

Transport of the equipment, materials and supplies

The Contractor shall conform to the local legislation with regard to the means of routing on the site as well as their use on the public highways that access to the site.

Circulation on the construction site

The Contractor shall make provisions to ensure, during the execution of the works, the maintenance of the pedestrian and traffic on the normal ways crossing the construction zones which make the object of this tender. All the site and roads are to be permanently watered (wetted) in order to avoid dust.



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The contractor shall execute temporary works and deviations necessary; he shall ensure the indications during the day and night as well as maintaining security guards imposed by the regulation in force.

#### Borrow Zones and deposit

The borrow pits of materials for the realization of the embankments, filling works etc, shall be specified by the Contractor. They shall then be placed freely at his disposal by the Administration. The Contractor shall make sure that the borrow pits staked out, shall allow him to extract volumes of materials necessary to the realization of the embankments (backfill), all this material reconnaissance being under his charge. The provisional and final points of discharge necessary to the realization of the works shall be defined by the Contractor in a plan of movement of the Earthworks and subjected to the approval of the Engineer. The provisional discharge points shall necessarily be near the zones of application.

At completion and before reception of the works:

The provisional work areas shall be cleaned.

The final working areas shall be replaced according to instructions of the Engineer.

The borrow zones shall be refilled using materials not re-used in fill and to be re-applied according to the instructions of the Engineer.

The borrow pits are to be, as far as possible, refilled using materials different from what has been used in backfilling and it is to be spread according to supervising mission (engineer) instructions. The Contractor will plant soil protection shrubs like penissetum and will provide infiltration trenches according to required spacing. Steep slope banks of the dam or near the dam accessory structures are to be planted with soil fixing grass like passparum or any other type of grass that ensures complete cover of the area. All the borrow pits or disturbed areas are to be properly managed by the Contractor till the final hand over of works.

#### Re-transforming the site

At completion of the works, all the areas having been placed at the disposal of the Contractor shall be returned clean to the Client. Not even unusable material shall remain there.

During the execution period, the Contractor shall maintain the access roads to the site made dysfunctional by his machines and trucks.

#### Force majeure

The Contractor shall be responsible for any damage undergone by the foundations, the works, the installations on the site and the materials, caused by water either because of heavy rainfall, or in consequence of a rupture or of an unspecified insufficiency of the temporary works. All possible repairs shall be at his cost.

The cases where the force majeure is likely to release the Contractor of his responsibility correspond to exceptional floods, to the outbreak of war or earthquake. In the case of force majeure, the damage caused to the works, the installations at site, the materials shall not be attributable to the Contractor.

The Contractor shall undertake repairs and receive for that remuneration calculated by application of the price in the bill of quantities and possibly of the price of the contract by “force account”, made deductions of the percentages for benefit, unforeseen and others. This remuneration shall be however paid after deduction of the benefit and the percentage for risks and unforeseen. The Contractor shall take the information necessary with regard to the hydrological trends of the principal tributary and the side tributaries of the marshland, the water level reached by the exceptional risings and their period of

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occurrence. The chronogram of work proposed shall imperatively hold account of it, in particular for the building works of the reservoir dam as well as the works for channelling-over to the gauge of the tributary.

#### Bad weather

Following bad weather preventing the continuation of the works, and at the written request of the Contractor, the Engineer can authorize stoppage of the works. The suspension of work in a period of heavy rains shall relate only to the earthworks. In this period, the Contractor can carry out the concrete works (prefabricated works and works cast in-situ) located in dry place. At the stoppage or suspension of the works, the Contractor shall then make note to the Engineer the impossibility in which it is to continue his activities. Recommencement of the works shall also be by written notice to the Engineer.

#### Control of Water

Except in case of force majeure, the Contractor shall be solely responsible for the control of water at the Site during the construction period and shall provide such temporary works, dewatering works, diversions and channels as may be necessary.

The Contractor shall submit for the consent of the Engineer details of the arrangements and resources he proposes to adopt at the same time as he submits the construction programme.

#### Origin and quality of materials, products and workmanship

The supply and the storage of all materials necessary for the works shall be the responsibility of the Contractor and shall be carried out under his sole responsibility. All goods and materials to be provided by the Contractor and incorporated in the Works shall be new, unused, and of the most recent or current design. The materials shall satisfy the standards set down by the present particular specifications. However, the products corresponding to other current standards of qualities equal or higher than those of the standards required could also be accepted. These products and standards shall undergo a preliminary approval by the Engineer.

All the materials, matters and products incorporated in the works shall be of quality and shall come from quarries or factories approved by the Engineer. Those whose origin and trademark shall not be defined shall be proposed to the Engineer who shall before deciding, require, in addition to the production of a documentation and references, samples and carrying out of control and quality tests. All the tests and controls of materials shall be carried out by an approved laboratory, at the expense of the Contractor. The Contractor shall not in any case ask for an unspecified increase in price of the works from suppliers or subcontractors without consultation from the Engineer.

Before any ordering of material, the Contractor will have to subject to the agreement of the Engineer the identity of manufacturers and the properties of the materials which he intends to order. With this intention, he will submit to the engineer all the appropriate documentation as well as the guarantees offered.

Generally, the materials and workmanships shall satisfy the standards and norms as defined in the present Technical Specifications and shall be approved by the Engineer. In the reading of the Specifications the words to the approval of the Engineer shall be deemed to be included in the description of all operations for the due execution of the Works.

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Should any materials or manufactured articles be brought on to the Site which, in the judgement of the Engineer, are unsound or of inferior quality or in any way are unsuited for the work in which it is proposed to employ them, such materials or manufactured articles shall not be used upon the Works but shall be branded, if in the opinion of the Engineer this is necessary, and shall forthwith be removed from the Site.

The Contractor shall be responsible for his own quality control and shall provide sufficient competent personnel on the Site for taking and preparing samples and for carrying out the necessary tests.

#### Tests and control of materials, matters and products

The Engineer has the outright control over quarries, stores and construction sites of the Contractor and those of his subcontractors on the preparation as well as on the utilisation of the materials, matters and products forming part of the works. Controls do not reduce anything to the responsibility of the Contractor as far as good quality of the materials, matters and products to be used are concerned.

Samples of all natures, in quantities sufficient for the tests, shall be provided freely by the Contractor to the Engineer or to his representative at his request. The control tests or reception of materials by the Engineer or on his request will be at the cost of the Contractor. The minimum number of material tests is defined in the Specifications or by the Engineer.

#### Natural Materials

The Contractor shall make all arrangements for locating, selecting and processing natural materials in accordance with the Specifications and shall submit for approval full information regarding the proposed location of material well in advance of commencement of working the material. Approval of a source does not imply that all the material in that source is approved.

#### Accommodation for Workmen

The Contractor shall provide and maintain at or near the Site suitable and sufficient shelters, mess-rooms, wash-rooms, latrines, etc, as are necessary and customary, to the satisfaction of the Engineer and in accordance with the local laws and regulations. The closets and latrines shall be properly screened and maintained in a clean sanitary state at all times.

#### Contractor's Yards, Stores etc

The Contractor shall make his own arrangements for all yards, stores, workshops, offices etc and for all services in connection therewith. Their location shall be agreed beforehand with the Engineer's Representative and shall be such as to avoid obstruction and nuisance to the public.

The Contractor shall construct on the Site of the Works all the appropriate storage infrastructures where he shall place at his own risk all electrical, mechanical plant and materials delivered to Site and awaiting erection.

The Engineer may at any time give the Contractor notice in writing to demolish and remove those infrastructures which are no longer required. After the demolition and removal of storage infrastructures and works as required by the Engineer, the Contractor shall level, clear, restore and make good the sites and surrounding ground and fill in and compact all latrines, drains, pits and similar works leaving the whole area in a neat and tidy condition to the satisfaction of the Engineer.

Natural materials transported to the Site shall be stored at a properly arranged location at a safe distance from riverbed and the water courses in the dam area, before their incorporation in the Works,

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so that they are not swept away towards them. The same measures shall be taken for temporary storage of excavation material before their reuse in the Works or their disposal at an approved tip. The said materials shall be sprayed periodically, so that dust transmission is avoided.

#### Refuse Disposal and Precautions against Contamination of the Works

Refuse, and rubbish useless rubble of every kind shall be removed from the Site and disposed of by the Contractor at his own expense to an approved tip, frequently and regularly, at least once per day, so as to keep the Site in an approved wholesome and tidy condition. The Contractor shall provide portable metal boxes for the collection of rubbish and garbage bins at the rest areas of the employees.

The Contractor shall give strict instructions to all persons employed by him to use the sanitary accommodation provided. Throughout the Contract the Site and all Permanent and Temporary Works shall be kept in a clean, tidy and sanitary condition.

The Contractor shall at all times take measures to avoid contamination of existing water courses in the area of the Works by fuel, lubricants or other harmful materials. The storage areas of these materials shall be located away from the above water courses and the Contractor shall construct embankments around them, in order to retain the materials in case of accidental leakage.

#### Latrines

The Contractor shall provide throughout the period of the execution of the Works, maintain and cleanse suitable and sufficient latrines for use by his personnel and for the sole use of the Engineer's Representative. The Contractor shall ensure that his personnel do not foul the Site but make proper use of the latrines.

The latrines shall be located in the Site area far from river bed and the dam catchment.

#### Medical Services

The Contractor shall provide and maintain in easily accessible places at the site of the Works adequate first aid equipment for the whole duration of the Contract, to the satisfaction of the Engineer's Representative.

#### Photographs

During construction of the Works, the Contractor shall provide the Engineer with colour progress photographs which shall be taken under the direction of the Engineer's Representative at monthly intervals before, during and after construction, viewed from the same positions. Each month the Contractor shall take an adequate number of photographs as agreed with the Engineer.

The Contractor shall provide the Engineer's Representative (within 10 days of the photographs having been taken) with the aforementioned photographs both in printed (colour prints 12 cm x 9 cm in size) and electronic form (in CD, DVD or other).

On the reverse of each print the following information shall be shown:

- (1) Date photograph was taken.
- (2) Description.
- (3) Digital file number.

Each set of photographs after approval by the Engineer shall be mounted in albums provided by the Contractor. In addition, during the construction of the Works, the Contractor shall provide the

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Engineer with coloured photographs for record purposes taken under the direction of the Engineer's Representative.

Photographs taken for record purposes as ordered by the Engineer or as specified in Clause 2.07 herein, shall be supplied in the form of digital files and two prints, not less than 25 cm × 20 cm. The reverse of each print shall be subscribed with signatures of the Contractor and the Engineer (or their authorised representatives) for the purposes of attestation and will be retained by the Engineer. The Contractor may also have additional prints similarly attested for his retention.

Electronic files and prints shall not be subjected to any alteration process.

The copyright of all photographs shall belong to the Employer.

#### Meetings

Approved representatives of the Contractor shall attend formal meetings at the office of the Engineer's Representative when called upon, for the purposes of Contract administration. Such meetings, unless otherwise agreed, shall not be more frequent than once per month.

The Contractor shall submit to the Engineer each month a report on his progress in the performance of the Contract.

#### Existing Services and Installations

The Contractor shall take every precaution to ensure that all existing services, pipes, culverts, cables, boundary walls and fences, retaining walls, drainage and irrigation ditches etc, within and near the line of excavation, are located, supported and safeguarded from damage. Any damage caused to any such services, pipes, culverts, cables, boundary walls and fences, retaining walls, drainage and irrigation ditches etc attributable to the Contractor's operations, his constructional traffic or his negligence shall be made good by the Contractor at his own expense to the satisfaction of the Engineer, Owner or responsible Authority.

In the event of the Owner or responsible Authority electing to repair such damage the Contractor shall pay the cost of his or their doing the work. Should the Contractor fail to pay the cost of the said work within a reasonable period of the account being presented, the Employer reserves the right to settle the account and deduct the sum paid by him from monies due or which may become due to the Contractor.

If it should become necessary for the proper execution of the work temporarily to remove or divert any existing pipe, sewer, field drain, cable, drainage or irrigation ditch or other service, the Contractor shall obtain permission from the competent Authority or Owner and shall carry out the work at his own expense in a manner and at times to be approved by such Authority or Owner and shall subsequently reinstate the work to the satisfaction of such Authority or Owner.

In the event of the Owner or responsible Authority electing to arrange for the temporary removal of an existing service, the Contractor shall pay the cost of his or their doing the work. Should the Contractor fail to pay the cost of the said work within a reasonable period of the account being presented, the Employer reserves the right to settle the account and deduct the sum paid by him from monies due or which may become due to the Contractor.

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If in the opinion of the Engineer and/or the competent Authority or Owner it should become necessary to provide permanent support for any existing pipe, sewer, cable, structure or other thing disturbed, exposed or injured during or after the execution of the Works, the Contractor shall carry out promptly such additional works as the Engineer may require to provide such permanent support. Payment for such additional work will be made in accordance with the Conditions of Contract, provided always that the necessity for such permanent support has not arisen due to the fault of the Contractor.

The Contractor shall at his own expense provide temporary fencing and security measures at all times to protect any affected properties.

#### Notice of Operations

The Contractor shall give full and complete written notice of all important operations to the Engineer sufficiently in advance to enable the Engineer to make such arrangements as the Engineer may consider necessary for inspection and for any other purpose. The Contractor shall not start any important operation without the written approval of the Engineer.

#### Preliminary works and execution documents

The Contractor will have the responsibility of drawing up the documents of execution of the project. The preliminary work for the studies of the project will include:

The installation in the presence of the Engineer of the two final topographic points, in the axis of the dam of reservoir, located apart from the influence of work and a point near the works or groups of isolated works. During the completion of the work, the Contractor will take good care of these reference marks and will restore them at his own expenses, if necessary.

The clearing of undergrowth and the deforestation possible of the perimeter of the works. The work of clearing the undergrowth and deforestation will be remunerated by application of the corresponding unit prices according to quantities carried out in accordance with the instructions of the Engineer.

#### Reconnaissance

Parallel to the re-establishment of accessibility, the Contractor will clear off undergrowth to the access routes of the existing works, to allow determination of the type, the characteristics and the state.

#### Complementary geotechnical data

A geotechnical investigation has been carried out at the site of Kanyeganyege Irrigation scheme Dam location. The Contractor shall draw his own conclusions from the data, particularly in regard to the level of rock etc, and may if he wishes, subject to the approval of the Engineer, make further explorations at his own expense.

The geotechnical complementary data retrieval will include the following actions:

Study of the borrow zones for each site.

Studies of materials in the vicinity of the embankments including a study of identification for each haul and a complete test of behaviour per family of ground encountered.

Study of the foundations of the important works such as: reservoir dam and its additional works, located in zones presenting particular problems and including two penetrometric surveys per work. Generally, the number and the frequency of the tests will be sufficient to allow a good knowledge of the grounds, resources and properties of materials.

#### Complementary topographic surveys

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Generally, the Contractor will at his own expenses realize the topographical surveys necessary to the calculations of the quantities of work for the establishment of the works and the earthworks to be carried out. They will include the following surveys at least:

- (1) Survey details for the establishment of the dam and the works for the networks of irrigation and drainage.
- (2) Raised longitudinal profiles and profiles across the dam and networks of irrigation and drainage. The distance between two points of the longitudinal profile will be at least 25 m. Except contrary indication, all the surveys will be attached in altitude to the topographic points envisaged in preliminary work. The carry forwards will be made on suitable scales allowing a good legibility of the plans.

#### Execution documents

The execution documents shall be prepared starting from the background documents given by the Client and starting from the data collected on the spot at the expenses of the Contractor. The documents provided by the Client at the time of the signature of the order to start work shall include:

General layout plans.

Longitudinal, transverse profiles and standard profiles of the dam and the networks of irrigation and drainage.

Typical plans of the works, as well as the corresponding variable dimensions, except for the plans of execution of detail (plan of construction site) which will come from the Contractor.

Plans of particular works.

The Contractor shall ensure the final development of the standard plans in agreement with the Engineer and the establishment of the design calculation for the standard works, works and the hydraulic apparatuses. The documents of execution will generally include all the topographical surveys and the drawings, design calculations, bills of quantities or sketches necessary to the completion of the works and the calculation of the quantities to be realized. The standard documents of execution will include:

For the reservoir dam:

A general plan of establishment on an adapted scale, with delimitation of the various types of permanent and provisional topographic reference marks, subgrade and all indication necessary to the completion of the works: centre dam, stake slope, centre and perimeter of the works.

The file of completion of the work of earthworks. It will include the longitudinal profile, the transverse profiles, the design calculations of cubic content of the earthworks and the bills of quantities.

Files of execution of all the works and hydraulic equipment including: notes of calculation, plans of execution, plans of reinforcement, the list of steel, notes of calculation of the quantities per component, estimated costs and bills of quantities.

Plans of establishment of the works and all the particular plans.

The summary bill of quantities by component of the Estimated costs of the whole of the works.

For the networks of irrigation, the standard files of execution will include for each work or isolated group of works:

The general plan of establishment on adapted scale.

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Files of execution of all the works and hydraulic equipment including: the notes of calculation, the plans of execution, the plans of reinforcement, the list of steel, the notes of calculation of the quantities per station Tallies of the Estimated cost and the bills of quantities.

The file of execution of possible earthworks. It will include the longitudinal profile, the transverse profiles, the notes of calculation of cubic content of the earthworks and the bills of quantities.

The summary of the bill of quantities by station of the Estimated costs of the whole works.

It should be noted that calculations of the works will be made by application of the rules of the CCBA68 and its modifications of 1970.

#### Methods of execution of the projects

The Contractor is held, under his bid, to elaborate the execution program as previously defined. The elaboration of the execution program shall begin within a period of 10 days starting from the date of notification of the order to begin work. The Contractor shall hand over to the Administration the files of execution, progressively as they get completed. He shall be able to begin the "works" phase on all those files that have been approved by the Administration without waiting until the whole of works program is approved.

For the realization of these services, the Contractor shall put up the means and the specialized personnel envisaged in his bid. He shall put up instead of his construction site installations, an office where documents shall be worked out and drawn up. In order to take into account, the deadline period of 10 days, the Contractor shall, if necessary, locate a temporary office to carry out the studies without waiting for the completion of the site installations.

#### THE SITE

##### Site

Except where otherwise shown on the Drawings or specified herein, the Site shall mean the extent of such public and private lands as is, in the opinion of the Engineer, necessary or practicable for the construction of the Works. The Contractor shall not use the Site for any purpose not required by the Contract.

##### Access to Site

The Contractor shall assess his own need for access roads to the temporary site installations and to quarries, borrow pits and spoil tips and shall construct such roads at his own expense. Construction of new access roads should be avoided and the impacts from existing access roads widening must be diminished. All access roads, as well as all other Site areas, which shall be often used by trucks, shall be paved with proper material and sprayed at the Contractor's expense, so that dust produced by traffic is diminished. Dirt access roads shall be sprayed during the summer period, whenever increased dust levels are inspected.

The Contractor shall not run tracked vehicles or tracked plant on any public or private road without the written approval of the Engineer and the Responsible Authority or Owner and subject to such conditions as each may reasonably require.

The Contractor shall observe all weight and dimensions restrictions which apply to roads and tracks in Rwanda and he shall comply with all reasonable restrictions which may from time to time be imposed by the Engineer, Employer, Police, Responsible Authority or Owner. Where damage to roads and



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tracks are caused by the Contractor this shall be repaired at the Contractor's expense. In particular the Contractor shall fill potholes in roads with road stone when these are deepened by his plant.

The Engineer shall have the power to restrict the Contractor's use of any roads, either in direction of traffic, speed of traffic or numbers of vehicles in order to preserve such roads or to make such roads safe for use by the general public. The Contractor shall maintain all access roads throughout the duration of the Contract so that they are open to traffic at all times.

The Contractor shall make a record to be agreed by the Engineer of the conditions of the surfaces of any private lands or of any public cultivated or maintained lands over which access to the Site lies before use for access and he shall keep such surfaces in a reasonable state of cleanliness and repair during the execution of the Works. On the termination of the Contractor's use of such access he shall restore the surfaces to a condition at least equal to that obtaining before his first entry on them.

#### Boundaries of Works

The Employer will be responsible for making available the land upon which the Works and the borrow areas are to be constructed.

The boundary of the land acquired for the construction of the Works will be indicated by the Engineer and the Contractor shall set out, provide, erect, maintain and reinstate, from commencement to final completion of the Works, substantial galvanised iron pipes or similar approved markers, linked with yellow plastic warning ribbon, indicating the boundary of the Site at regular 100 m or such other intervals as the Engineer may require.

The Contractor shall not exceed the limits of the Site as shown on the Drawings except in exceptional circumstances with prior approval of the Employer.

The Contractor shall be responsible for obtaining the consent of the owners, tenants or occupiers of private land to the use of such land for temporary access or for other temporary purposes outside the limits of the Site. Before entering upon such private land, for the purpose of commencing construction the Contractor shall confirm in writing to the Engineer that he has obtained this consent.

The Contractor shall at his own expense pay all costs, expenses, rentals, compensation or other disbursements which may be incurred by him in negotiations with the owners, tenants or occupiers and during the subsequent use by him of such private land or roads for these purposes.

The Contractor shall be responsible for all damage which he may inflict to land and property lying outside the limits of the Site as defined above. Compensation for damage to such land or property caused by the Contractor shall be assessed by the Appropriate Government Authorities for settlement by the Contractor through the Employer.

The Employer will be entitled to withhold from any payments due to the Contractor sufficient sums that may appear to him to be necessary to cover the Contractor's liabilities under this Clause until evidence is produced by the Contractor to the Engineer to show that the Contractor's liabilities in this respect have been finally settled and discharged.

#### Clearance of Site

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The Contractor shall clear the parts of the Site subsequently to be occupied by the Permanent Works and shall maintain them clear of vegetation. The Contractor shall not clear the Site of any structure without the prior written permission of the Engineer. The Contractor shall fill and make good with appropriate materials those cavities and losses of soil which result from clearing the parts of the Site not subsequently to be occupied by the Works.

#### Clearing of undergrowth and cutting of small trees

It shall consist of removing all the small shrubs and herbaceous vegetations over the whole perimeter defined on the transverse profiles. The Engineer can however, demand to clear undergrowth from a larger surface by issuing a written order. Except otherwise stated, the trees present in the perimeter of the site shall be cut down and cleared and the cut material shall be heaped up. The cleared materials shall be placed in heaps and burnt. The cleared materials shall be slightly lifted during displacement, and not by scraping the ground so as to avoid transporting the soil at the same time as the vegetation. The attention of the Contractor is particularly drawn to this point, because the organic surface layer of the terrain will imperatively have to be preserved. Constructions, walls and barriers etc. and generally the materials likely to disturb circulation or works, shall also be removed from the site area and deposited in zones approved by the Engineer.

In no case shall the Contractor be authorized to carry out the clearing using products that kill undergrowth or clearing using chemicals, hormones or others. Within the framework giving value to the cleared wood for charcoal making, the cut down plants, will be pruned, cut up, swathed and classed in controllable quantities (steres) outside the perimeter of the site to locations approved by the Engineer in such a way that they do not hinder the continuation of the works. This work shall not give rise to any additional remuneration. The holes left by the pulling up the stocks of trees and shrubs shall be filled. Filling out of those small depressions shall be done simultaneously with the removal of termite hills and small mounds (summary ground adjustments).

#### Dewatering Foundations

The Contractor shall provide on Site all necessary pumping equipment and throughout the construction period dewater the foundations to allow concrete and fill to be placed under dry conditions. The Contractor shall submit for approval by the Engineer the arrangements and resources he proposes to adopt.

#### Site Records

The Contractor shall, where ordered, provide photographs and make a record to the approval of the Engineer of the conditions and levels of the surfaces of the Site immediately before entering on them for the purpose of execution of the Works. Where specified in the Contract or ordered by the Engineer, the Contractor shall take and test samples of the materials and water in and about the excavations and fill.

The Contractor shall make records of the position and extent of every type of service, stratum, groundwater level and obstruction encountered in the excavations during the execution of the Works, and of samples taken and results of tests of such materials and water. The records shall be prepared in a form to the approval of the Engineer and shall be submitted to him in duplicate as soon as practicable after the events and observations, which they record.

#### GENERAL EARTHWORKS

##### General

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### Excavation

The Contractor shall make excavations in any material for the several parts of the Works and shall dispose of the excavated materials as specified, shown on the Drawings, or ordered by the Engineer. Heavy trucks transporting excavated or other material, shall avoid passing through the neighbouring villages if possible.

Before commencing or recommencing each excavation on the Site, the Contractor shall give to the Engineer at least 7 days written notice of the proposed date, which shall not be less than 7 days after the appropriate part of the Site has been cleared. Within this period an agreed record of the ground levels and topography shall be made for the measurement of the Works.

Excavation, which is to remain open permanently, shall be carried out to the lines and levels shown on the Drawings or to such other lines and levels as the Engineer may direct as the work proceeds depending on the nature of the ground exposed. In soft excavation the exposed faces shall be trimmed to the required profiles. In rock excavation the face shall be trimmed so that no point of rock protrudes within the required "Payment Line".

Excavation, which is to remain open only temporarily, shall be carried out in such a manner as to permit the proper execution of the Permanent Works. Sides of soft excavation which, at the Contractor's choice, are excavated to unstable slopes shall be adequately supported at his own expense. No face of any excavation shall be covered before it has been approved by the Engineer.

Where a structure or embankment is to be founded on sound ground, not necessarily rock, the excavation shall be taken down until the required formation is exposed, all loose soil, turf, vegetable soil and peat being removed. Where the formation of any excavation, being other than rock, is to support the foundation or floor of a structure, the bottom 150 mm thereof shall not be excavated and trimmed until immediately before placing the Permanent Works upon it.

When a structure or embankment is to be founded on rock but does not require penetration into it, all soft overburden shall be removed and the surface of the rock cleared of any loose pieces of rock by barring and wedging. Where the foundation calls for penetration into the rock, the excavation of the rock may be carried out by blasting. The explosives shall be used in such a manner as to prevent the shattering of the rock, and loose or shattered rock shall be removed by barring and wedging so that the exposed surface is sound.

Where directed the Contractor shall wash down the surface of the excavated rock for inspection, and shall examine all excavated rock faces as soon as possible and regularly thereafter and shall remove all insecure pieces of loose rock. For the purpose solely of the descriptions given in the Specification the following classification shall apply: "Rock" Rock shall mean a hard compact natural formation which in the opinion of the Engineer can only be removed by the prolonged and persistent use of pneumatic tools, or by sledge hammer and wedges, or by the use of explosives. "Soft" Materials which can be excavated by hand with pick and shovel or can be machine ripped (by a tractor not larger than caterpillar D8 or machine of similar capacity) prior to excavation.

### Stripping of Top-Soil

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Where specified or ordered by the Engineer, the Contractor shall strip the top-soil from the areas to be occupied by the Works and shall keep it separate from other excavated materials until its final disposal by spreading and levelling elsewhere on the Site as specified or ordered by the Engineer.

Where the Temporary Works not subsequently covered by the Permanent Works or by the reservoir after impounding will involve works on or movement over top-soil which is in the opinion of the Engineer substantially more fertile than the sub-soil, the Contractor shall strip the top-soil to the full depth (not exceeding 0.50 m) and shall store it on Site at the commencement of the Works. After completion of the Works, or the appropriate part thereof, the Contractor shall replace the top-soil as far as practicable in the original positions and to the satisfaction of the Engineer.

#### Excavation of Unsound Material

If any unsound material occurs in the bottom of any excavation, or at the foundation level, the Contractor shall remove and dispose it. Unless otherwise specified or ordered by the Engineer, the Contractor shall fill the voids so formed with concrete of the same class as the adjacent structure in the formations to structures, with the same material as that which comprises the fill in the formation to embankments, and with suitable granular material to the approval of the Engineer in the case of pipelines and embankment pitching.

If the Contractor encounters any material which in his opinion may be unsound, he shall immediately inform the Engineer, who will instruct the Contractor in writing as to whether or not the said material shall be treated as unsound, provided that if in the Engineer's opinion the unsoundness of the formation is due to the Contractor's method of working or his failure to keep the excavation free from water, the removal, disposal and replacement of unsound material shall not be measured for payment. The omission by the Engineer to give an instruction shall not relieve the Contractor from any responsibility for defects in the Works, if prior to construction the Contractor shall have failed to request the Engineer, in writing, to inspect the exposed foundation.

#### Extent of Excavations

The extent of excavations shall be subject to the prior approval of the Engineer and as shall have been reasonably justified to him by the Contractor.

#### Support of Excavations

The Contractor shall provide the supports necessary for the excavations and shall not remove such supports until in the opinion of the Engineer, the Permanent Works is sufficiently far advanced to permit such removal. He shall submit his proposals for such supports to the Engineer when required. If, in the opinion of the Engineer, the support proposed by the Contractor is insufficient, then the Engineer may order the provision of stronger support, in which event the Contractor shall provide and shall make no charge for providing such stronger support to the satisfaction of the Engineer.

#### Slips, Falls, and Excess Excavation

The Contractor shall prevent slips and falls of material from the sides of the excavation and embankments. In the event of slips or falls occurring in the excavations, and where excavations are made in excess of the dimensions of the Permanent Works, the voids so formed shall be filled by the Contractor. When such voids occur in rock and, in the opinion of the Engineer, may affect the stability of the ground for the support of the Works, or of the adjacent structures and services, the Contractor shall fill the void solid with concrete of the same class as the adjoining structure unless shown otherwise on the Drawings. In other cases the Contractor shall fill the voids with selected excavated

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material placed and compacted to the approval of the Engineer. The Contractor shall make no charge for additional payment in respect of filling such voids.

#### Excavations to be Kept Dry

Unless otherwise approved and such approval will only be given in exceptional circumstances, the Contractor shall keep the excavations free from water from whatever source, so that the Works shall be constructed in dry conditions. The Contractor shall maintain the accumulated or sub-soil water at level below that of the bottom of the Permanent Work by such methods, to such depth and for such duration as the Engineer may approve. Where the method approved by the Engineer involves the use of mechanical plant, the Contractor shall maintain on Site in working order as much stand-by plant as is necessary to ensure the safety of the Works.

The method and position of disposal of water from the excavations shall be subject to the approval of the Engineer. In the event of the Contractor requiring drainage grips, channels or sub-drains, the Engineer may permit them to be constructed below the level and within the width limits of the Permanent Work. Full proposals shall be submitted for the Engineer's approval. Any provision that the Contractor makes below the Permanent Work shall, if left in place, be made to provide support at least equal to the permanent support. No sub-drainage pipes shall be left in unless they are filled with concrete or other approved material.

#### Disposal of Excavated Material

The Contractor shall transport and dispose of all excavated material not required for the Works, frequently and regularly (at least once per day). The locations proposed by the Contractor for disposing or storing excavated materials, whether temporarily or permanently, shall be subject to the approval of the Engineer.

#### Spoil Dumps

Unless otherwise approved, spoil dumps within the reservoir area shall, on completion, be graded to have slight crossfalls and even side slopes not greater than one vertical to two horizontal. Spoil dumps outside the reservoir area shall be landscaped to the approval of the Engineer.

#### Excavation for Foundations of Concrete Structures

Foundations shall be excavated to the grade of foundation material or depth as shown on the Drawings or to such other depths as the Engineer may direct and no concrete shall be placed until the foundations have been examined and approved by him. Due notice shall be given to the Engineer to enable him to examine foundations in advance. If, in the opinion of the Engineer, due to the fault of the Contractor the ground becomes weathered prior to the placing of concrete, the Contractor shall remove the weathered soil and replace it with concrete to the original formation level at his own expense.

The surface of rock excavation under concrete structures shall be prepared by picking, barring and wedging and other approved methods, which will leave the rock in a sound condition as may reasonably be expected according to the rock quality. All surfaces shall be free of oil, water, mud or any material which in the opinion of the Engineer is not desirable. Rock surfaces shall be thoroughly cleaned by compressed air and water jet or other suitable means before concrete is placed.

Areas of excavation, which are to receive a layer of concrete as a blinding layer, a screeding or drainage layer under the structural concrete, shall be covered immediately after the excavation has been completed.

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### Excavation for Pipelines

The following will apply in addition to the general clauses for excavation. The ground shall be excavated for pipelines in open trench to the lines and depths indicated on the Drawings or such other lines and depths as the Engineer may direct. Any trench, which has been excavated to a greater depth than necessary, shall be filled in with approved material as specified elsewhere at no extra cost to the Contract.

All topsoil and surface features such as walls are to be kept separate from other excavation material. In fertile areas or where directed by the Engineer, the topsoil shall be stripped from the whole of the working easement area and stored on one side, to be replaced on the easement area when pipe laying is completed. Wherever necessary all trenches shall be properly supported by timbering (including steel trench sheeting or steel sheet piling or such other materials as may be approved by the Engineer) in such a manner as to ensure the safety of men working in the trench or on the surface at the side of the trench and to protect any roads, buildings, bridges and other properties in the vicinity thereof from damage.

In all cases where the ground is of unstable character or where the Engineer considers it necessary, the trenches, excavations and headings shall be close timbered from top to bottom. The Engineer may direct that timber and sheeting be left in trenches where in his opinion it is necessary for the safety of the Works.

Sheeting or timbering shall be designed to allow withdrawal as filling takes place to ensure complete filling of the trench, such that backfill is in contact with the sides of the trench. If ground conditions are such that insertion of sheeting or timbering is impractical the Contractor may select to batter the sides of trench excavation. He shall not extend that battering below a level of 300 mm above the crown of the pipe, or one quarter of the external diameter of the pipe where concrete arch or concrete surround protection is detailed on the Drawings. Excavation below this level shall be in the form of a trench with vertical sides.

Roomy joint holes shall be provided so that the pipe barrels shall rest for their whole length on a properly prepared solid bed, unless concrete bedding is required. Every precaution shall be taken to avoid causing damage to any structure. Any damage so caused shall be made good by the Contractor as soon as practicable, once the main laying has been completed, at no extra cost to the Contract.

All trenches shall be kept free from water by pumping or wellpoint dewatering system, or by bailing out or by temporary drains to sumps at all times during the construction, inspection and testing of pipelines therein. All necessary measures shall be taken to prevent slurring or disturbance of the trench sides and bottom. The Contractor shall remove any slurry or disturbed material.

### Pipe bedding, surround and backfill in trenches

The material for pipe bedding shall be cohesionless, sandy selected rounded granular well graded material having a maximum particle size of 20 mm and not more than 18% shall pass 0.063 mm BS sieve. The material shall be free from stones, lumps and vegetable matter. The bottom of the trench shall be well rammed and the bedding material placed and compacted to refusal by a vibratory plate or roller to produce a base of the required thickness and gradient so that the pipe is uniformly supported

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on the bedding material. A depression shall be formed on this bed to receive the joint so that the pipe is fully bedded on the barrel.

All pipes shall be surrounded with material selected from the trench excavation and having a maximum particle size of 50 mm. The material shall be placed in successive layers not exceeding 200 mm and well compacted by vibrating plate compactor or hand punners or runners to achieve the specified relative compaction as measured in accordance with Clauses 2.2 or 2.4 of BS 1377: Part 9: 1990 and brought up evenly and simultaneously on both sides of the pipe to the specified level above the top of the pipe. Joints shall be left exposed until the line has been tested.

The relative compaction shall be 85% for ductile iron pipes laid in the field or minor roads and 90% for pipes in main roads. Backfill material shall be selected from the material obtained from the trench excavation and shall be free from large stones and vegetable matter. Backfill material shall be placed in layers not exceeding 300 mm compacted thickness in fields and in layers not exceeding 150 mm compacted thickness beneath all roads. Backfill shall be thoroughly compacted to achieve a relative compaction, when measured in accordance with Clauses 2.2 or 2.4 of BS 1377: Part 9: 1990, as specified below.

The relative compaction shall be 90% for pipes laid in the field or minor roads and 95% for pipes in main roads. Heavy mechanical equipment shall not be allowed to run over any pipeline until the trench has been completely backfilled and compacted as specified and shown on the Drawings. Construction plant exerting a load excess of 60 tn, whether dynamic or static, shall not be used within 5 metres of the pipe centre line during construction.

#### Explosives and Blasting (provision)

The Contractor shall at all times take every possible precaution and comply with the Explosives Laws of Rwanda and regulations relating to the handling, transportation, storage and use of explosives and shall at all times when engaged in blasting operations post sufficient warning flagmen to the full satisfaction of the Engineer's Representative.

The Contractor shall at all times make full liaison with and inform well in advance and obtain such supervision and permission as is required from the Police and all Government Authorities, public bodies and private parties whosoever concerned or affected by blasting operations. Blasting shall only be carried out on those sections of the Works for which permission in writing shall have been given by the Engineer's Representative and shall be restricted to such hours and conditions as he may prescribe. Such permission shall not be withheld nor such hours and conditions imposed unreasonably.

The greatest care shall be taken in the use of explosives, the charges being so placed and of such amount as in no way to weaken existing structures or the foundations or ground adjacent to the existing and proposed works. The Contractor shall take all necessary precautions to prevent loss, injury or accident to persons or property and shall be entirely liable for any accident or damage that may result from the use of explosives.

The Contractor shall submit to the Engineer's Representative for his approval details of the intended drilling patterns, depths of holes, the amounts of explosives at each location and the method or

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sequence of detonation that he proposes to use. The Engineer may find it desirable to direct the Contractor to use special methods to obtain sufficient, even and undamaged rock surfaces.

#### Storage and Handling of Explosives (provision)

The Contractor shall provide a special store for explosives in accordance with Rwandan Regulations. The Contractor shall provide experienced men with valid Rwandan blasting licences for handling explosives to the satisfaction of the Engineer and the Authorities concerned.

#### Earthworks other than Dam Embankment

##### Backfill and Fill

Backfill shall mean the material required to refill excavations outside the permanent work up to the ground levels prevailing at the commencement of the Works, or to the levels shown on the Drawings, or ordered by the Engineer with due allowance for settlement. Fill shall mean the material required above the ground levels prevailing at the commencement of the Works to make the embankments comprised in the Works, with due allowance for settlement.

Unless otherwise specified the material used for fill and backfill shall be selected excavated material to the approval of the Engineer. Backfill against the permanent work shall be selected free from boulders, cobbles, rock fragments and the like greater than 50 mm nominal size.

After approval by the Engineer for filling or backfilling to commence, the operation shall start with the minimum delay and shall continue until the work is completed in that part of the Works for which the approval is given.

#### Compaction of Backfill and Fill to Structures

For compaction where the degree of compaction of the backfill or fill is specified, the Contractor shall adopt such methods and use such Constructional Plant as is necessary to achieve the degree of compaction specified. Where the degree of compaction is expressed as a percentage, it is either the per cent ratio of the dry density of the compacted material to the maximum dry density as determined by Clauses 3.3 or 3.4 of BS 1377: Part 4: 1990 (2.5 kg rammer method), depending on soil type for cohesive materials, or the density index as determined in accordance with Clause 4 of BS 1377: Part 4: 1990 (maximum and minimum dry densities of granular soils), for cohesionless materials.

At least one month before commencing such compaction of the fill in the Works, the Contractor shall submit to the Engineer details of the method and Constructional Plant proposed to be used. The Engineer will make such tests of the materials before and after compaction, as he considers necessary to ascertain to his satisfaction that the degree of compaction specified is attained.

The Contractor shall exercise careful control of the moisture content of the backfill or fill material prior to and during compaction, such that it lies within the range of values specified. The degree of compaction of fill and backfill, unless otherwise specified, shall be at least 90% of maximum dry density for earthfill and fine filter materials or shall achieve a density index of 75% for granular materials.

#### Finish of Earthworks

Except where otherwise specified or ordered by the Engineer, the tops and side slopes of fill shall be neatly trimmed equal to the best practicable finish which in the opinion of the Engineer can be obtained by the skilled use of the earth moving equipment used in the placing and, where specified, compacting of fill. Where precise lines and levels of embankments are not specified or ordered by the



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Engineer, the Contractor shall construct embankments in straight lines between smooth curves to give a pleasing appearance.

#### Granular Material as Backfill

Unless indicated otherwise granular material for backfill shall be obtained from sources approved by the Engineer. The material shall be such that it lies within the following grading limits:

<b>Particle Size</b>	<b>Fine Limit (% Finer)</b>	<b>Coarse Limit (% Finer)</b>
50 mm	100	100
20 mm	100	80
6.3 mm	95	50
2 mm	70	25
600 $\mu$ m	45	5
212 $\mu$ m	20	0

Excavation of granular material may be carried out underwater, but the Contractor must ensure that the water content of the material so procured is satisfactory for the situation in which the material is to be used.

#### DAM EMBANKMENT

##### General

The dam embankment shall consist of compacted shoulders made of homogenous clay material, , the filters and drains, and the rip-rap protection and bedding. The embankment shall be constructed to conform to the finished levels shown on the Drawings.

The Contractor shall provide and maintain proper profile rails showing the position and inclination of the various slopes. The Contractor's attention is drawn to the requirements of Chapter 3, where these are of relevance to the construction of the dam embankments. Other than where shown on the Drawings the difference in elevation at any two points on the unfinished surface of the embankment shall not at any time exceed 2.0 meters. The difference in elevation at the boundaries between adjacent material zones shall not exceed 1.0 meter.

##### Borrow Areas

Unless otherwise directed by the Engineer, suitable earthfill material for the embankment shall be obtained from the designated borrow areas shown on the Drawings, and from the excavations.

The Contractor shall construct and maintain all necessary access roads and bridges to the borrow areas. To facilitate efficient planning of his method of working, the Contractor at his own expense shall carry out test pits in the borrow areas to determine the quantity, condition and type of materials that will be encountered during excavation.

The Contractor shall submit to the Engineer his proposed method of working the borrow areas and shall not start site clearance or excavation at any borrow area until he has obtained the Engineer's permission and approval of his method of working in writing.

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The Contractor shall work the borrow areas in a systematic manner and shall so arrange his method of working to minimise deterioration of the materials in the borrow areas both before and during excavation. The Contractor shall provide all necessary drainage and pumping to ensure that the borrow areas are at all times free of standing water.

Different types of material from the borrow areas shall be kept separate for use in the Works, and shall be stored in approved areas not adjacent to the stream beds or any main road. Material that is unsuitable for use in the Works shall be disposed of to spoil tips approved by the Engineer.

The Contractor shall spray access roads to borrow areas with water to minimise dust. Access roads, which are regularly used, shall be spread over with suitable material to minimise dust when the Engineer considers this necessary.

#### Earthfill Material

Earthfill material shall be obtained from the designated borrow areas in and near the reservoir area, as shown on the Drawings. Exploitation of the Borrow Areas shall be carried out in 100 m long stages, to be agreed with the Engineer. For Borrow Areas that are located outside the reservoir and within agricultural land, the existing topsoil shall be stockpiled in areas not adjacent to the stream beds or any main road and re-spread it evenly over each area exploited, so as these areas will be returned to agricultural use after the completion of the Works. This shall be carried out immediately after the area has been fully exploited. Existing big trees shall be protected and maintained as much as possible.

Finished ground levels within the borrow area shall have a uniform gradient to ensure adequate drainage and this will be supplemented by drainage ditches and other appropriate measures to meet this requirement. In order to meet this requirement, the Contractor may excavate, remove topsoil and re-spread it over an area outside the limits of the designated Borrow area.

The Contractor shall prevent slips of material from the sides of the excavation and shall provide all necessary temporary support, if needed.

#### Filters and Drains Material

The filter and drain material shall be obtained from the rip-rap borrow areas, and from a borrow area located approximately 5 km away from the dam area, after proper processing involving screening, crushing, washing, etc.

#### Upstream slope protection

Material for rip-rap protection and bedding shall be obtained from the borrow area shown on the Drawings.

#### Downstream slope protection

The downstream slope will be protected with a layer of topsoil, obtained from excavations within the reservoir area, 30 cm thick, which will be planted with local grass.

#### Capping Layer

Sands and gravel for capping layer shall be obtained from the designated borrow areas shown on the Drawings.

#### Permitted Deviations

The thicknesses of the various filter, drainage, and transition zones or layers shall not be less than as shown on the Drawings.

### Cofferdam

Cofferdam shall be constructed using material for the embankment shoulders excavated from the proposed borrow areas. In constructing the Cofferdam the Contractor shall use the same equipment and technique as that which he proposes to use in constructing the embankment proper. In collaboration with the Engineer the Contractor shall determine the number of roller passes and the loading of the rollers required to achieve the degrees of compaction specified for the embankment shoulder zones.

Towed rollers shall be pulled by tractors which are adequately powered to work satisfactorily when the rollers are fully loaded.

### Material for Construction

### Material for Embankment

Earthfill material for the construction of the embankment shall be taken from the Borrow Areas designated on the Drawings. The material shall lie within the following grading limits, determined by the methods described in Clauses 9.2 and 9.5 of BS 1377: Part 2: 1990.

Particle Size (mm)	% Passing
4.760	100
2.380	98-100
1.190	82-98
0.590	62-92
0.420	56-86
0.297	47-74
0.149	38-62
0.075	32-48

Atterberg limits will be above line "A" in plasticity chart with Liquid Limit ranging from 35% to 55% and PI greater than 10. Unsuitable material such as vegetation, roots, top soil or other organic materials should not be incorporated in the embankment. Any such materials that are spread on the embankment shall be removed manually or otherwise.

Fill material shall be conditioned in the borrow areas before excavation. Where the natural moisture content of the fill material in the borrow areas is higher than required the fill material shall be exposed to the air, scarified and ploughed in order to reduce the moisture content uniformly prior to excavation. If, before excavation operations at any location in the borrow areas, there is a shortage of moisture, then moisture shall be introduced into the borrow areas by irrigation, at least 3 days in advance of excavation operations. Care shall be exercised to moisten the material uniformly prior to excavation, avoiding both excessive run-off and accumulation of water in depressions.

### Materials for Filters and Drains

Materials for the various filters and drainage layers shall be obtained from sources as approved by the Engineer. Filter and drains material is shown on the Drawings and shall conform to the grading requirements given in the following table.

Fine Filter	
Particle Size (mm)	% Passing
12.700	100
9.525	100-91

4.760	100-76
2.380	100-60
1.190	84-36
0.840	74-30
0.590	64-20
0.420	55-10
0.297	35-0
0.149	29-0
0.075	5-0

<b>Coarse Filter (drain material)</b>	
<b>Particle Size (mm)</b>	<b>% Passing</b>
76.200	100
50.800	100-92
38.100	100-85
25.400	100-76
12.700	100-64
9.525	92-56
4.760	72-36
2.380	53-19
1.190	32-0
0.590	16-0
0.297	12-0
0.075	5-0

#### Material for Upstream Slope Protection

The upstream slope protection consists of a layer of fragments cobbles and boulders forming the rip-rap protection with rip-rap bedding layer (gravel). For the material forming the rip-rap protection the diameter of the stones shall vary from 10.0 cm to 50.0 cm with an average diameter of D50 =30cm.

The rock fragments shall be dense, sound, and resistant to abrasion and shall be free from cracks, seams, and other defects, that would tend to increase unduly their destruction by water. Samples for rip-rap and rock armour prepared in accordance with applicable designations of the US Bureau of Reclamation's "Concrete Manual" (8th edition), shall meet the following requirements when tested by the procedures described in the respective designation.

Test	Designation	Requirements
Specific gravity (Saturated surface-dry basis)	10	Greater than 2.60
Soundness (sodium sulphate method)	19	Less than 10% loss of weight after 5 cycles

Abrasion (using Los Angeles machine grading A)	21	Less than 35% loss of weight after 500 revolutions
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The material for the rip-rap bedding layer shall be well-graded within the following grading limits:

Particle Size (mm)	% Passing
76.200	100
50.800	100-92
38.100	100-85
25.400	100-76
12.700	100-64
9.525	100-56
4.760	100-36
2.380	100-19
1.190	84-0
0.590	64-0
0.297	35-0
0.075	5-0

The particles forming bedding layer should be from dense, sound rock and should have less than 10% loss in the soundness test and less than 35% loss in the Los Angeles test.

#### Material for Downstream slope protection

The downstream slope protection shall come from excavations within the reservoir. It will be of the best quality obtained from the excavated areas and it will be planted with local grass.

#### Material for Capping Layer

The capping layer shall consist of sound granular material with the following gradation limits:

Particle Size	Capping Layer	
	Fine Limit (% Finer)	Coarse Limit (% Finer)
50 mm	100	100
20 mm	100	70
5 mm	70	20
2 mm	40	0
75 µm	5	0

The materials shall be produced from the rip-rap Borrow Area or other suitable source, after proper processing. It should consist of sound, strong rock particles following the requirements for the filters and drains.

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### Construction of Dam Embankment

#### Construction of Earth-fill Embankment

Materials considered suitable for inclusion in the earthfill embankment of the main embankment shall be compacted in layers not exceeding 0.20 m before compaction and in such a manner that field densities as measured in situ using the methods described in Clauses 2.2 or 2.4 of BS 1377: Part 9: 1990, achieve the specified compaction. The moisture content of the material shall be controlled at the borrow area to give a uniformly distributed water content after compaction of between 0% and + 2% above Optimum Water Content.

Where the material is placed against the sides of the core trench, steep rock faces or the walls of the spillway and draw-off works, it may be necessary to use hand held compacting equipment to achieve the required degree of compaction. If shrinkage cracks due to drying occur in the exposed surface of the core, the fill shall be excavated back to the full depth of any cracks and the excavated material removed to spoil. This work shall be carried out at the Contractor's own cost.

Compaction will be achieved by heavy sheep-foot or peg-foot vibrating rollers with minimum drum weight of 15 tons. The length of the sheep-feet or pegs will be no less than 19 cm. The number of passes will be determined by trial placement, but it will not be less than 8 unless otherwise directed by the Engineer.

#### Construction of Filters and Drainage Layers

The drainage layers in the dam embankment shall be constructed of material complying with the requirements of Clause 4.5. The inclination of the drainage layers or filters shall be as shown in the Drawings.

In order to avoid contamination of the filters, they will be always placed in advance of the earthfill material. In this way the surface of the filters will be at one layer above the fill surface.

It is of utmost importance to ensure that the drainage layers and filters are not contaminated by other fill materials, and the Contractor shall ensure that constructional traffic does not cross such sections of the embankment or otherwise contaminate the drainage or filter material. If, in the Engineer's opinion, contamination does take place, the contaminated material shall be removed from the Works and the Contractor shall have no claim for payment for such material so removed.

The relative density of the compacted material shall not be less than 70% as determined by ASTM Test Nr D 4253-00.

#### Construction of Upstream slope protection

Approved material for inclusion in the rip-rap protection to the embankment as defined in Clause 4.5 shall be transported without intermediate handling direct to the point of final use, where it shall be dumped and graded off in a manner to ensure that the larger rock fragments are uniformly distributed and the smaller rock fragments fill the spaces between the larger rock fragments to form compact uniform layers of rip-rap of the specified thicknesses as shown on the Drawings. Hand placing will be required only to the extent necessary to secure the results specified above.

#### Downstream slope protection

The downstream slope protection will be applied two or three stages behind the construction of the rest of the embankment.

#### Construction of Capping Layer

The capping zone material will be placed in max 0.15 m thick layers and will be compacted by a vibrating smooth drum roller to a relative density of no less than 80%. The number of passes in order to achieve the required density will be determined following a trial placement. In any case, no less than 6 passes of a 10 ton (static weight) will be applied.

#### Earthfill Sampling – Testing

The Contractor shall take samples from the embankment as directed by the Engineer's Representative to enable the following tests to be carried out:

- (i) Field dry density and water content
- (ii) Standard Proctor compaction
- (iii) Relative Density
- (iv) Classification tests (gradation, Atterberg limits)

The minimum rate of sampling shall be as shown in the following table.

Location	Quantity of fill placed per sample (m <sup>3</sup> )				
	Field dry density and water content tests	Gradation tests	Atterberg Limits	Standard Proctor compaction test	Relative Density
Cofferdam	100	100	-	100	-
Main embankment					
Earthfill zone	500	1000	2000	1000	2000
filter, drainage and transition zones	200	500	-	-	2000

The Cofferdam will test the Contractor's equipment and will assist in finalizing the construction procedures. Tests shall be carried out as described in the above table and a report shall be prepared in order to interpret the results and propose the construction procedures to be approved by the Engineer.

Apart from the tests presented in the table above, marker plates shall be positioned and shall be precisely surveyed every 2 passes of the roller in order to determine the settlement of the layer. The number of passes to refusal will be decided according to the results but a minimum of 12 passes shall be carried out in the Cofferdam. The Cofferdam shall test layer thickness of 30, 40 and 50 cm and varying water content (e.g. 8% to 12%). The results shall be presented and interpreted in a report proposing the construction procedure to be approved by the Engineer. The frequency of sampling shall be determined from the results of previous tests, the quality of the material revealed during such tests and the uniformity of such quality. The frequency may be amended as required by the Engineer.

In the event that individual compaction tests on samples of earthfill material result in widely ranging values for Proctor Optimum Water Content and Proctor Maximum Dry Density, and maximum and minimum dry density, the Engineer may require that during the construction of the Cofferdam and from time to time during the construction of the main embankment, laboratory Proctor compaction and maximum and minimum dry density tests shall be carried out at the same frequency as field density tests on material taken from the fill adjacent to the location of the field density test.

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Should the fill placed, in the opinion of the Engineer, be thought likely not to comply with the Specifications, the Contractor shall, if directed by the Engineer, carry out additional tests.

The following tests will be carried out, unless otherwise directed by the Engineer:

Gradation

Atterberg limits

Proctor Standard

Relative density

Field density – sand replacement

Field density – water replacement

Earthfill Compaction Control

Embankment Earthfill

Earthfill shall be compacted in such a manner that the average percentage compaction of the fill at any time defined as the ratio Field Dry Density over Laboratory Maximum Dry Density, shall be not less than 98%, where:

Field Dry Density equals the average of results of all tests to determine field dry density to date, for each material type, and Laboratory Maximum Dry Density equals the average of results of all laboratory Dry Density tests to determine Proctor Maximum dry density to date, for each material type.

Results of field dry density tests shall be examined in consecutive batches of 10 results, which shall conform to the following requirements:

- (i) The average of the Field Dry Density for each batch shall be not less than 98% of the Laboratory Maximum Dry Density.
- (ii) Not more than 10% of the results in each batch shall show a compaction of less than 95% Laboratory Maximum Dry Density and no result shall be less than 90% Laboratory Maximum Dry Density.
- (iii) The standard deviation of the results in each batch shall be not greater than 3%.

Separate compaction records shall be kept for materials of differing properties.

In the event that the Engineer has required Proctor compaction tests to be carried out adjacent to the field density tests and at the same frequency, the percentage compaction shall be defined for each individual sample. Compaction results obtained in this way shall be examined as described above. Material which has been compacted to a dry density less than that required by this Specification or at water content outside the agreed range shall be removed or re-worked and re-compacted until the required properties are achieved. In this case the field dry densities recorded before removal or re-compaction of the material shall be omitted from the calculations of mean percentage compaction and standard deviation. Compaction criteria may be varied along the foundation interface at the discretion of the Engineer or his Representative.

Filters and Drainage Layers

Filter and drainage layer will be compacted in such a manner that the average relative density at any time shall not be less than 80%. The relative density is defined as;

$$RD (\%) = [(L_{maxDD} \times (FDD - L_{minDD})) / (FDD \times (L_{maxDD} - L_{minDD}))] \times 100$$



Where: LmaxDD = Laboratory Maximum Dry Density

LminDD = Laboratory Minimum Dry Density

FDD = Field Dry Density

Settlement Allowance

In the setting out and construction of the embankment an allowance shall be made for post-construction settlement, as shown on the Drawings. The nominal crest level shall be raised by the amount shown on the embankment camber diagram by steepening the slopes of the embankments.

#### Cement

The cement must conform to the Norm EN197-1:2000 “Cement: Composition, specifications and compliance criteria” (Type CEM I, CEM II/A-M, CEM II/A-L and CEM II/A-P). Unless it is specified otherwise in the contract, the concrete must have minimum typical strength at 28 days 42.5 MPa and must be type N. The Contractor must submit to the Engineer the type of cement that will be used.

The Contractor must take all necessary measures to protect the cement from exposure to humidity. The Engineer reserves the right to demand the removal from the site of cement that has been influenced by humidity. The Engineer reserves the right to demand at any time from the Contractor to carry out laboratory test to verify whether the quality of the cement delivered on the Site is according to the specifications. Whatever quantity of cement is not according to the specifications will not be used and will be removed from the site.

#### Aggregates

The sand and gravel must conform to the Norm EN12620:2002 “Aggregates for Concrete”, and the requirements listed in Table 6/1 must be respected.

**Table 6/1.**

<b>EN12620:2002: Aggregates for Concrete</b>				
<b>Paragraph Norm</b>	<b>Characteristic</b>	<b>PRESCRIBED LIMIT</b>		
		<b>Coarse Aggregates</b>	<b>All-in Aggregates</b>	<b>Fine Aggregates</b>
4.4	Particle shape	Maximum allowable Class F120	Maximum Allowable class F120. It refers to coarse part	
4.2	Particle size	The ratio d/D of the product is declared	The ratio d/D of the product is declared	The ratio d/D of the product is declared
5.5	Particle density	The value shall not be smaller than 2,00Mg/m <sup>3</sup> as dry density	The value shall not be smaller than 2,00Mg/m <sup>3</sup> as dry density	The value shall not be smaller than 2,00Mg/m <sup>3</sup> as dry density
4.6	Fines content	Maximum allowable class F1.5	Maximum allowable class F3	Maximum Allowable class F10. For natural sand produced from natural gravel maximum allowable class F3.

## EN12620:2002: Aggregates for Concrete

Paragraph Norm	Characteristic	PRESCRIBED LIMIT		
		Coarse Aggregates	All-in Aggregates	Fine Aggregates
5.2	Resistance to fragmentation	Maximum Allowable class LA30	Maximum Allowable class LA30. It refers to the coarse part	
5.4.1	Resistance to polishing	The PSV class is declared for the concrete used as pavement for vehicles	The PSV class is declared for the concrete used as pavement for vehicles. It refers to the coarse part. (I)	
5.4.2	Resistance to abrasion	The AAV class is declared for the concrete used as pavement for vehicles	The AAV class is declared for concrete used as pavement for vehicles. It refers to the coarse (I)	
6.2	Chlorides	It is declared for aggregates used for reinforced concrete. The allowable content must not exceed 0.1%	It is declared for aggregates used for reinforced concrete. The allowable content must not exceed 0.1%	It is declared for aggregates used for reinforced concrete. The allowable content must not exceed 0.1%
6.3.1	Acid sulfates	Maximum Allowable class ASO.8	Maximum Allowable class ASO.8	Maximum allowable class ASO.8
6.3.2	Total sulfur	The value must not exceed 1%	The value must not exceed 1%	The value must not exceed 1%
5.5	Water absorption	The value must not exceed 4%	The value must not exceed 4%	The value must not exceed 4%
5.7.1	Durability against freeze-thaw	Maximum allowable category MS18	Maximum allowable category MS18	Maximum allowable category MS18
5.7.3	Durability against alkali silica reactivity	Specified for aggregates produced from natural gravels	Specified for aggregates produced from natural gravels	Specified for aggregates produced from natural gravels

Note: (I) Coarse is the size greater than 4 mm

Sand and gravel will be kept in different stockpiles and in generally their mixture must be avoided. The stocks of both sand and gravel must be placed on inclined bases of lean concrete or of another surface approved by the Engineer so as to avoid contamination by soil and facilitate the drainage of the stock piles. Aggregates that have been placed direct on soil will not be used in concrete mixes.

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The Engineer reserves the right to demand at any time from the Contractor to carry out laboratory test to verify whether the quality of the aggregates comply with the Norm EN 12620:2002. The Engineer reserves the right to demand from the Contractor not to use aggregates that are not of his approval and to have them removed from the Site.

#### Water

The water used for the concrete mixing must be from clean water supply (potable). Non potable water may be used if it complies with EN1008:2002 “Mixing Water for Concrete. Specification for sampling, testing and assessing the suitability of water, including water recovered from processes in the concrete industry as mixing water for concrete” or it is approved by the Engineer.

#### Additives - Admixtures

The concrete will compose of cement, aggregates and water as it is specified. No other substance will be mixed in the concrete or the mortar without the approval of the Engineer. The use of chlorides is prohibited. The contractor may examine the use of natural pozzolans for the partial replacement of cement in the mix or alternatively the use of admixtures with hydraulic properties that will contain pozzolans and that in cases only of massive concretes.

These materials must conform to standards ASTM C618-73 and ASTM C595-75, respectively, and will be tested in combination with the cement and/or the aggregates used on site so as to prove their beneficial properties to the satisfaction of the Engineer before the contractor may gain approval for their use.

If the Engineer approves the use of additives, such as retarders or plasticizers that comply with standards EN 480:2006 “Admixtures for concrete, mortar and grout. Test Methods” and EN 934:2001 “Admixtures for concrete mortar and grout. Concrete admixtures. Definitions, requirements, conformity, marking and labeling”, their use will be subject to the following rules:

- (i) The average strength of the tested specimen shall not be lower than the average strength of the tested specimen without the use of additives.
- (ii) The quantity of the cement shall not be reduced below the minimum limit described for the specific concrete category.
- (iii) International approved tests will be carried out to determine the time of solidification, the workability and the strength of the concrete mixes that contain additives.
- (iv) The amount of additives added as well as the mixing time must follow the instructions of the manufacturer of the products, adjusted to the existing conditions on site.

#### Concrete Quality

The concrete’s designed compressive strength and the size of aggregates used must comply with what is written on the drawings and the specifications. The following concrete classes will be used: C10, C15, C20, C25, C30, C35 and C40. The above-mentioned concrete classes must satisfy the requirements presented in the following table. It should be stated that wherever in the drawings concrete class C12/15 or C20/25 is written it is meant to be class C15 and C25 respectively.

Concrete class	C10	C15	C20	C25	C30	C35	C40
Maximum Aggregate Size (mm)	20	20	20	20	20	20	20
Minimum Cement Quantity (m3)	200	250	300	350	370	390	420
Slump (mm)	120	120	120	120	120	20	120

Concrete class	C10	C15	C20	C25	C30	C35	C40
Maximum Water/Cement Ratio	0.65	0.60	0.55	0.55	0.55	0.50	0.50
Specified Strength of 150 mm cube specimens							
Tested at 7 days (N/sq.mm)	6.5	10.0	13.5	16.5	20.0	25.0	28
Specified Strength of 150 mm cube specimens							
Tested at 28 days (N/sq.mm)	10	15	20	25	30	35	40
Preliminary Laboratory- Strength of 150 mm cube specimens	9	13	18	21	24	28	34
Tested at 7 days (N/sq.mm)*	(11)	(17)	(22)	(25)	(28)	(33)	(37)
Preliminary Laboratory Strength-of 150 mm cube specimens	13	20	27	32	37	42	48
Tested at 28 days (N/sq.mm)*	(17)	(25)	(33)	(38)	(43)	(48)	(53)

\* The values in brackets refer to concrete not produced in plants producing ready-made concrete.

NOTE: The maximum cement content in any mix shall not exceed 500 kg/m<sup>3</sup> for normal structures and 425 kg/m<sup>3</sup> for liquid retaining structures.

#### Mix design

For concrete mixes with specified strength equal or greater than 20 N/ mm<sup>2</sup>, the Contractor must submit a design mix report. After the approval of the submitted design mix report, with the weight percentage of cement, water, sand and gravel clearly stated., the contractor shall perform 1-3 trial mixes with the presence of the Engineer and following any orders the Engineer issues. From every trial mix two (2) to six (6) cube test samples (according to the Engineer's instructions) will be taken to be tested for their compressive strength. ¼ of the taken cube test samples will be tested at 7 days for their strength and the rest samples at 28 days. The strength of each cube test sample tested at 28 days must be considerably higher than the specified strength. In the case that there are no previous data the average strength of the tested samples must be 3 N/mm<sup>2</sup> greater than the specified strength.

As soon as the Engineer approves the design mix and is satisfied by the trial mixes and the tests carried out then the contractor is prohibited from changing the source and quality of the supplied materials and the mix proportions without prior approval of the Engineer. If for any reason any of the above-mentioned parameters are altered then the contractor is obliged to submit a new design mix for approval.

#### Predetermined Concrete Mixes

For concrete strength requirements of 15 N/mm<sup>2</sup> or lower strength ready-made mixes described in following Table can be used. The weight proportion per material indicated for the ready-made mixes can be used for the first mix and according to the results from the tests against compression they could be changed if required so.

#### Predetermined Mixes

Quality or Concrete Class	Maximum Aggregate Size (mm)*	40			20		
	Fluidity*	Low	Medium	High	Low	Medium	High
	Slump (mm)	0-30	30-60	60-180	0-30	30-60	60-180
	Minimum Cement Weight (kg)	-	180	200	200	210	230

C5 (W/C=0.7)	Minimum Aggregates Weight (kg)	-	1995	1940	1995	1920	1800
	Fine Coarse Aggregates (Sand) (%)	-	25-50	25-50	35-55	35-55	35-55
C10 (W/C=0.65)	Minimum Cement Weight (Kg)	-	210	230	220	240	260
	Minimum Aggregates Weight (kg)	-	1965	1925	1975	1890	1835
	Fine Coarse Aggregates (Sand) (%)	-	25-50	25-50	35-55	35-55	35-55
C15 (W/C=0.65)	Minimum Cement Weight (Kg)	235	270	290	255	300	320
	Minimum Aggregates Weight (kg)	1995	1900	1850	1940	1820	1775
	Fine Coarse Aggregates (Sand) (%)	25-50	25-50	25-50	35-55	35-55	35-55

\* Specified by the Engineer  
Concrete Testing

The verification of the concrete compressive strength shall be based on the crushing of 150mm cube test samples. The maximum cement content in any mix shall not exceed 500 kg/m<sup>3</sup> for normal structures and 425 kg/m<sup>3</sup> for liquid retaining structures. The Contractor must have on site a cone so as to perform slump tests and a necessary number of cube moulds so as to be able to fulfill the sequence of tests listed below:

- 1-3 cube test samples from each mix if the volume of concrete is of the order of 4-6 m<sup>3</sup>.
- 1-2 cube test samples every 4 mixes if the volume of the concrete is of the order of 0.5 m<sup>3</sup>.
- 1-2 cube test samples every 10 mixes if the volume of the concrete is smaller than 0.5 m<sup>3</sup>.

The Engineer may alter the sampling sequence according to the quality of concrete and the type of works it is going to be used. All test samples must be numbered.

A small number of test samples will be tested at 7 days (approximately ¼ of the total number of samples) and the rest at 28 days. The results from the specimens tested at 7 days will be treated as indicative.

The concrete will comply to the specifications when both of the following criteria are satisfied:

- The average strength of the cube test samples of 4 consecutive tests\* crushed at 28 days must be greater than 3N/sq.mm for concrete categories C20 and greater than 2N/sq.mm for categories lower than C20.
- The strength of any test sample crushed at 28 days must not be smaller than 3N/sq.mm for concrete categories C20 and smaller than 2N/sq.mm for categories lower than C20.

\* Every crushing of a cube specimen is considered as a test.

The Engineer may demand the testing of cylindrical test samples from the laboratory for more appropriate results. The tests of the cylindrical samples will be executed in accordance to EN 12350:2000 "Testing fresh concrete", EN 12390:2000 "Testing hardened concrete", EN 12504:2000 "Testing concrete in structures" and EN 13791:2007 "Assessment of in situ concrete compressive strength in structures or in precast concrete components".

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In the case where the strength criteria set by the specifications are not met, the Engineer retains the right to demand the demolition of the structures. The Contractor is responsible for the cost and the delays caused. The Contractor must take all necessary additional remedial measures for improving the concrete's strength following the Engineer's instructions before new concreting takes place.

The Contractor is obliged to keep full records regarding the concrete's category, the concreting date and location and all relative data and results for the cube and cylindrical test samples. The records must be at the disposal of the Engineer at any time. The equipment used for the concrete mixing must be appropriate and in good condition. The Engineer retains the right to prohibit the concrete mixing and demand the removal or substitution of inappropriate equipment.

The sampling, transportation, storage, protection and testing of the cube test samples will be executed according to Standards EN 12350, 12390, 12504 and 13791. The concrete's workability will also be checked according to these standards.

#### Concreting Records

The contractor is obliged to keep records regarding the concreting works. The specific record must be submitted every day to the Engineer for approval. The Engineer must note on the record the observations made on site and comments regarding the contractor's schedule. The record must include notes and data for the following:

- (a) The names of the supervising engineers and their assistances assigned by the Contractor that will be involved during the specific concreting works.
- (b) A description of the weather conditions, the temperature and the humidity. A list with the temperature of the water, the cement, the aggregates and the concrete itself must also be included.
- (c) The invoices of the materials for the concrete mix on site delivered on site. (Quantities of materials, Cement brand name, etc.).
- (d) Any specific instructions issued by the Engineer.
- (e) The supervision by the Engineer.
- (f) The time of starting and finishing the concreting works, mentioning also segments of implementation; the time of erection and removal of the formworks.
- (g) The quantities of the cement, admixtures, fine and coarse aggregates and any additives used in every concreting work. The number of quality tests executed in the above mentioned materials and the water used.

#### Transportation

The transportation from the batching plant to the site may be done with delivery concrete truck carriers (rolled mixer) or any other appropriate mean indicated by the Engineer. In general the elapsing time between concrete mixing and pouring should not exceed 30 minutes. In case where retarding additives are used as specified in Paragraph 6.4 then the transportation time will be adjusted according to the instructions of the Engineer. During concrete casting, the concrete must have the predefined slump.

#### Concrete Casting

The Engineer must be present during concrete casting. Formwork and reinforcement must have been checked and approved according to drawings. In no case should the concrete be left to fall free from a height exceeding 1.5 m. In no case should the concrete be placed in stagnant or running water unless it is approved by the Engineer.

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The concrete must be compacted by mechanical vibrators. The vibrators must be embedded well in the concrete mass and in appropriate distances that ensure adequate concrete compaction without voids. The vibrators must be slowly drawn out from the poured concrete after their embedment so as to avoid air voids.

If the concrete is poured in the formwork with the use of a pump this should be taken into account in the concrete mix design. The concrete may be richer in fine aggregates and contain admixtures of the approval of the Engineer. The concrete must have a relative high slump (7-12 cm).

#### Construction Joints

The concrete casting must be continuous till the completion of the scheduled works or till a pre-specified construction joint according to drawings. In case the concreting is stopped before a pre-specified construction joint the Engineer must be notified immediately for his approval and instructions. Before new casting takes place the hardened surface must be washed with water. Compressed air must be used to remove the previously applied water. The newly poured concrete must be placed near the hardened surface and vibrated adequately.

#### Concrete Curing after Casting

The concrete must be treated immediately after pouring so that it is protected from exposure to sun, wind, frost and rain. The concrete protection may be done with one of the following measures:

Covering the concrete surface with a saturated membrane, the membrane must be kept saturated for at least 7 days.

Covering the concrete surface with wet sand, the sand must be kept wet for at least 7 days.

Using different chemicals for concrete curing that have previously been approved by the Engineer.

#### Concreting under Cold Weather

During cold weather the temperature of the concrete immediately after mixing must not be lower than 10°C. Aggregates, cement and water containing ice are not allowed to be used. In the case that the water is heated its temperature must not exceed 60° C.

During casting the concrete's temperature must be at least 5° C. Concrete works are prohibited if the temperature is lower than 3° C. Concrete poured must be protected with the appropriate insulating materials for at least 72 hours in addition to the provisions listed in Paragraph 6.13. Concrete affected by frost will be demolished. For the time calculated for the removal of formworks, days when the temperature is lower than +5° C must not be taken into account.

#### Concreting Under Warm Weather

During warm weather the stockpiles of aggregates must be protected from solar radiation or watered. The water tank and distribution pipes must be insulated. The concrete's temperature during pouring must not exceed 32° C.

The formwork surfaces and the reinforcement must be wetted before casting takes place so that water is not absorbed from the concrete. Immediately after pouring the concrete surfaces must be protected according to the provisions set by Paragraph 6.13.

#### Preparation of surfaces prior to concreting

Rock surfaces should be carefully cleaned with water and air under pressure just prior to concreting. The water must be removed and the surface will be laid with mortar consisting of sand and cement. Only surfaces that will be concreted within half hour will be laid with the sand-cement mortar.

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The surfaces at construction joints must be meticulously treated and loose aggregates should be removed from the top surface. The surfaces should be left undisturbed, clean without water, sand, loose materials etc. After concreting the hardened surface must be kept wet but without allowing the presence of stagnant water.

#### Reinforcement

The reinforcement shall consist of high or low tensile steel that conforms to Norms EN 10080:2005 “Steel for the reinforcement of concrete. Weldable reinforcing steel. General”, EU-8069 and EU-8085. The Engineer retains the right to demand from the Contractor to present certificates of quality control from the supplier. The steel bars bending shall be carried according to Norm 10080.

The reinforcement bars must be clean, free of impurities, dust, oil and paint. The reinforcement must be placed and mantled with precision according to the drawings. Where it is not specified the concrete cover is set to 25 mm. The reinforcement lap length will be at least 50 times the diameter bars unless otherwise specified in the drawings.

The reinforcement must be supported adequately so as not to deform and be able to carry loads during concreting. In order to ensure the appropriate cover concrete, plastic or other spacers approved by the Engineer must be used.

The overlapped bars will not be welded unless in specific cases approved by the Engineer. In the above mentioned cases the bars will be welded according to standards EN 1011-1:1998 “Welding. Recommendations for welding of metallic materials. General guidance for arc welding”, EN 1011-2:2001 “Welding recommendations for welding of metallic materials. Arc welding of ferritic steels” and EN 60974:2002, IEC 60254-6 and IEC 60974-12:2005 “Arc welding equipment”.

#### Formworks

The formworks must comply with precision the shape, location, line and height required on site or specified in the drawings. The formworks must be supported adequately so as not to deform during concreting or compaction. The formwork joints must be watertight. Top surface formworks must be used when concreting takes place on surface with inclination greater than 1:2.5.

Before the formwork is mounted it must be thoroughly checked and cleaned. The inner surface of the formworks must be oiled with special oil preferable before it is mounted and certainly before the reinforcement placement. The use of steel plates or small diameter reinforcement, embedded perpendicular in the concrete in order to facilitate the stability of the formwork, is prohibited. If this is required then special bolts and plastic tubes must be used or any other support method that in any case must have the prior approval of the Engineer.

Concrete casting is prohibited before the formwork and reinforcement are approved from the Engineer. The Engineer retains the right to demand, in certain cases (i.e. bridges), a calculation report proving the formwork/shuttering stability-rigidity. This report must be submitted 6 weeks before the scheduled concrete works. Although the Engineer issues the approval of the formwork/shuttering, its structural adequacy is full responsibility of the Contractor.



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The Contractor is at all cases responsible for the stability of the formwork. The Contractor is responsible for all remedial works, compensations and time delays in case of accidents and unsatisfactory work due to inadequate formwork support.

The type of surface finishing of the concrete must comply with the one prescribed in the drawings, specifications or the Engineer instructions. All formwork joints shall be either vertical or horizontal as per the agreed pattern. Any holes serving support or spacing purposes shall be sealed with plastic covers or cement mortar identical to the poured concrete following the Engineer's orders. The Engineer reserves the right to demand the placement of trowels, water cut offs or whatever is required to achieve the required result.

The removal of the formwork must be carried carefully without causing damage to the concrete. The time for the formwork removal will be proposed by the Contractor and approved by the Engineer. The Contractor must take into account the type of cement used, the admixtures/additives added and the weather conditions. The indicative table (Table 6/3) listed below provides formwork removal time for normal structures and weather conditions.

Prior to the removal of the formwork, the Engineer must be notified well in advance. After the formwork removal no part of reinforcement must be visible. In the contrary, remedial works of the Engineer's approval must be carried. All costs regarding remedial works or even partial demolition will be covered by the Contractor.

Table 6/3.

Time for Formwork Removal Formwork	Days
Side Formwork	2
Slab Formwork (deck)	14
Columns for slabs, beams and frames	21-28
Columns under Cantilevers	28

#### Formed Surfaces

Unless otherwise specified in the drawings, the formwork surfaces must comply with one of the following classes listed below:

Class F1: It refers to cases where the concrete surfaces will be backfilled or covered with concrete. The formwork surface must be such that the loss of any of the concrete components is prohibited and allows for a compact top surface.

Class F2: It refers to cases where the concrete surface will be permanently exposed unless otherwise specified in the drawings. The formwork surface must be such that the loss of any of the concrete components is prohibited and a durable lean surface is formed without discontinuities, cavities, etc. Although cavities are prohibited, small imperfections can be repaired with techniques and materials approved by the Engineer.

Class F3: It refers to cases where the concrete surfaces will be in contact with water flow of specific requirements (high velocities, cavitation risk, etc.). The formwork surfaces must be such that a lean straight surface correctly aligned vertically and horizontally is achieved free of cavities and humps. The Engineer retains the right to demand the plastering of the surfaces with the appropriate mortar mix so as to achieve the desirable surface finish.

When a surface is partially backfilled and exposed then the surface finish of the exposed surface must extend 500 mm to the backfill.

#### Unformed Surfaces

Unless otherwise specified in the drawings the finishing of surfaces concreted without the use of formwork must comply with one of the finish classes listed below:

**Class U1 (Screeded Surface):** It refers to road pavement, foundations slabs or other structural elements backfilled or road pavement that do not require better surface finish. This surface finish is a prerequisite for surfaces with a higher quality final finish such as class U2 and U3. The screeded finish will be achieved by hand sawing motion using a straight-edge timber of 50 mm thickness.

**Class U2 (Floated Surface):** It refers to all exposed surfaces of permanent works unless otherwise specified in the drawings. The floated surface will be achieved by wood or bull float so as to allow abundance of fine aggregates on the top surface.

**Class U3 (Trowelled Surface):** This class refers to all surfaces that will be subject to contact with water flow of specific requirements (high velocities, cavitation risk etc.). Surfaces finishing of class U1 and U2 must have already been implemented. Manual or mechanical steel trowelling must be applied on the floated surface after the concrete has sufficiently hardened. If required a custom made cover must be applied to protect the final surface from rain.

#### Acceptance Tolerances of Concrete Surfaces

The abnormalities observed for the different classes of the formed and the unformed surfaces must be within the limits set by table 6/4. If the abnormalities exceed the pre-specified limits, the Engineer will issue orders so that this does not re-occur. If the abnormalities exceed the maximum pre-specified tolerances limits, the Engineer retains the right to reject totally or partially the executed works.

In Table 6/4 the number in the brackets under the type of abnormality refers to:

- (1) The element dimensions (walls, columns, beams, etc.) where for construction purposes the deviation must be kept to the allowable tolerances specified for the alignment and levels.
- (2) Consecutive abnormalities created from the wrong formwork alignment and dimensions that are specified in the drawings and are measured with a 3 m long trowel.
- (3) Abrupt changes in the surface created from the formwork/shuttering wrong placement, loss of support and defective equipment or uneven surface in case of unformed shapes.

Table 6/4. Tolerances for Abnormalities in Concrete Surfaces (mm)

Abnormality	Type of Final Shape											
	Formed Surface						Unformed Shape					
	Allowable Tolerance			Maximum Limit			Allowable Tolerance			Maximum Limit		
	F1	F2	F3	F1	F2	F3	U1	U2	U3	U1	U2	U3
Deviation from the alignment and levels specified in the drawings	+20 -5	±5	±5	+25 -10	±10	±10	±5	±3	±3	±10	±5	±5
Deviation from the element dimensions (1)	+5 -3	+5 -3	+5 -3	+10 -5	+10 -5	+10 -5	-	-	-	-	-	-
Abrupt changes in Surface (3)	±5	±3	±1	±10	±5	±3	±5	±3	±1	±10	±5	±3

Abnormality	Type of Final Shape											
	Formed Surface						Unformed Shape					
	Allowable Tolerance			Maximum Limit			Allowable Tolerance			Maximum Limit		
	F1	F2	F3	F1	F2	F3	U1	U2	U3	U1	U2	U3
Deviation from the crawler (2)	±5	±5	±3	±10	±10	±5	±5	±3	±3	±10	±5	±5

#### Ready Made Concrete Mix

The Ready-Made Concrete Mix will be transported from the Concrete Plant to the site with concrete mixer trucks or other appropriate vehicles approved by the Engineer. During the transport the mixer must be rotating continuously so as to avoid concrete segregation. The mixing speed during transport and haulage must be set at the specified limits. In generally the transport time (starting from loading the truck mixer and ending with the delivery on the site) shall not exceed 30 minutes. In case where retarding additives are used, then the transportation time will be adjusted according to the instructions of the Engineer. During concrete casting, the concrete must have the predefined slump. The loading time must be written on the Concrete's Delivery Invoice. Loading time starts when the cement is added on the aggregates.

Addition of water in the concrete mix is strictly prohibited during transport. When mixing takes place in truck mixers, then any water added at the batching plant or at site will be done under the supervision of an experienced and authorized technician. With the approval of the Engineer ready mixed concrete may be used. The ready mixed concrete must comply with Norm EN 206-1:2000 "Concrete. Specification, performance, production and conformity" and Norm EN 12620:2002.

#### Plastic Concrete

Plastic concrete will be used at the seepage measuring arrangement, with the composition shown on the table below (for 1 m<sup>3</sup> of plastic concrete):

ingredient	quantity (kg/m <sup>3</sup> )
Cement CEM II 42.5 N	150
Bentonite (high quality lime bentonite processed with sodium carbonate)	35
Water for bentonite activation	350
Free water	85
Fine aggregates	675
Coarse aggregates	675

The Contractor shall submit a Report and present, no restrictively, the properties and the sources of origin of the plastic concrete ingredients (with relative certificates attached, etc.), the natural properties and other characteristics of the mixture, etc. Provided that the sources of origin or the type of materials are differentiated from those mentioned in the above table, modifications may be required on the composition of plastic concrete, to the satisfaction of the Engineer, without additional payment to the Contractor.

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## EMBANKMENT INSTRUMENTATION

### Scope

This section deals with the execution of all works relative to the instrumentation as prescribed hereafter and its maintenance until the final delivery of the project. The Contractor will supply all the facilities, workforce, equipment, materials and supplies and will execute all work relative to the supply at the site of the Project, storage, transport, placement and installation of the instruments, which must be fully equipped and ready to operate, according to the requirements of the present Specifications, the Drawings, as well as the instructions of the Supplier of the instruments and according to the instructions of the Engineer.

### General

The contractor will supply and install at the locations shown in the Drawings or according to the instructions of the Engineer, the following main parts of the instrumentation:

Combined “IDEL” type instrument inclinometer - settlement plates for combined measurement of lateral movements and settlement, fully equipped, with inclinometer and settlement probes, plastic guide tubes, telescopic couplers, the joints of pipes, aluminum marker plates, various fittings and readout units.

Standpipe piezometers, fully equipped, with tubes and fittings, including electric diameters.

Benchmarks, equipped with all necessary parts.

Surface displacement monuments, equipped with all necessary parts for measuring vertical and horizontal displacement.

Seepage measuring arrangement at the downstream toe of the dam.

The Contractor will place and install the entire main equipment of the instrumentation system described in this document as shown in the Drawings or according to the Engineer's instructions, and will execute all works relative to:

Drilling at the foundation of the dam and elsewhere, for the installation of piezometers, observation wells, inclinometers and accelerometers.

Excavation and backfill of trenches, tube filling grouting, concrete placement at foundations, construction of concrete bases for the accelerometers, backfill of holes, trenches and vertical tubes for cables with permeable material, clay grout or cement grout, as specified or according to the instructions of the Engineer and execution of every other pertaining work including supply and installation of casings in boreholes.

Construction of all civil engineering pertaining works to the surface displacement monuments, benchmarks, piezometers, inclinometers and “IDEL” type instruments and terminal boxes.

The Contractor will purchase the equipment of the instruments from specialized in this sector equipment manufacturers. For each kind and type of the main instrument equipment, the Contractor will submit with his Offer, but not restrictively, the following data: name of manufacturer, country of origin, detailed list of all items including quantities, parts and manuals, list of projects (where such equipment has been installed including the period of installation and the address of the Owner of the Project), and technical information providing satisfactory proof of the equipment's adequacy. The above-mentioned data and information will be subject to approval by the Engineer.

### Materials

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The Contractor must provide the entire instrumentation system together with all replacement parts and fittings, sufficiently long before the beginning of the first instrument's installation. The Contractor will purchase the equipment from specialized manufacturers, approved by the Engineer, and will ensure that the Manufacturers and their Representatives can provide technical support in Rwanda. For each kind and type of the main instrument equipment, the Contractor will submit, but not restrictively, the following data:

Name of Manufacturer,

Country of origin,

Detailed list of all items (including quantities, parts and manuals, list of projects where such equipment has been installed including the period of installation and the address of the Owner of the Project), and Relevant technical information providing satisfactory proof of the equipment's adequacy.

Also, upon delivery of the materials on Site, visual inspection must be carried out in order to ascertain their integrity. All materials supplied will be new and the best for the prescribed type of equipment, taking into account the resistance and durability and will be exempted from flaws and imperfections as faulty, worn-out, corroded or altered materials will not be accepted.

The materials will be in accordance with the requirements of the most recent relative Specifications or British Standards or other equivalent approved by the Engineer. The Contractor can propose alternative Standards, Specifications, materials or equipment that will be similar or equivalent in every aspect to those specified. The corresponding equivalent European Standards will be accepted provided the Contractor submits to the Engineer satisfactory proof of their equivalence.

#### Execution of works

The execution of works and the design must be of high standard and in accordance to the best current practice for the manufacture of high-quality measurement instruments, despite any possible omissions of the present Technical Specifications. Each work will be executed by personnel that are capable, specialized and experienced in various areas of expertise and arts, according to the instructions of the Engineer and the representatives of the Manufacturer of the equipment. The Contractor will also provide all the required manpower and equipment for the timely execution of work without additional charge and in accordance to the instruction of the Engineer. Mechanical processing of the replacement parts will be accurate and to the specified dimensions, so that replacement of parts of the equipment will be easy.

#### "IDEL" type combined instruments

##### Scope

The "IDEL" type combined instruments are instruments that combine measurement of lateral displacements and vertical internal settlements. They are placed in boreholes and mainly within the embankment dam while it is being raised.

The combined "IDEL" type instrument will be composed of:

Access pipes made of synthetic material (ABS), with four internal grooves and sufficient wall thickness, so as to avoid possible deformation during their installation. The type of casing joints will be slip joint pipe connection with sleeve and telescopic tube. The joints will link 3.0 m long casing segments and will be able to accommodate 150 mm of compression or extension. Joints will be appropriately sealed so that grout does not force its way into the casing during installation. The outer diameter of the casing will be 70 mm.

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Two (2) biaxial probes moving along the access pipes, for the taking of measurements. The probe will have wheel assemblies at a distance of 0.50 m and will incorporate two force-balanced servo-accelerometers. The time required to balance the accelerometers in order to take a measurement at each position of the probe, should not be greater than fifteen (15) seconds. The probes, when supplied, will be placed in suitable durable cases.

Two (2) portable readouts recording two readings, both axes, simultaneously. They will be light, placed in permanent well-adjusted and durable cases easy to transport and will be able to operate in difficult environmental conditions (external temperature between  $<-20^{\circ}$  and  $>+60^{\circ}$ ).

The device will be connected with the probe via a multicore, plated, protected against corrosion and reinforced with a steel wire at the core. The control cable will be graduated at intervals equal to the distance between the wheel assemblies of the probe for measurements to a depth of sixty (60) meters or as according to the Engineer's requirements and its accuracy will be at least two (2) millimetres in ten (10) meters.

The readout unit must show on liquid-crystal display (LCD) the depth of measurement at both axes simultaneously, without the use of a switch and will be supplied with power by fast recharging batteries that will ensure continuous function for at least fifteen (15) hours, when freshly charged. The readout unit must operate with common 6 or 12 V battery and be also equipped with the necessary cables for connection to the city electricity. Eventual complete discharge of the batteries must not cause loss of the data stored, which must be safely stored at least for a period of four months, when batteries are completely discharged. The readout unit will be able to store in its memory the surveys, installation headers of every "IDEL" type instrument and at least for ten (10) instruments, and will be able by means of appropriate connection to transfer these data to a computer.

Two (2) cable reels with handle and metal support frame necessary to coil the control cable of the device with the biaxial probe and equipped with sixty (60) meters of graduated cable or according to the Engineer's suggestions.

Computer software, with the required licenses, for the processing of the survey data (one license per measuring device).

One (1) vibration resistant transportation box, which will include the inclinometer probes, the cable reels, the readout units, the graduated cables, pulleys, jam cleats with tool-box with the necessary installation and maintenance tools, and all the required fittings.

The "IDEL" type system will also include fixed magnets attached to the aluminum plates, and placed every three (3) meters according to the Drawings, or wherever the Engineer instructs, as well as two probes to measure the location of the magnets with 60 m long cables graduated in centimeters.

Every "IDEL" type instrument will be equipped with protective cover modified so as to accept a "Wild" type reflector, for geodetical measurements of horizontal and vertical displacement, and the above-mentioned reflector. At the head of every "IDEL" type instrument a brass bolt will be placed in order to center the instrument.

#### Method of construction

The device of the inclinometer system must be transported and installed by the Contractor, according to the manuals and instructions of the Manufacturer, as shown in the Drawings. The materials that are to be incorporated must be transported and unloaded on Site with care, to avoid damage. The inclinometer system will be in general terms as shown in the Drawings, and can be modified as

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construction of the dam progresses according to the design requirements and the Engineer's instructions.

The Contractor will have to submit to the Engineer a complete schedule of instrument installation, in which the sequence of tasks will be defined, in detail for the placement and installation of the "IDEL" type instruments' equipment. During their installation, the coordinates of all instruments will be noted. The Contractor will ensure that the installation of the "IDEL" type instruments system will be completed without interruption of the construction works.

The Contractor will perform all drillings for the "IDEL" type instruments; he will provide and install all casings (when required), the tubing and the couplers at positions and depths shown in the Drawings or according to the instructions of the Engineer. Connections of the various parts will be done using special sliding telescopic joints, as required. The Contractor will not be allowed to backfill the tubing before the Engineer issues the relevant order.

Pipes/casings of the "IDEL" type instruments during their installation at the core of the Dam will be surrounded laterally by well compacted (manually using tampers, etc.) core material of special requirements. The Contractor will incorporate along the tubes of the "IDEL" type instruments at the embankment of the Dam marker aluminum plates with magnets and anchor rods at three (3) meters intervals or as specified in the drawings or instructed by the Engineer, and at appropriate levels. The locations of the marker plates will be recorded with great accuracy immediately after their installation.

#### Measurements

After the installation and until the completion of the dam, the Contractor's qualified personnel will perform reading and interpretation of "IDEL" type instrument measurements. The Contractor will interrupt all work that can interfere with the reading of measurements for as long as it is required, or as ordered by the Engineer. The Contractor should provide the qualified personnel and specialized equipment in order to assist the Engineer in the gathering and interpretation of measurement.

The vertical displacement will be determined by the distance variation between the constant magnets and each plate. The probe will be connected to a sixty (60) metres cable or as ordered by the Engineer. The position of magnets will be determined as the probe moves vertically inside the instructive pipe, which should have a scale in centimetres. Light signals and buzzer will point out the position of magnets.

Prior to the recording of measurements the Engineer will be notified on time and copies of the sheets of the measurements will be delivered to him on the same day. Additional measurements will take place, wherever and whenever the Engineer specifies. Sheets of these measurements, with recordings processed to produce graphs showing the evolution of measurements in time, etc. will be delivered to the Engineer within one (1) day from the measurement.

The frequency of measurements of the "IDEL" type instruments will be determined by the Engineer. No special compensation will be paid to the Contractor for the collection, the presentation and the processing of the first twenty (20) measurements of the inclinometer tubes and the first forty (40) measurements of all the installed settlement marker plates.

#### Benchmark pedestals

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### Scope

Benchmark pedestals are immovable reference datum instruments, against which surface displacement measurements of all points of the Project are made.

### Construction – Measurements

The Contractor will construct and place benchmark pedestals at the positions and levels shown in the Drawings and according to the instructions of the Engineer. They will be subject to modifications as construction of the Project progresses according to the design requirements and the Engineer's instructions. The construction of the bases and the instruments that are placed on them will be accordingly to the details shown in the Drawings or the instructions of the Engineer.

Recording and processing of the measurements using the benchmarks after their installation and until the end of the construction of the Project will be carried out by specialised personnel of the Contractor. The Contractor is obliged to interrupt the works affecting the taking of measurements in the time that it is required, according to the instructions of the Engineer, and to provide the workforce and equipment necessary to assist the Engineer in the collection and processing of the measurements, without any compensation.

Prior to the taking of measurements the Engineer will be notified on time and copies of the sheets of measurements will be delivered on the same day. Additional measurements will take place wherever and whenever the Engineer specifies. Sheets of these measurements, with recordings processed to produce graphs showing the evolution of measurements in time etc. will be delivered to the Engineer within one (1) day from the measurement.

The frequency of measurements of the Reference Datum instruments will be determined by the Engineer. No special compensation will be paid to the Contractor for the collection, the presentation and the processing of the first twenty (20) measurements.

### Surface displacement monuments

#### Scope

Surface displacement monuments are placed to measure horizontal and vertical displacements.

### Construction – Measurements

The Contractor will execute the construction of all pertaining civil engineering works and will install surface displacement monuments at the positions and levels shown in the Drawings and according to the instructions of the Engineer. On the surface of the surface displacement monuments brass bolts will be installed to adjust the instruments. The construction of the bases and the instruments that are placed on them will be according to the details that are shown in the Drawings or the instructions of the Engineer. The Engineer will determine the control elevations for the measurement of surface displacement.

Taking and processing of the measurements of the surface displacement monuments after their installation and until the end of construction of the Project will be carried out by specialised personnel of the Contractor under the supervision of the Engineer. The Contractor is obliged to interrupt the works affecting the taking of measurements in the time that it is required, according to the instructions of the Engineer, and to provide the workforce and equipment necessary to assist the Engineer in the collection and processing of the measurements, without any compensation.



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Prior to the taking of measurements the Engineer will be notified on time and copies of the sheets of measurements will be delivered on the same day. Additional measurements will take place wherever and whenever the Engineer specifies. Sheets of these measurements, with recordings processed to produce graphs showing the evolution of measurements in time etc. will be delivered to the Engineer within one (1) day from the measurement.

The frequency of measurements of the surface displacement monuments will be determined by the Engineer. No special compensation will be paid to the contractor for the taking and the presentation and processing of the first twenty (20) measurements for each monument.

#### Piezometer observation well

##### Subject – Materials

Piezometer observation wells are instruments for detecting the water level, placed inside boreholes at the abutments of the Dam and other locations of the Project, from the surface.

The piezometric well is composed of:

Perforated or not pipes made of synthetic material (HDPE or ABS). Connection of pipes will be done by means of special threaded couplers.

One (1) dip-meter to measure the water level in piezometric wells, thirty (30) meters long, connected to a portable readout. The measuring tape will include insulated cable connections at the readout and will be graduated in cm. The tape will be covered by a transparent or clear plastic pipe, which will allow the unobstructed observation of the readings of the tape. The measuring tape and the insulated wire will be welded at the points of contact with the readout and at the contact points within the plastic cover.

The detection of the water level will be indicated by an electrical lamp and a buzzer that will be placed on the upper edge of the device. The instrument will be equipped with a reel with a folding handle to coil the cable when it is not being used for measuring.

A reel with ball bearings, handle and metal frame of support necessary to coil the cable.

The pipes with their attachments as well as the readouts will be of type approved by the Engineer.

#### Installation – Measurements

The piezometric observation well must be installed by the Contractor, as shown in the Drawings, according to the manuals and the instructions of the Manufacturer and the instructions of the Engineer. The Contractor must provide all the required parts of the piezometric observation wells together with all their replacement parts, sufficiently long before installation of the first instrument begins.

The Contractor will provide all the facilities, man power, equipment, the materials and supplies and will execute every task relevant to the provision at the site of the Project, storage, transportation, placement and installation of the piezometric observation wells which have to be complete and ready to operate, according to the requirements of the Technical Specifications, the Drawings, as well as the drawings and the instructions of the Supplier of the instruments and the instructions of the Engineer.

The Contractor will have to submit to the Engineer a complete schedule regarding installation of instruments, in which the sequence of placement and installation of the piezometric observation wells will be shown. During their installation, the coordinates of all wells will be noted. The Contractor will

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ensure that the installation of the piezometric observation wells will be possible to complete without interruption of the construction works.

The Contractor will perform all the drillings of holes for the wells, will provide and install the pipes and the connections at locations and depths shown in the Drawings or according to the instructions of the Engineer. The connections of the several parts of the casing will be done using special threaded couplers, as required. The Contractor will not be allowed to backfill the casings before the Engineer issues the relevant order.

Taking and processing of the measurements of all piezometric observation wells after their installation and until completion of the Project's construction will be carried out by specialised personnel of the Contractor under the supervision of the Engineer. The Contractor is obliged to interrupt the works affecting the taking of measurements during the time that it is required, according to the instructions of the Engineer, and to provide the workforce and equipment necessary to assist the Engineer in the collection and processing of the measurements, without any compensation.

Prior to the taking of measurements the Engineer will be notified on time and copies of the sheets of measurements will be delivered on the same day. Additional measurements will take place wherever and whenever the Engineer specifies. Sheets of these measurements, with recordings processed to produce graphs showing the evolution of measurements in time etc. will be delivered to the Engineer within one (1) day from the measurement.

The frequency of measurements at the piezometric observation wells will be determined by the Engineer. No special compensation will be paid to the Contractor for the taking and the presentation and processing of the first thirty (30) measurements of each observation well.

#### V-notch weir for seepage measurement

The seepage emerging from the dam is measured by a sharp-crested V-notch weir with 90° angle, calibrated to measure flow accurately. It is installed at the downstream toe of the dam in a deep location close to outlet works. Seepage flow is directed through drainage ditches and with the aid of a diaphragm in an open rectangular cistern. The diaphragm is made of plastic concrete, while the cistern is of reinforced concrete C20/25.

The gauge is installed so as indication  $H = 0$  m to correspond to zero flow. (The dimensions of the weir allow reliable measurements for  $H < 0.2$  m.) Indicative values of water height in V-notch and corresponding volume of seepage are given in the Table that follows. The bottom of the well shall be always clear from fines and unlettered. The blade, over which the water passes, shall be always sharp and slick, and immediately replaced if weathered.

H (cm)	Q	
	(m <sup>3</sup> /s)	(m <sup>3</sup> /hr)
1.0	0.00001	0.05
2.0	0.00008	0.30
3.0	0.00022	0.81
4.0	0.00046	1.65
5.0	0.00080	2.87

6.0	0.00125	4.51
8.0	0.00256	9.20
10.0	0.00445	16.00
12.0	0.00699	25.15
15.0	0.01215	43.74

The arrangement will be constructed by the Contractor, according to the Drawings and the instructions of the Engineer.

#### JOINTS, JOINT SEALERS AND BEARINGS

##### Water-stops – General

The Contractor shall supply and fix water-stops in all contraction and expansion joints in structures which are to be water retaining and where shown on the Drawings. Such joints shall be watertight.

Water-stops unless otherwise specified shall be of rubber or HDPE as shown on the Drawings. They shall be obtained from manufacturers approved by the Engineer and shall be stored, fixed and jointed in accordance with the manufacturer's instructions. They shall be fabricated into the longest practicable units complete with angles and junctions, at the manufacturer's plant, and shall be made continuous throughout the structure and below the highest water level and where it is shown on the Drawings. The Contractor's proposals for jointing water-stops on Site shall be to the approval of the Engineer. Rubber water stops shall be jointed with an approved sleeve jointing system, and HDPE joints shall be welded. The minimum dimensions and shape of water-stop types shall be as tabulated below:

Material	Width	Web thickness	Edge bulb diam.	Centre bulb diam.	Centre core diam.
	(mm)	(mm)	(mm)	(mm)	(mm)
Rubber	305	9.5	25	50	33
	230	9.5	25	38	19
	150	9.5	19	30	15
HDPE	250	5.0	19	to approval of	the approval of
	190	5.0	13	the Engineer	the Engineer
	140	5.0	13	of Engineer	the Engineer

The edge bulb section shall be circular or in the case of HDPE it may be semi-circular. The webs shall be plain without serrations.

The water-stop shall be carefully maintained in the position shown on the Drawings and properly protected from damage and the harmful effects of light and heat during all stages of construction. The stop-boards on each side of the water-stop shall be accurately wrought to match the profile of the water-stop. The concrete shall be carefully compacted under and around the water-stop so as to leave no cavities. The Contractor shall supply the manufacturer's test certificates for each consignment of water-stop delivered to Site, and shall, if requested, supply to the Engineer sufficient of each type and consignment for confirmatory tests to be carried out in accordance with the appropriate standard test procedure.

##### Rubber Water-stop

The rubber for rubber water-stop shall satisfy the following requirements when tested as moulded sheet in accordance with BS 903-5:2004 “Physical testing of rubber. Guide to the application of rubber testing to finite element analysis” and ISO 815:1991 “Rubber, vulcanized or thermoplastic – Determination of compression set at ambient, elevated or low temperatures”.

Minimum tensile strength	20 N/mm <sup>2</sup> (204 kg/cm <sup>2</sup> )
Minimum elongation at break	500%
Hardness	60 to 65 degrees
Maximum compression set by constant deflection method	20% of original deflection
Maximum water absorption after 2 days at 20° C	5%
After accelerating ageing (48 hours at 70°C in oxygen at 2.0 N/mm <sup>2</sup> (20 kg/cm <sup>2</sup> ))	
Minimum tensile strength	75% of initial value
Minimum elongation at break	75% of initial value

Rubber water stops to be installed in “diversion - bottom outlet - water intake works”, only.

#### HDPE Water-stop

The HDPE for HDPE water-stop shall be high grade primary polyvinyl chloride containing no filler reclaimed or scrap material. It shall comply with the requirements of BS 2571:1990 “Specification for general purpose, flexible compounds for moulding and extrusion” for type A3 of Class 1, but shall have improved tensile properties. The minimum tensile strength shall be 12.5 N/sq mm, (127 kg/sq cm), and the minimum elongation at break shall be 285%.

#### Joint Fillers – General

The Contractor shall supply and fix joint fillers in movement joints only where shown on the Drawings. Unless otherwise specified the joint filler shall be of impregnated fibreboard or resin bonded cork. It shall be obtained from manufacturers approved by the Engineer and shall be stored and fixed in accordance with the manufacturer's instructions. The joint filler of the material and thickness specified, shall be cut to shape and fixed to fill the whole space between the concrete faces to the joint not otherwise filled by water-stop and joint sealer. Abutting pieces shall be placed in close contact and the joints covered on each side to prevent the passage of cement grout.

The Contractor shall supply the manufacturer's test certificate for each consignment of each type of joint filler delivered to Site and shall, if requested, supply to the Engineer sufficient of each type and consignment for confirmatory tests to be carried out in accordance with the appropriate standard test procedure.

#### Cork Filler

The resin-bonded cork filler shall comply with United States Federal Specification HH-F-341 Type II Class B (and ASTM D1751-04 “Standard specification for performed joint filler for concrete paving and structural construction”) with the following limitations when tested in accordance with the above Specification:

- (i) The load required to compress the material to 50% of its thickness shall be more than 0.035 N/mm<sup>2</sup> and less than 0.35 N/mm<sup>2</sup>.

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- (ii) The recovery after compression to 50% of the original thickness shall be to not less than 95% of the original thickness.

#### Impregnated Fibreboard Filler

The impregnated fibreboard filler shall comply with the American Association of State Highways Officials (AASHO) Standard Specification M.153-54, or the United States Federal Specification HH-F-341 for Type 1 (and ASTM D1751-04 “Standard specification for performed joint filler for concrete paving and structural construction”), and with the limitation that the load necessary to compress the material to 50% of its thickness in the specified compression test shall be more than 0.035 N/mm<sup>2</sup> and less than 0.35 N/mm<sup>2</sup>.

#### Dowel Bars

Where dowel bars are to be provided through movement joints the part of the bar to be free to move shall be coated with bitumen and fitted with a compressible cap of material as specified for impregnated fibreboard joint filler or other materials approved by the Engineer.

#### Joint Sealers, General

The Contractor shall construct recesses for joint sealers where ordered at movement joints. The recesses shall be accurately formed to the lines and dimensions shown on the Drawings or ordered by the Engineer. The Contractor shall prepare the surfaces of the recess and shall supply a joint sealer and fill or caulk the recess completely with it. The joint sealer shall be either a polysulphide or a bituminous based compound. It shall be approved by the Engineer before ordering and shall be used in accordance with the manufacturer's instructions, inclusive of the supply and application of any priming materials or bond breakers.

The application of joint sealer shall not be commenced without the Contractor having first obtained the approval of the Engineer. The Contractor shall supply the manufacturer's tests certificate for each consignment of each type of joint sealer delivered to Site and shall, if requested, supply to the Engineer sufficient samples of each type and consignment for confirmatory tests to be carried out in accordance with the appropriate test procedure.

#### Polysulphide Sealer

The polysulphide based compound for joint sealing shall comply with EN ISO 11600:2003 “Building Construction. Joint products. Classification and requirements for sealants” or DIN 18540 “Design and sealing of joints in external walls of buildings”. It shall be light grey in colour for use with concrete.

#### Bitumen-coated Joints

Where the Drawings show bituminous paint between concrete faces the Contractor shall clean and dry the face to which the bitumen is to be applied and shall then paint the bitumen in two separate applications. The bitumen shall be a straight run bitumen, Grade 40/50 penetration, or other approved by the Engineer.

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## Environmental and Social (ES) requirements

*[The employer's team preparing the ES requirements should include a suitably qualified environmental and social specialist/s].*

*[The employer should attach or refer to the employer's environmental and social policies that will apply to the project. If these are not available, the employer should use the following guidance in drafting an appropriate policy for the works.]*

### ***[Suggested content for an Environmental and Social Policy (Statement)]***

*The works' policy goal, as a minimum, should be stated to integrate SECAP requirements with respect to environmental protection, occupational and community health and safety, gender, equality, child protection, vulnerable people (including those with disabilities), Sexual Harassment (SH), gender-based violence, sexual exploitation and abuse (SEA), HIV/AIDS awareness and prevention and wide stakeholder engagement in the planning processes, programs, and activities of the parties involved in the execution of the works. The employer is advised to consult with IFAD to agree the issues to be included in line with SECAP requirements which shall also address: climate change and related mitigation measures, land acquisition and resettlement, indigenous people, etc. The policy should set the frame for monitoring, continuously improving processes and activities and for reporting on the compliance with the policy.*

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

*The policy should, as far as possible, be brief but specific and explicit, and measurable, to enable reporting of compliance with the policy in accordance with the particular conditions- special provisions- sub-clause 4.20.*

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

- 1 apply good international industry practice to protect and conserve the natural environment and to minimize / offset unavoidable impacts;*
- 2 provide and maintain a healthy and safe work environment and safe systems of work;*
- 3 protect the health and safety of local communities and users, with particular concern for those who are disabled, elderly, or otherwise vulnerable;*
- 4 be intolerant of, and enforce disciplinary measures for illegal activities. To be intolerant of, and enforce disciplinary measures for gender-based violence, inhumane treatment, sexual exploitation, rape, sexual abuse, sexual activity with children, and sexual harassment;*
- 5 incorporate a gender perspective and provide an enabling environment where women and men have equal opportunity to participate in, and benefit from, planning and development of the works;*
- 6 work co-operatively, including with end users of the works, relevant authorities, contractors and local communities;*

- 
- 7 engage with and listen to affected persons and organizations and be responsive to their concerns, with special regard for vulnerable, disabled, and elderly people;*
  - 8 provide an environment that fosters the exchange of information, views, and ideas that is free of any fear of retaliation, and protects whistleblowers;*
  - 9 Minimize the risk of communicable diseases and to mitigate the effects of communicable diseases associated with the execution of the works.*

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

### ***[Minimum Content of ES requirements***

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

- project reports e.g. ESIA/ESMP*
- consent/permit conditions*
- IFAD SECAP Standards*
- relevant international conventions or treaties etc., national legal and/or regulatory requirements and standards (where these represent higher standards than the WBG EHS Guidelines)*
- relevant international standards e.g. WHO Guidelines for Safe Use of Pesticides*
- relevant sector standards e.g. EU Council Directive 91/271/EEC concerning urban waste water treatment*
- grievance redress mechanism including types of grievances to be recorded and how to protect confidentiality e.g. of those reporting allegations of SEA.*
- SEA prevention and management.*

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

*The ES requirements should be prepared in manner that does not conflict with the relevant general conditions of contract (and the corresponding particular conditions if any) and other parts of the specifications.*

### ***Payment for ES Requirements***

*The employer's ES and procurement specialists should consider how the contractor will cost the delivery of the ES requirements. In the majority of cases, the payment for the delivery of ES requirements shall be a subsidiary obligation of the contractor covered under the prices quoted for other bill of quantity items. For example, normally the cost of implementing work place safe systems of work, including the measures necessary for ensuring traffic and road safety, shall be covered by the bidder's rates for the relevant works. Alternatively, provisional sums could be set aside for discrete activities for example for HIV counselling service, and, SEA and SH awareness and sensitization or to encourage the contractor to deliver additional ES outcomes beyond the requirement of the contract.]*

## **Contractor's Representative and Key Personnel**

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<b>Item No.</b>	<b>Position/specialization</b>	<b>Relevant academic qualifications</b>	<b>Minimum years of relevant work experience</b>	<b>Minimum years of similar work experience</b>	<b>Specific projects</b>
1.	Contract manager	Bachelor's Degree (A <sub>0</sub> ) in Civil engineering or related field	15	10	5 dams as Project Manager with 3 completion certificates
2.	Assistant Contract Manager	Bachelor's Degree (A <sub>0</sub> ) in Civil engineering or related field	10	5	3 dams as Assistant Contract manager with 3 completion certificates
3.	Irrigation Engineer	Bachelor's Degree (A <sub>0</sub> ) in Irrigation and Drainage engineering or soil and water engineering or related field	10	5	3 Irrigation projects with 3 completion certificates
4.	Civil/ structural Engineer	Bachelor's Degree (A <sub>0</sub> ) in Civil engineering or related field	10	5	3 dams as Assistant Contract manager with 3 completion certificates
5.	Surveyor	B.Sc in Surveying	5	3	3 dams with 3 completion certificates
6.	Envirnomenta Specialist	MSc in Environmental Science	5	3	3 dams with 3 completion certificates



## List of drawings

DETAILED DESIGN FOR 150 HA NET COMMAND AREAS IN KAYONZA DISTRICT OF RWANDA ON BEHALF OF KIIWP1 PROJECT			
LIST OF SITE DRAWINGS			
No	Description	Scale	Format Size
KNG 1	Kanyeganyege Irrigation Scheme - General Layout	1/6000	A <sub>0</sub>
KNG 2	Kanyeganyege Dam Layout	1/1000	A <sub>3</sub>
KNG 3	Kanyeganyege Dam Cross-section	1/600	A <sub>3</sub>
KNG 4	Kanyeganyege Dam Intake	1/1000	A <sub>3</sub>
KNG 5	Kanyeganyege Dam Spillway	1/1000	A <sub>3</sub>
KNG 6	Kanyeganyege Primary Canals Profiles LP (LHS)	1/1000	A <sub>3</sub>
KNG 7	Kanyeganyege Primary Canals Profiles LP (RHS)	1/1000	A <sub>3</sub>
KNG 8	Kanyeganyege Primary Canals Profiles Cross section (LHS)	1/100	A <sub>4</sub>
KNG 9	Kanyeganyege Primary Canals Profiles Cross section (RHS)	1/100	A <sub>4</sub>
KNG 10	Kanyeganyege Weir 1	1/1000	A <sub>3</sub>
KNG 11	Kanyeganyege Weir 2	1/1000	A <sub>3</sub>
KNG 12	Kanyeganyege Weir 3	1/1000	A <sub>3</sub>
KNG 13	Kanyeganyege Weir 4	1/1000	A <sub>3</sub>
KNG 14	Kanyeganyege Weir 5	1/1000	A <sub>3</sub>
KNG 15	Kanyeganyege Weir 6	1/1000	A <sub>3</sub>
KNG 16	Drop Type 1	1/500	A <sub>3</sub>
KNG 17	Drop Type 2	1/500	A <sub>3</sub>
KNG 18	Drop Type 3	1/500	A <sub>3</sub>
KNG 19	Drop Type 4	1/500	A <sub>3</sub>

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KNG 20	Drop Type 5	1/500	A <sub>3</sub>
KNG 21	Collature	1/500	A <sub>3</sub>
KNG 22	Diversion 1	1/500	A <sub>3</sub>
KNG 23	Diversion 2	1/500	A <sub>3</sub>
KNG 24	Diversion 3	1/500	A <sub>3</sub>
KNG 25	Bridge Canal 1	1/500	A <sub>3</sub>
KNG 26	Bridge Canal 2	1/500	A <sub>3</sub>
KNG 27	Bridge Canal 3	1/500	A <sub>3</sub>
KNG 28	Secondary Intakes	1/500	A <sub>3</sub>
KNG 29	Rice Dries	1/100	A <sub>3</sub>
KNG 30	Maize Dries	1/100	A <sub>3</sub>
KNG 31	Warehouses	1/100	A <sub>3</sub>
KNG 32	Tail Escape	1/100	A <sub>3</sub>
KNG 33	Road Culvert	1/100	A <sub>3</sub>
KNG 34	Hydrant	1/100	A <sub>3</sub>

**Note: below is a Link for all drawings, Plans and Layout:**

<https://we.tl/t-KuJlJVmXvh>

*The actual Drawings, including site plans, should be attached to this section or if greater than A3 should be annexed in a separate folder.*

*The engineering design consultant is required to collect the GPS coordinates of the infrastructure sites following a systematic and standardized methodology. The geo-referenced data is to be included in the design documents/drawings and submitted to the borrower in “shapefile” format for on-forwarding to IFAD. It is required to record the latitude and longitude of project sites such as buildings (e.g. marketing or processing facilities). Transect data (polylines) must be collected for roads and irrigation pipes or channels. Area/polygon data must be collected for land areas (e.g. land under irrigation or improved management). The Technical Specifications /Employer’s Requirements (to be incorporated in the bidding documents for construction of the works) must include a requirement that the Contractor submits to the engineering supervision firm, along-with its requests for payment and/or progress reporting, GIS coordinates of the works completed in the referenced interim period.]*



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## **Supplementary Information**

*[The employer adds here its other requirements particularly with respect to environmental, social and climate change as well as health and safety.]*

*A copy of the project's ESMP will help guide the bidder in the preparation of its MSIP to be submitted with the bidder's bid.]*

## **Part 3: Conditions of Contract and Contract Forms**

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## Section VI. General Conditions of Contract

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## General Conditions of Contract

### A.General

#### 1. Definitions

The terms used in this contract and not otherwise defined have the meanings given such terms in the financing agreement or related document. Unless the context otherwise requires, the following terms whenever used in this contract have the following meanings.

1.1 The accepted contract amount means the amount accepted in the letter of acceptance for the execution and completion of the works and the remedying of any defects.

1.2 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.

1.3 The adjudicator is the person appointed jointly by the employer and the contractor to resolve disputes in the first instance, as provided for in GCC 23.

1.4 IFAD or FUND means the financing institution named in the PCC.

1.5 Bill of quantities means the priced and completed bill of quantities forming part of the bid.

1.6 Compensation events are those defined in GCC clause 42 hereunder.

1.7 The completion date is the date of completion of the works as certified by the project manager, in accordance with GCC sub-clause 57.1.

1.8 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 GCC sub-clause 2.3 below.

1.9 The contractor is the party whose bid to carry out the works has been accepted by the employer.

1.10 The contractor's bid is the completed bidding document submitted by the contractor to the employer.

1.11 The contract price is the accepted contract amount stated in the letter of acceptance and thereafter as adjusted in accordance with the contract.

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1.12 Days are calendar days; months are calendar months.

1.13 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.

1.14 A defect is any part of the works not completed in accordance with the contract.

1.15 The defects liability certificate is the certificate issued by project manager upon correction of defects by the contractor.

1.16 The defects liability period is the period named in the PCC pursuant to GCC sub-clause 38.1 and calculated from the completion date.

1.17 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.

1.18 The employer is the party who employs the contractor to carry out the works, as specified in the PCC.

1.19 Equipment is the contractor's machinery and vehicles brought temporarily to the site to construct the works.

1.20 "In writing" or "written" means hand-written, type-written, printed or electronically made, and resulting in a permanent record;

1.21 The initial contract price is the contract price listed in the employer's letter of acceptance.

1.22 The intended completion date is the date on which it is intended that the contractor shall complete the works. The intended completion date is specified in the PCC. The intended completion date may be revised only by the project manager by issuing an extension of time or an acceleration order.

1.23 Materials are all supplies, including consumables, used by the contractor for incorporation in the works.

1.24 Plant is any integral part of the works that shall have a mechanical, electrical, chemical, or biological function.

1.25 The project manager is the person named in the PCC (or any other competent person appointed by the employer and notified to the contractor, to



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act in replacement of the project manager) who is responsible for supervising the execution of the works and administering the contract.

1.26 PCC means particular conditions of contract.

1.27 The site is the area defined as such in the PCC.

1.28 Site investigation reports are those that were included in the bidding document and are factual and interpretative reports about the surface and subsurface conditions at the site.

1.29 Specifications means the specifications of the works included in the contract and any modification or addition made or approved by the project manager.

1.30 The start date is given in the PCC. It is the latest date when the contractor shall commence execution of the works. It does not necessarily coincide with any of the site possession dates.

1.31 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.

1.32 Temporary works are works designed, constructed, installed, and removed by the contractor that are needed for construction or installation of the works.

1.33 A variation is an instruction given by the project manager which varies the works.

1.34 The works are what the contract requires the contractor to construct, install, and turn over to the employer, as defined in the PCC.

1.35 “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.

1.36 “Key personnel” means the positions (if any) of the contractor’s personnel that are stated in the specifications.

1.37 “ES” means environmental and social (including sexual exploitation and abuse (SEA), and sexual harassment (SH));

1.38 “Sexual exploitation and abuse” “(SEA)” means “any actual or attempted abuse of a 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 others (sexual exploitation); the actual or threatened physical intrusion of a sexual nature, whether by force or under

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unequal or coercive conditions (sexual abuse)”.

1.39 “Sexual harassment” “(SH)” is defined as “unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature that unreasonably interferes with work, alters or is made a condition of employment, or creates an intimidating, hostile or offensive work environment.

1.40 “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. Interpretation**

2.1 In interpreting these GCC, 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 GCC.

2.2 If sectional completion is specified in the PCC, references in the GCC 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).

2.3 The documents forming the contract shall be interpreted in the following order of priority:

- (a) Agreement,
- (b) Letter of acceptance,
- (c) Contractor’s bid,
- (d) Particular conditions of contract,
- (e) General conditions of contract, including appendices,
- (f) Specifications,
- (g) Drawings,
- (h) Bill of quantities,<sup>23</sup> and

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<sup>23</sup> In lump-sum contracts, delete “bill of quantities” and replace with “activity schedule.”

- 
- (i) any other document listed in the PCC as forming part of the contract.

- 3. Language and law** 3.1 The language of the contract and the law governing the contract are stated in the PCC.
- 3.2 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.
- 4. Project manager's decision** 4.1 Except where otherwise specifically stated, the project manager shall decide contractual matters between the employer and the contractor in the role representing the employer.
- 5. Delegation** 5.1 Unless otherwise specified in the PCC, the project manager may delegate any of his duties and responsibilities to other people, except to the adjudicator, after notifying the contractor, and may revoke any delegation after notifying the contractor.
- 6. Communications** 6.1 Communications between parties that are referred to in the conditions shall be effective only when in writing. A notice shall be effective only when it is delivered.
- 7. Subcontracting** 7.1 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. The contractor shall require that its subcontractors execute the works in accordance with the contract, including complying with the relevant ES requirements and the obligations set out in sub-clause 28.1.
- 8. Other contractors** 8.1 The contractor shall cooperate and share the site with other contractors, public authorities, utilities, and the employer between the dates given in the schedule of other contractors, as referred to in the PCC. The contractor shall also provide facilities and services for them as described in the schedule. The employer may modify the schedule of other contractors, and shall notify the contractor of any such modification.
- 8.2 The contractor shall also, as stated in the specifications or as instructed by

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the project manager, cooperate with and allow appropriate opportunities for the employer's or any other personnel, notified to the contractor by the employer or project manager, to conduct any environmental and social assessment.

**9. Personnel  
equipment**

**and** 9.1 The contractor shall employ the key personnel and use the equipment identified in its bid, 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 bid.

9.2 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- based on reasonable evidence, is determined to have engaged in fraud and corruption during the execution of the works;
- f- has been recruited from the employer's personnel;
- g- undertakes behavior which breaches the code of conduct for contractor's personnel (ES).

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

Notwithstanding any requirement from the project manager to remove or cause to remove any person, the contractor shall take immediate action as appropriate in response to any violation of (a) through (g) above. Such immediate action shall include removing (or causing to be removed) from the site or other places where the works are being carried out, any contractor's personnel who engages in (a), (b), (c), (d), (e) or (g) above or has been recruited as stated in (f) above."

9.3 The Contractor shall take all necessary safety measures to avoid the occurrence of incidents and injuries to any third party, associated with the use of, if any, equipment on public roads or other public infrastructure. The contractor shall monitor road safety incidents and accidents to identify negative safety issues, and establish and implement necessary measures to resolve them.

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## 9.4 Labor

9.4.1 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.

Unless otherwise provided in the contract, the contractor shall be responsible for the recruitment, transportation, accommodation and welfare facilities in accordance with GCC sub-clause 9.4.6, of the contractor's personnel, and for all payments in connection therewith.

The contractor shall provide the contractor's personnel information and documentation that are clear and understandable regarding their terms and conditions of employment. The information and documentation shall set out their rights under relevant labor laws applicable to the contractor's personnel (which will include any applicable collective agreements), including their rights related to hours of work, wages, overtime, compensation and benefits, as well as those arising from any requirements in the specifications. The contractor's personnel shall be informed when any material changes to their terms or conditions of employment occur.

9.4.2 Conditions of labor. The contractor shall inform the contractor's personnel about:

(a) any deduction to their payment and the conditions of such deductions in accordance with the applicable laws or as stated in the specifications; and

(b) their liability to pay personal income taxes in the country in respect of such of their salaries, wages, allowances and any benefits as are subject to tax under the laws of the country for the time being in force.

The contractor shall perform such duties in regard to such deductions thereof as may be imposed on him by such laws. Where required by applicable laws or as stated in the specifications, the contractor shall provide the contractor's personnel written notice of termination of employment and details of severance payments in a timely manner. The contractor shall have paid the contractor's personnel (either directly or where appropriate for their benefit) all due wages and entitlements including, as applicable, social security benefits and pension contributions, on or before the end of their engagement/ employment.

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- 9.4.3 The contractor may bring in to the country any foreign personnel who are necessary for the execution of the works to the extent allowed by the applicable laws. The contractor shall ensure that these personnel are provided with the required residence visas and work permits. The employer will, if requested by the contractor, use its best endeavors in a timely and expeditious manner to assist the contractor in obtaining any local, state, national, or government permission required for bringing in the contractor's personnel.
- 9.4.4 The contractor shall at its own expense provide the means of repatriation to and the contractor's personnel employed on the contract at the Site to their various home countries. It shall also provide suitable temporary maintenance of all such persons from the cessation of their employment on the contract to the date programmed for their departure. In the event that the contractor defaults in providing such means of transportation and temporary maintenance, the employer may provide the same to such personnel and recover the cost of doing so from the contractor.
- 9.4.5 Disorderly conduct. The contractor shall at all times during the progress of the contract use its best endeavors to prevent any unlawful, riotous or disorderly conduct or behavior by or amongst the contractor's personnel.
- 9.4.6 Facilities for staff and labor. Except as otherwise stated in the specifications, the contractor shall provide and maintain all necessary accommodation and welfare facilities for the contractor's personnel. If stated in the specifications, the contractor shall give access to or provide services that accommodate the physical, social and cultural needs of the contractor's personnel. The contractor shall also provide similar facilities for the employer's personnel if stated in the specifications.
- 9.4.7 The contractor shall, in all dealings with the contractor's personnel, pay due regard to all recognized festivals, official holidays, religious or other customs and all local laws and regulations pertaining to the employment of labor. The contractor shall provide the contractor's personnel annual holiday and sick, maternity and family leave, as required by applicable laws or as stated in the specifications.
- 9.4.8 Supply of foodstuffs. The contractor shall arrange for the provision of a sufficient supply of suitable food as may be stated in the specifications at reasonable prices for the contractor's personnel for the purposes of or in connection with the contract.
- 9.4.9 Supply of water. The contractor shall, having regard to local

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conditions, provide on the site an adequate supply of drinking and other water for the use of the contractor's personnel.

- 9.4.10 Measures against Insect and pest nuisance. The contractor shall at all times take the necessary precautions to protect the contractor's personnel employed on the site from insect and pest nuisance, and to reduce the danger to their health. The contractor shall comply with all the regulations of the local health authorities, including use of appropriate insecticide.
- 9.4.11 Alcoholic liquor or drugs. The contractor shall not, otherwise than in accordance with the laws of the country, import, sell, give, barter or otherwise dispose of any alcoholic liquor or drugs, or permit or allow importation, sale, gift, barter or disposal thereto by contractor's personnel.
- 9.4.12 Arms and ammunition. The contractor shall not give, barter, or otherwise dispose of, to any person, any arms or ammunition of any kind, or allow contractor's personnel to do so.
- 9.4.13 Funeral arrangements. The contractor shall be responsible, to the extent required by local regulations, for making any funeral arrangements for any of its local employees who may die while engaged upon the works.
- 9.4.14 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.

- 9.4.15 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,

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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.

9.4.16 Employment records of workers. The contractor shall keep complete and accurate records of the employment of labor at the site. The records shall include the names, ages, genders, hours worked, and wages paid to all workers. These records shall be summarized on a monthly basis and submitted to the project manager.

9.4.17 Workers' organizations. In countries where the relevant labor laws recognize workers' rights to form and to join workers' organizations of their choosing and to bargain collectively without interference, the contractor shall comply with such laws. In such circumstances, the role of legally established workers' organizations and legitimate workers' representatives will be respected, and they will be provided with information needed for meaningful negotiation in a timely manner. Where the relevant



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labor laws substantially restrict workers' organizations, the contractor shall enable alternative means for the contractor's personnel to express their grievances and protect their rights regarding working conditions and terms of employment. The contractor shall not seek to influence or control these alternative means. The contractor shall not discriminate or retaliate against the contractor's personnel who participate, or seek to participate, in such organizations and collective bargaining or alternative mechanisms. Workers' organizations are expected to fairly represent the workers in the workforce.

9.4.18 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, including recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment or retirement, and disciplinary practices. Special measures of protection or assistance to remedy past discrimination or selection for a particular job based on the inherent requirements of the job shall not be deemed discrimination. The Contractor shall provide protection and assistance as necessary to ensure non-discrimination and equal opportunity, including for specific groups such as women, people with disabilities, migrant workers and children (of working age in accordance with GCC Sub-Clause 9.4.15).

9.4.19 Contractor's personnel grievance mechanism. The contractor shall have a grievance mechanism for contractor's personnel, and where relevant the workers' organizations stated in GCC sub-clause 9.4.17, to raise workplace concerns. The grievance mechanism shall be proportionate to the nature, scale, risks and impacts of the contract. The mechanism shall address concerns promptly, using an understandable and transparent process that provides timely feedback to those concerned in a language they understand, without any retribution, and shall operate in an independent and objective manner. The contractor's personnel shall be informed of the grievance mechanism at the time of engagement for the contract, and the measures put in place to protect them against any reprisal for its use. Measures will be put in place to make the grievance

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mechanism easily accessible to all contractor's personnel. The grievance mechanism shall not impede access to other judicial or administrative remedies that might be available, or substitute for grievance mechanisms provided through collective agreements. The grievance mechanism may utilize existing grievance mechanisms, providing that they are properly designed and implemented, address concerns promptly, and are readily accessible to contractor's personnel. Existing grievance mechanisms may be supplemented as needed with contract-specific arrangements.

9.4.20 Training of contractor's personnel. The contractor shall provide appropriate training to relevant contractor's personnel on ES aspects of the contract, including appropriate sensitization on prohibition of SEA and SH, and health and safety training referred to in GCC sub-clause 18.2.

As stated in the specifications or as instructed by the project manager, the contractor shall also allow appropriate opportunities for the relevant contractor's personnel to be trained on ES aspects of the contract by the employer's personnel.

The contractor shall provide training on SEA and SH, including its prevention, to any of its personnel who has a role to supervise other contractor's personnel.

**10. Employer's and contractor's risks** 10.1 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.

**11. Employer's risks** 11.1 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.

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11.2 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

11.2.1 a defect which existed on the completion date,

11.2.2 an event occurring before the completion date, which was not itself an employer's risk, or

11.2.3 the activities of the contractor on the site after the completion date.

## **12. Contractor's risks**

12.1 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.

## **13. Insurance**

13.1 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 stated in the PCC for the following events which are due to the contractor's risks:

(a) loss of or damage to the works, plant, and materials;

(b) loss of or damage to equipment;

(c) loss of or damage to property (except the works, plant, Materials, and equipment) in connection with the contract; and

(d) personal injury or death.

13.2 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.

13.3 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.

13.4 Alterations to the terms of an insurance shall not be made without the approval of the project manager.

13.5 Both parties shall comply with any conditions of the insurance policies.

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- 14. Site data** 14.1 The contractor shall be deemed to have examined any site data referred to in the PCC, supplemented by any information available to the contractor.
- 15. Contractor construct works** 15.1 The contractor shall construct and install the works in accordance with the specifications and drawings.
- 15.2 If the contract specifies that the contractor shall design any part of the permanent works, the contractor shall take into the employer's requirements which may include, if stated in the specifications:
- (a) designing structural elements of the works taking into account climate change considerations;
  - (b) applying the concept of universal access (the concept of universal access means unimpeded access for people of all ages and abilities in different situations and under various circumstances; and
  - (c) considering the incremental risks of the public's potential exposure to operational accidents or natural hazards, including extreme weather events.
- 16. The works to be completed by the intended completion date** 16.1 The contractor may commence execution of the works on the start date and shall carry out the works in accordance with the program submitted by the contractor, as updated with the approval of the project manager, and complete them by the intended completion date.
- 16.2 The contractor shall not carry out mobilization to the site unless the project manager gives approval, an approval that shall not be unreasonably delayed, to the measures the contractor proposes to address environmental and social risks and impacts, which at a minimum shall include applying the management strategies and Implementation plans (MSIPs) and code of conduct for contractor's personnel submitted as part of the bid and agreed as part of the contract.
- 16.3 The contractor shall submit, to the project manager for its approval any additional MSIPs as are necessary to manage the ES risks and impacts of ongoing works. These MSIPs collectively comprise the contractor's environmental and social management plan (C-ESMP). The contractor shall review the C-ESMP, periodically (but not less than every six (6) months), and update it as required to ensure that it contains measures appropriate to the works. The updated C-ESMP shall be submitted to the project manager for its approval.
- 17. Approval by the project manager** 17.1 The contractor shall submit specifications and drawings showing the proposed temporary works to the project manager, for his approval.

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17.2 The contractor shall be responsible for design of temporary works.

17.3 The project manager's approval shall not alter the contractor's responsibility for design of the temporary works.

17.4 The contractor shall obtain approval of third parties to the design of the temporary works, where required.

17.5 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.

**18. Health, safety and protection of the environment**

18.1 The contractor shall be responsible for the safety of all activities on the site.

18.2 The contractor shall:

- (a) comply with all applicable health and safety regulations and laws;
- (b) comply with all applicable health and safety obligations specified in the contract;
- (c) take care for the health and safety of all persons entitled to be on the site and other places, if any, where the works are being executed;
- (d) keep the site and works clear of unnecessary obstruction so as to avoid danger to these persons;
- (e) provide fencing, lighting, safe access, guarding and watching of the works until the issue of the contract certificate of completion;
- (f) provide any temporary works (including roadways, footways, guards and fences) which may be necessary, because of the execution of the works, for the use and protection of the public and of owners and occupiers of adjacent land;
- (g) provide health and safety training of contractor's personnel as appropriate and maintain training records;
- (h) actively engage the contractor's personnel in promoting understanding, and methods for, implementation of health and safety requirements, as well as in providing information to contractor's personnel, training on occupational safety and health, and provision of personal protective equipment without expense to the contractor's personnel;
- (i) put in place workplace processes for contractor's personnel to report work

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situations that they believe are not safe or healthy, and to remove themselves from a work situation which they have reasonable justification to believe presents an imminent and serious danger to their life or health;

- (j) Contractor's personnel who remove themselves from such work situations shall not be required to return to work until necessary remedial action to correct the situation has been taken. Contractor's personnel shall not be retaliated against or otherwise subject to reprisal or negative action for such reporting or removal;
- (k) where the employer's personnel, any other contractors employed by the employer, and/or personnel of any legally constituted public authorities and private utility companies are employed in carrying out, on or near the site, of any work not included in the contract, collaborate in applying the health and safety requirements, without prejudice to the responsibility of the relevant entities for the health and safety of their own personnel; and
- (l) establish and implement a system for regular (not less than six-monthly) review of health and safety performance and the working environment.

Subject to GCC sub-clause 16.2, the contractor shall submit to the project manager for its approval a health and safety manual which has been specifically prepared for the works, the site and other places (if any) where the contractor intends to execute the works.

The health and safety manual shall be in addition to any other similar document required under applicable health and safety regulations and laws.

The health and safety manual shall set out all the health and safety requirements under the contract,

- (a) which shall include at a minimum:
  - (i) the procedures to establish and maintain a safe working environment without risk to health at all workplaces, machinery, equipment and processes under the control of the contractor, including control measures for chemical, physical and biological substances and agents;
  - (ii) details of the training to be provided, records to be kept;
  - (iii) the procedures for prevention, preparedness and response activities to be implemented in the case of an emergency event

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(i.e. an unanticipated incident, arising from both natural and man-made hazards, typically in the form of fire, explosions, leaks or spills, which may occur for a variety of different reasons including failure to implement operating procedures that are designed to prevent their occurrence, extreme weather or lack of early warning);

- (iv) remedies for adverse impacts such as occupational injuries, deaths, disability and disease;
- (v) the measures to be taken to avoid or minimize the potential for community exposure to water-borne, water-based, water-related, and vector-borne diseases,
- (vi) the measures to be implemented to avoid or minimize the spread of communicable diseases (including transfer of sexually transmitted diseases or infections (STDs), such as HIV virus) and non-communicable diseases associated with the execution of the works, taking into consideration differentiated exposure to and higher sensitivity of vulnerable groups. This includes taking measures to avoid or minimize the transmission of communicable diseases that may be associated with the influx of temporary or permanent contract-related labor;
- (vii) the policies and procedures on the management and quality of accommodation and welfare facilities if such accommodation and welfare facilities are provided by the contractor in accordance with GCC sub-clause 9.4.6; and
- (viii) any other requirements stated in the specifications.

### 18.3 Protection of the environment

- (i) The contractor shall take all necessary measures to: protect the environment (both on and off the Site); and
- (ii) limit damage and nuisance to people and property resulting from pollution, noise and other results of the Contractor's operations and/ or activities.
- (iii) The contractor shall ensure that emissions, surface discharges, effluent and any other pollutants from the contractor's activities shall exceed neither the values indicated in the Specifications, nor those prescribed by applicable laws.
- (iv) In the event of damage to the environment, property and/or

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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.

**19. Archaeological and geological findings** 19.1 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. The contractor shall:

- (a) take all reasonable precautions, including fencing-off the area or site of the finding, to avoid further disturbance and prevent contractor's personnel or other persons from removing or damaging any of these findings;
- (b) train relevant contractor's personnel on appropriate actions to be taken in the event of such findings; and
- (c) implement any other action consistent with the requirements of the specifications and relevant laws.

The contractor shall, as soon as practicable after discovery of any such finding, notify the project manager of such discoveries and carry out the project manager's instructions for dealing with them

**20. Possession of the site** 20.1 The employer shall give possession of all parts of the site to the contractor. If possession of a part is not given by the date stated in the PCC, the employer shall be deemed to have delayed the start of the relevant activities, and this shall be a compensation event.

**21. Access to the site** 21.1 The contractor shall allow the project manager and any person authorized by the project manager (including the IFAD staff or consultants acting on the IFAD's behalf, stakeholders and third parties, such as independent experts, local communities, or non-governmental organizations), including to carry out environmental and social audit, as appropriate, 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.

**22. Instructions, inspections and audits** 22.1 The contractor shall carry out all instructions of the project manager which comply with the applicable laws where the Site is located.

22.2 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



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identify relevant time changes and costs.

### 22.3 Inspections & Audit by the IFAD

Pursuant to paragraph 2.2 e. of Appendix A to the GCC- 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 IFAD and/or persons appointed by the IFAD 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 IFAD. The contractor's and its subcontractors' and subconsultants' attention is drawn to GCC sub-clause 25.1 (fraud and corruption) which provides, inter alia, that acts intended to materially impede the exercise of the IFAD's inspection and audit rights constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the IFAD's prevailing sanctions procedures).

**23. Appointment of the adjudicator** 23.1 The adjudicator shall be appointed jointly by the employer and the contractor, at the time of the employer's issuance of the letter of acceptance. If, in the letter of acceptance, the employer does not agree on the appointment of the adjudicator, the employer will request the appointing authority designated in the PCC, to appoint the adjudicator within 14 days of receipt of such request.

23.2 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 30 days, the adjudicator shall be designated by the appointing authority designated in the PCC at the request of either party, within 14 days of receipt of such request.

**24. Procedure for disputes** 24.1 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 days of the notification of the project manager's decision.

24.2 The adjudicator shall give a decision in writing within 28 days of receipt of a notification of a dispute.

24.3 The adjudicator shall be paid by the hour at the rate specified in the PCC, together with reimbursable expenses of the types specified in the PCC, and the cost shall be divided equally between the employer and the contractor, whatever decision is reached by the adjudicator. Either party may refer a decision of the adjudicator to an arbitrator within 28 days of the adjudicator's written decision.

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If neither party refers the dispute to arbitration within the above 28 days, the adjudicator's decision shall be final and binding.

24.4 The arbitration shall be conducted in accordance with the arbitration procedures published by the institution named and in the place specified in the PCC.

**25. Fraud  
corruption  
(prohibited  
practices)**

**and** 25.1 The IFAD requires compliance with the IFAD's Anti-Corruption Guidelines and its prevailing sanctions policies and procedures as set forth in Appendix A to the GCC.

25.2 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 bidding process 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.

**26. Stakeholder  
engagement**

26.1 The contractor shall provide relevant contract-related information, as the employer and/or project manager may reasonably request to conduct stakeholder engagements. "stakeholder" refers to individuals or groups who:

- (i) are affected or likely to be affected by the contract; and
- (ii) may have an interest in the contract.

The contractor may also directly participate in stakeholder engagements, as the employer and/or project manager may reasonably request.

**27. Suppliers (other  
than  
subcontractors)**

27.1 Forced labor: The contractor shall take measures to require its suppliers (other than subcontractors) not to employ or engage forced labor including trafficked persons as described in GCC sub-clause 9.4.14. If forced labor/trafficking cases are identified, the contractor shall take measures to require the suppliers to take appropriate steps to remedy them. Where the supplier does not remedy the situation, the contractor shall within a reasonable period substitute the supplier with a supplier that is able to manage such risks.

27.2 Child labor: The contractor shall take measures to require its suppliers (other than Subcontractors) not to employ or engage child labor as described in GCC sub-clause 9.4.15. If child labor cases are identified, the contractor shall take measures to require the suppliers to take appropriate steps to remedy them. Where the supplier does not remedy the situation, the contractor shall within a reasonable period substitute the supplier with a supplier that is able to manage such risks.

27.3 Serious safety issues: The contractor, including its subcontractors, shall

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comply with all applicable safety obligations, including as stated in GCC sub-clause 18.2. The contractor shall also take measures to require its suppliers (other than subcontractors) to adopt procedures and mitigation measures adequate to address safety issues related to their personnel. If serious safety issues are identified, the contractor shall take measures to require the suppliers to take appropriate steps to remedy them. Where the supplier does not remedy the situation, the contractor shall within a reasonable period substitute the supplier with a supplier that is able to manage such risks.

27.4 Obtaining natural resource materials in relation to supplier: The contractor shall obtain natural resource materials from suppliers that can demonstrate, through compliance with the applicable verification and/ or certification requirements, that obtaining such materials is not contributing to the risk of significant conversion or significant degradation of natural or critical habitats such as unsustainably harvested wood products, gravel or sand extraction from river beds or beaches.

If a supplier cannot continue to demonstrate that obtaining such materials is not contributing to the risk of significant conversion or significant degradation of natural or critical habitats, the contractor shall within a reasonable period substitute the supplier with a supplier that is able to demonstrate that they are not significantly adversely impacting the habitats.

**28. Code of conduct** 28.1 The contractor shall have a code of conduct for the contractor's personnel.

The contractor shall take all necessary measures to ensure that each contractor's personnel is made aware of the code of conduct including specific behaviors that are prohibited, and understands the consequences of engaging in such prohibited behaviors.

These measures include providing instructions and documentation that can be understood by the contractor's personnel and seeking to obtain that person's signature acknowledging receipt of such instructions and/or documentation, as appropriate.

The contractor shall also ensure that the code of conduct is visibly displayed in multiple locations on the site and any other place where the works will be carried out, as well as in areas outside the site accessible to the local community and project affected people. The posted code of conduct shall be provided in languages comprehensible to contractor's personnel, employer's personnel and the local community.

The contractor's management strategy and implementation plans shall include appropriate processes for the contractor to verify compliance with these obligations.

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**29. Security of the site**

29.1 The contractor shall be responsible for the security of the site, and:

- (a) or 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.

Subject to GCC sub-clause 16.2, the contractor shall submit for the project manager's No-objection a security management plan that sets out the security arrangements for the site.

The contractor shall (i) conduct appropriate background checks on any personnel retained to provide security; (ii) train the security personnel adequately (or determine that they are properly trained) in the use of force (and where applicable, firearms), and appropriate conduct towards contractor's personnel, employer's personnel and affected communities; and (iii) require the security personnel to act within the applicable laws and any requirements set out in the specifications.

The contractor shall not permit any use of force by security personnel in providing security except when used for preventive and defensive purposes in proportion to the nature and extent of the threat.

In making security arrangements, the contractor shall also comply with any additional requirements stated in the specifications."

## **B. Time Control**

**30. Program and progress report**

30.1 Within the time stated in the PCC, after the date of the Letter of acceptance, the contractor shall submit to the project manager for approval a program showing the general methods, arrangements, order, and timing for all the activities in the works. In the case of a lump-sum contract, the activities in the program shall be consistent with those in the activity schedule. The project manager's approval of the program shall not alter the contractor's obligations. The contractor may revise the program and submit it to the project manager again at any time. A revised program shall show the effect of variations and compensation events.

30.2 An update of the program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.

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30.3 The contractor shall monitor progress of the works and submit to the project manager progress report and any updated program showing the actual progress achieved and the effect of the progress achieved on the timing of the remaining works, including any changes to the sequence of the activities, at intervals no longer than the periods stated in the PCC. If the contractor does not submit an updated program within this period, the project manager may withhold the amount stated in the PCC from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue program has been submitted. In the case of lump-sum contract, the contractor shall provide an updated activity schedule within 14 days of being instructed to by the project manager.

30.4 Unless otherwise stated in the specifications, each progress report shall include the environmental and social (ES) metrics set out in Appendix B.

30.5 In addition to the progress reports, 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 on the environment, the affected communities, the public, employer's personnel or contractor's personnel. This includes, 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. In case of SEA and/or SH, while maintaining confidentiality as appropriate, the type of allegation (sexual exploitation, sexual abuse or sexual harassment), gender and age of the person who experienced the alleged incident should be included in the information.

The contractor, upon becoming aware of the allegation, incident or accident, shall also immediately inform the project manager of any such incident or accident on the subcontractors' or suppliers' premises relating to the works which has or is likely to have a significant adverse effect on the environment, the affected communities, the public, employer's personnel, or contractor's, its subcontractors' and suppliers' personnel. The notification shall provide sufficient detail regarding such incidents or accidents. The contractor shall provide full details of such incidents or accidents to the project manager within the timeframe agreed with the project manager.

The contractor shall require its subcontractors and suppliers (other than Subcontractors) to immediately notify the contractor of any incidents or accidents referred to in this subclause.

**31. Extension of the intended completion date** 31.1 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

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contractor to incur additional cost.

31.2 The project manager shall decide whether and by how much to extend the intended completion date within 21 days of the contractor asking the project manager for a decision upon the effect of a compensation event or variation and submitting full supporting information. 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.

### **32. Acceleration**

32.1 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.

32.2 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.

### **33. Delays ordered by the project manager**

33.1 The project manager may instruct the contractor to delay the start or progress of any activity within the works.

### **34. Management meetings**

34.1 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.

34.2 The project manager shall record the business of management meetings and provide copies of the record to those attending the meeting and to the employer. The responsibility of the parties for actions to be taken shall be decided by the project manager either at the management meeting or after the management meeting and stated in writing to all who attended the meeting

### **35. Early warning**

35.1 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. The project manager may require the contractor to provide an estimate of the expected effect of the future event or circumstance on the contract price and completion Date. The estimate shall be provided by the contractor as soon as reasonably possible.

35.2 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.

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## C. Quality Control

- 36. Identify defects** 36.1 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
- 37. Tests** 37.1 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.
- 38. Correction defects** 38.1 The project manager shall give notice to the contractor of any defects before the end of the defects liability period, which begins at completion, and is defined in the PCC. The defects liability period shall be extended for as long as defects remain to be corrected.
- 38.2 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.
- 39. Uncorrected defects** 39.1 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

- 40. Contract price<sup>24</sup>** 40.1 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.

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<sup>24</sup> In lump-sum contracts, replace GCC sub-clause 40.1 as follows:

40.1 The Contractor shall provide updated activity schedules within 14 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

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**41. Changes in the contract price<sup>25</sup>** 41.1 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 initial contract price, 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 initial contract price is exceeded by more than 15 percent, except with the prior approval of the employer.

41.2 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.

**42. Variations** 42.1 All variations shall be included in updated programs<sup>26</sup> produced by the contractor.

42.2 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 contractor shall also provide information of any ES risks and impacts of the variation. The project manager shall assess the quotation, which shall be given within seven (7) days of the request or within any longer period stated by the project manager and before the variation is ordered.

42.3 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.

42.4 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.

42.5 The contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning.

42.6 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 GCC sub-clause 41.1 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

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<sup>25</sup> In lump-sum contracts, replace entire GCC clause 41 with new GCC sub-clause 41.1, as follows:

41.1 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

<sup>26</sup> In lump-sum contracts, add "and activity schedules" after "programs."



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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<sup>27</sup>.

42.7 Value engineering: The contractor may prepare, at its own cost, a value engineering proposal at any time during the performance of the contract. The value engineering proposal shall, at a minimum, include the following;

- (a) the proposed change(s), and a description of the difference to the existing contract requirements;
- (b) a full cost/benefit analysis of the proposed change(s) including a description and estimate of costs (including life cycle cost) the employer may incur in implementing the value engineering proposal;
- (c) a description of any effect(s) of the change on performance/functionality; and
- (d) a description of the proposed work to be performed, a program for its execution and sufficient ES information to enable an evaluation of ES risks and impacts.

The employer may accept the value engineering proposal if the proposal demonstrates benefits that:

- (a) accelerate the contract completion period; or
- (b) reduce the contract price or the life cycle costs to the employer; or
- (c) improve the quality, efficiency, safety or sustainability of the facilities; or
- (d) yield any other benefits to the employer,

without compromising the functionality of the works.

If the value engineering proposal is approved by the employer and results in:

- (a) a reduction of the contract price; the amount to be paid to the contractor shall be the percentage specified in the PCC of the reduction in the contract price; or
- (b) an increase in the contract price; but results in a reduction in life cycle costs due to any benefit described in (a) to (d) above, the amount to be

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<sup>27</sup> In lump-sum contracts, delete this paragraph.

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paid to the contractor shall be the full increase in the contract price

**43. Cash  
forecast**

**flow**43.1 When the program<sup>28</sup>, is updated, the contractor shall provide the project manager with an updated cash flow forecast. The cash flow forecast shall include different currencies, as defined in the contract, converted as necessary using the contract exchange rates.

**44. Payment  
certificates**

44.1 The contractor shall submit to the project manager monthly statements of the estimated value of the work executed less the cumulative amount certified previously.

44.2 The project manager shall check the contractor's monthly statement and certify the amount to be paid to the contractor.

44.3 The value of work executed shall be determined by the project manager.

44.4 The value of work executed shall comprise the value of the quantities of work in the bill of quantities that have been completed<sup>29</sup>.

44.5 The value of work executed shall include the valuation of variations and compensation events.

44.6 The project manager may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

44.7 If the contractor was, or is, failing to perform any ES obligations or work under the contract, the value of this work or obligation, as determined by the project manager, may be withheld until the work or obligation has been performed, and/or the cost of rectification or replacement, as determined by the project manager, may be withheld until rectification or replacement has been completed. Failure to perform includes, but is not limited to the following:

- (a) failure to comply with any ES obligations or work described in the Works' Requirements which may include: working outside site boundaries, excessive dust, failure to keep public roads in a safe usable condition, damage to offsite vegetation, pollution of water courses from oils or sedimentation, contamination of land e.g. from oils, human waste, damage to archeology or cultural heritage features, air pollution as a result of unauthorized and/or inefficient combustion;

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<sup>28</sup> In lump-sum contracts, add "or activity schedule" after "program."

<sup>29</sup> 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."

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- (b) failure to regularly review C-ESMP and/or update it in a timely manner to address emerging ES issues, or anticipated risks or impacts;
  - (c) failure to implement the C-ESMP e.g. failure to provide required training or sensitization;
  - (d) failing to have appropriate consents/permits prior to undertaking Works or related activities;
  - (e) failure to submit ES report/s (as described in Appendix B), or failure to submit such reports in a timely manner;
  - (f) failure to implement remediation as instructed by the project manager within the specified timeframe (e.g. remediation addressing non-compliance/s).

#### **45. Payments**

45.1 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 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. Interest shall be calculated from the date by which the payment should have been made up to the date when the late payment is made at the prevailing rate of interest for commercial borrowing for each of the currencies in which payments are made.

45.2 If an amount certified is increased in a later certificate or as a result of an award by the adjudicator or an arbitrator, the contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.

45.3 Unless otherwise stated, all payments and deductions shall be paid or charged in the proportions of currencies comprising the contract price.

45.4 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.

#### **46. Compensation events**

46.1 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 GCC sub-clause 20.1.
- (b) The employer modifies the schedule of other contractors in a way that affects the work of the contractor under the contract.

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- (c) The project manager orders a delay or does not issue drawings, specifications, or instructions required for execution of the works on time.
  - (d) The project manager instructs the contractor to uncover or to carry out additional tests upon work, which is then found to have no defects.
  - (e) The project manager unreasonably does not approve a subcontract to be let.
  - (f) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the letter of acceptance from the information issued to bidders (including the site investigation reports), from information available publicly and from a visual inspection of the site.
  - (g) 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.
  - (h) 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.
  - (i) The advance payment is delayed.
  - (j) The effects on the contractor of any of the employer's risks.
  - (k) The project manager unreasonably delays issuing a certificate of completion.

46.2 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.

46.3 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 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.

46.4 The contractor shall not be entitled to compensation to the extent that the

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employer's interests are adversely affected by the contractor's not having given early warning or not having cooperated with the project manager

#### **47. Tax**

47.1 The project manager shall adjust the contract price if taxes, duties, and other levies are changed between the date 28 days before the submission of bids 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, provided such changes are not already reflected in the contract price or are a result of GCC clause 49.

#### **48. Currencies**

48.1 Where payments are made in currencies other than the currency of the employer's country specified in the PCC, the exchange rates used for calculating the amounts to be paid shall be the exchange rates stated in the contractor's bid.

#### **49. Price adjustment**

49.1 Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the PCC. If so provided, the amounts certified in each payment certificate, before deducting for advance payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due in each currency. A separate formula of the type specified below applies to each contract currency:

$$P_c = A_c + B_c \cdot I_{mc}/I_{oc}$$

where:

$P_c$  is the adjustment factor for the portion of the contract Price payable in a specific currency "c."

$A_c$  and  $B_c$  are coefficients<sup>30</sup> specified in the PCC, representing the nonadjustable and adjustable portions, respectively, of the contract price payable in that specific currency "c;" and

$I_{mc}$  is the index prevailing at the end of the month being invoiced and  $I_{oc}$  is the index prevailing 28 days before bid opening for inputs payable; both in the specific currency "c."

49.2 If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The index value shall be deemed to take account of all changes in cost due to fluctuations in costs.

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<sup>30</sup> The sum of the two coefficients  $A_c$  and  $B_c$  should be 1 (one) in the formula for each currency. Normally, both coefficients shall be the same in the formulae for all currencies, since coefficient  $A_c$ , for the nonadjustable portion of the payments, is a very approximate figure (usually 0.15) to take account of fixed cost elements or other nonadjustable components. The sum of the adjustments for each currency are added to the contract price.

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<b>50. Retention</b>	<p>50.1 The employer shall retain from each payment due to the Contractor the proportion stated in the PCC until completion of the whole of the works.</p> <p>50.2 Upon the issue of a certificate of completion of the works by the project manager, in accordance with GCC sub-clause 57.1, 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.</p>
<b>51. Liquid damages</b>	<p>51.1 The contractor shall pay liquidated damages to the employer at the rate per day stated in the PCC 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 the PCC. The employer may deduct liquidated damages from payments due to the contractor. Payment of liquidated damages shall not affect the contractor’s liabilities.</p> <p>51.2 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 GCC sub-clause 45.1.</p>
<b>52. Bonus</b>	<p>52.1 The contractor shall be paid a bonus calculated at the rate per calendar day stated in the PCC 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</p>
<b>53. Advance payment</b>	<p>53.1 The employer shall make advance payment to the contractor of the amounts stated in the PCC by the date stated in the PCC, against provision by the contractor 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. Interest shall not be charged on the advance payment.</p> <p>53.2 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.</p>

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53.3 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.

#### **54. Securities**

54.1 The performance security 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 the PCC, 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.

#### **55. Dayworks**

55.1 If applicable, the dayworks rates in the contractor's bid shall be used only when the project manager has given written instructions in advance for additional work to be paid for in that way.

55.2 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.

55.3 The contractor shall be paid for dayworks subject to obtaining signed dayworks forms.

#### **56. Cost of repairs**

56.1 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**

#### **57. Completion**

57.1 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.

#### **58. Taking over**

58.1 The employer shall take over the site and the works within seven days of the project manager's issuing a certificate of completion.

#### **59. Final account**

59.1 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

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liability certificate and certify any final payment that is due to the contractor within 56 days of receiving the contractor's account if it is correct and complete. If it is not, the project manager shall issue within 56 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.

**60. Operating and maintenance manuals**

60.1 If "as built" drawings and/or operating and maintenance manuals are required, the contractor shall supply them by the dates stated in the PCC.

60.2 If the contractor does not supply the drawings and/or manuals by the dates stated in the PCC pursuant to GCC sub-clause 60.1, or they do not receive the project manager's approval, the project manager shall withhold the amount stated in the PCC from payments due to the contractor.

**61. Termination**

61.1 The employer or the contractor may terminate the contract if the other party causes a fundamental breach of the contract.

61.2 Fundamental breaches of contract shall include, but shall not be limited to, the following:

- (a) the contractor stops work for 28 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 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 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 by the number of days for which the maximum amount of liquidated damages can be paid, as defined in the PCC; 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 GCC, in competing for or in executing the contract, then the employer may, after giving



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fourteen (14) days written notice to the contractor, terminate the contract and expel him from the site.

61.3 Notwithstanding the above, the employer may terminate the contract for convenience.

61.4 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

61.5 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 GCC sub-clause 61.2 above, the project manager shall decide whether the breach is fundamental or not.

**62. Payment upon termination**

62.1 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 to apply to the value of the work not completed, as specified in the PCC. 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.

62.2 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.

**63. Property**

63.1 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.

**64. Release from performance**

64.1 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.

**65. Suspension of IFAD loan credit**

65.1 In the event that IFAD 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 days of having received the IFAD's suspension notice.

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- (b) If the contractor has not received sums due to it within the 28 days for payment provided for in GCC sub-clause 45.1, the contractor may immediately issue a 14-day termination notice.

**66. SECAP  
Performance  
standards**

66.1 This contract shall be implemented in a manner consistent with IFAD's Social, Environmental and Climate Assessment Procedures (SECAP), available on <https://www.ifad.org/en/secap>

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## **Appendix A**

**Revised IFAD Policy on Preventing Fraud and Corruption in its Activities and Operations  
(revised on 12 December 2018 (EB 2018/125/R.6))**

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## Appendix B

### Environmental and Social (ES) Metrics for Progress Reports

*[Note to employer: the following metrics may be amended to reflect the specifics of the contract. The employer shall ensure that the metrics provided are appropriate for the works and impacts/key issues identified in the environmental and social assessment]*

Metrics for regular reporting:

- a. environmental incidents or non-compliances with contract requirements, including contamination, pollution or damage to ground or water supplies;
- b. health and safety incidents, accidents, injuries that require treatment and all fatalities;
- c. interactions with regulators: identify agency, dates, subjects, outcomes (report the negative if none);
- d. status of all permits and agreements:
  - i. work permits: number required, number received, actions taken for those not received;
  - ii. status of permits and consents:
    - list areas/facilities with permits required (quarries, asphalt & batch plants), dates of application, dates issued (actions to follow up if not issued), dates submitted to resident engineer (or equivalent), status of area (waiting for permits, working, abandoned without reclamation, decommissioning plan being implemented, etc.);
    - list areas with landowner agreements required (borrow and spoil areas, camp sites), dates of agreements, dates submitted to resident engineer (or equivalent);
    - identify major activities undertaken in each area in the reporting period and highlights of environmental and social protection (land clearing, boundary marking, topsoil salvage, traffic management, decommissioning planning, decommissioning implementation);
    - for quarries: status of relocation and compensation (completed, or details of activities and current status in the reporting period).
- e. health and safety supervision:
  - i. safety officer: number days worked, number of full inspections & partial inspections, reports to construction/project management;
  - ii. number of workers, work hours, metric of PPE use (percentage of workers with full personal protection equipment (PPE), partial, etc.), worker violations observed (by type of violation, PPE or otherwise), warnings given, repeat warnings given, follow-up actions taken (if any);
- f. worker accommodations:
  - i. number of expats housed in accommodations, number of locals;

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- ii. date of last inspection, and highlights of inspection including status of accommodations' compliance with national and local law and good practice, including sanitation, space, etc.;
    - iii. actions taken to recommend/require improved conditions, or to improve conditions.
  - g. Health services: provider of health services, information and/or training, location of clinic, number of non-safety disease or illness treatments and diagnoses (no names to be provided);
  - h. gender (for expats and locals separately): number of female workers, percentage of workforce, gender issues raised and dealt with (cross-reference grievances or other sections as needed);
  - i. training:
    - i. number of new workers, number receiving induction training, dates of induction training;
    - ii. number and dates of toolbox talks, number of workers receiving occupational health and safety (OHS), environmental and social training;
    - iii. number and dates of communicable diseases (including STDs) sensitization and/or training, no. workers receiving training (in the reporting period and in the past); same questions for gender sensitization, flag person training.
    - iv. number and date of SEA and SH prevention sensitization and/or training events, including number of workers receiving training on code of conduct for contractor's personnel (in the reporting period and in the past), etc.
  - j. environmental and social supervision:
    - i. environmentalist: days worked, areas inspected and numbers of inspections of each (road section, work camp, accommodations, quarries, borrow areas, spoil areas, swamps, forest crossings, etc.), highlights of activities/findings (including violations of environmental and/or social best practices, actions taken), reports to environmental and/or social specialist/construction/site management;
    - ii. sociologist: days worked, number of partial and full site inspections (by area: road section, work camp, accommodations, quarries, borrow areas, spoil areas, clinic, HIV/AIDS center, community centers, etc.), highlights of activities (including violations of environmental and/or social requirements observed, actions taken), reports to environmental and/or social specialist/construction/site management; and
    - iii. community liaison person(s): days worked (hours community center open), number of people met, highlights of activities (issues raised, etc.), reports to environmental and/or social specialist /construction/site management.
  - k. Grievances: list new grievances (e.g. number of allegations of SEA and SH) received in the reporting period and number of unresolved past grievances by date received, complainant's age and sex, how received, to whom referred to for action, resolution and date (if completed), data resolution reported to complainant, any required follow-up (Cross-reference other sections as needed):
    - i. Worker grievances;
    - ii. Community grievances
  - l. Traffic, road safety and vehicles/equipment:

- 
- i. traffic and road safety incidents and accidents involving project vehicles & equipment: provide date, location, damage, cause, follow-up;
    - ii. traffic and road safety incidents and accidents involving non-project vehicles or property (also reported under immediate metrics): provide date, location, damage, cause, follow-up;
    - iii. overall condition of vehicles/equipment (subjective judgment by environmentalist); non-routine repairs and maintenance needed to improve safety and/or environmental performance (to control smoke, etc.).
  - m. Environmental mitigations and issues (what has been done):
    - i. dust: number of working bowzers, number of waterings/day, number of complaints, warnings given by environmentalist, actions taken to resolve; highlights of quarry dust control (covers, sprays, operational status); % of rock/ spoil lorries with covers, actions taken for uncovered vehicles;
    - ii. erosion control: controls implemented by location, status of water crossings, environmentalist inspections and results, actions taken to resolve issues, emergency repairs needed to control erosion/sedimentation;
    - iii. quarries, borrow areas, spoil areas, asphalt plants, batch plants: identify major activities undertaken in the reporting period at each, and highlights of environmental and social protection: land clearing, boundary marking, topsoil salvage, traffic management, decommissioning planning, decommissioning implementation;
    - iv. blasting: number of blasts (and locations), status of implementation of blasting plan (including notices, evacuations, etc.), incidents of off-site damage or complaints (cross-reference other sections as needed);
    - v. spill clean-ups, if any: material spilled, location, amount, actions taken, material disposal (report all spills that result in water or soil contamination);
    - vi. waste management: types and quantities generated and managed, including amount taken offsite (and by whom) or reused/recycled/disposed on-site;
    - vii. details of tree plantings and other mitigations required undertaken in the reporting period;
    - viii. details of water and swamp protection mitigations required undertaken in the reporting period.
  - n. compliance:
    - i. compliance status for conditions of all relevant consents/permits, for the Work, including quarries, etc.): statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance;
    - ii. compliance status of the CESMP Contractor's Environmental, Social and Climate Management Plan and ES Management and Implementation Policies requirements: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance
    - iii. compliance status of SEA and SH prevention and response action plan: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance
    - iv. compliance status of health and safety management plan re: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance

- v. other unresolved issues from previous reporting periods related to environmental and social: continued violations, continued failure of equipment, continued lack of vehicle covers, spills not dealt with, continued compensation or blasting issues, etc. Cross-reference other sections as needed.

## Section VII Particular Conditions of Contract

Except where otherwise specified, all particular conditions of contract should be filled in by the employer prior to issuance of the bidding document. Schedules and reports to be provided by the employer should be annexed.

A.	General
GCC 1.1(d)	The financing institution is: <b>IFAD</b>
GCC 1.1(r)	The employer is: <b>RAB/KIIWP2 represented by UMUTONI Clarisse, Chief Finance Officer</b>
GCC 1.1(v)	The intended completion date for the whole of the works shall be <i>[insert date]</i> <i>[If different dates are specified for completion of the works by section (“sectional completion” or milestones), these dates should be listed here]</i>
GCC 1.1 (y)	The project manager is <i>[insert name, address, and name of authorized representative]</i> .
GCC 1.1 (aa)	The site is located at <i>[insert address of site ]</i> and is defined in drawings No. <i>[insert numbers]</i>
GCC 1.1 (dd)	The start date shall be <i>[insert date]</i> .
GCC 1.1 (hh)	The works consist of : <b><i>Civil works of Kanyeganyege dam and irrigation infrastructure (150ha) on behalf of KIIWP2</i></b>
GCC 2.2	Sectional completions are: <i>[insert nature and dates, if appropriate]</i>
GCC 2.3(i)	The following documents also form part of the contract: <i>[list any other relevant document not listed in the contract agreement]</i>
GCC 3.1	The language of the contract is : <b><i>English</i></b>
	The law that applies to the contract is the law of : <i>Rwandan Law</i>
GCC 5.1	The project manager may delegate any of his duties and responsibilities.
GCC 8.1	Schedule of other contractors: <i>[insert schedule of other contractors, if appropriate]</i>

GCC 13.1	<p>The minimum insurance amounts and deductibles shall be:</p> <p>(a) for loss or damage to the works, plant and materials: <b>Amount to o be agreed upon during the signature of the contract</b></p> <p>(b) For loss or damage to equipment: <b>Amount to o be agreed upon during the signature of the contract</b></p> <p>(c) for loss or damage to property (except the works, plant, materials, and equipment) in connection with contract <i>[insert amounts]</i>.</p> <p>(d) for personal injury or death:</p> <p style="padding-left: 40px;">(i) of the contractor’s employees: <b>Amount to o be agreed upon during the signature of the contract</b></p> <p style="padding-left: 40px;">(ii) of other people: <b>Amount to o be agreed upon during the signature of the contract</b></p>
GCC 14.1	Site data are: <i>[list site data]</i>
GCC 20.1	The site possession date(s) shall be: <i>[insert location(s) and date(s)]</i>
GCC 23.1 GCC 23.2	Appointing authority for the adjudicator: <i>[insert name of authority]</i> .
GCC 24.3	Hourly rate and types of reimbursable expenses to be paid to the adjudicator: <i>[insert hourly fees and reimbursable expenses]</i> .
GCC 24.4	<p>Institution whose arbitration procedures shall be used: .....</p> <p><i>[For larger contracts with international contractors, it is recommended to select one institution among those listed below; insert the corresponding wording]</i></p> <p>“United Nations Commission on International Trade Law (UNCITRAL) arbitration rules:</p> <p>Any dispute, controversy, or claim arising out of or relating to this contract, or breach, termination, or invalidity thereof, shall be settled by arbitration in accordance with the UNCITRAL arbitration rules as at present in force.”</p> <p>or</p> <p>“Rules of conciliation and arbitration of the International Chamber of Commerce (ICC):</p> <p>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 said rules.</p>
<div style="display: flex; justify-content: space-between;"> <span><b>B.</b></span> <span><b>Time Control</b></span> </div>	



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GCC 30.1	The contractor shall submit for approval a program for the works within : <b>21 days</b> days from the date of the letter of acceptance.
GCC 30.3	<p>The period between program updates is : <b>14 days.</b></p> <p>The amount to be withheld for late submission of an updated program is : <b>Amount to be agreed upon</b></p> <p>The period for submission of progress reports is: <b>30 days</b></p>
<b>C. Quality Control</b>	
GCC 38.1	The defects liability period is: <b>12 years.</b>
<b>D. Cost Control</b>	
GCC 42.7	If the value engineering proposal is approved by the employer the amount to be paid to the contractor shall be : <b>5%</b>
GCC 48.1	The currency of the employer's country is: <b>Rwandan Francs</b>

GCC 49.1	<p>The contract <i>[insert “is” or “is not”]</i> subject to price adjustment in accordance with GCC clause 45, and the following information regarding coefficients <i>[specify “does” or “does not”]</i> apply.</p> <p><i>[Price adjustment is mandatory for contracts which provide for time of completion exceeding 18 months]</i></p> <p>The coefficients for adjustment of prices are:</p> <p>(a) For currency <i>[insert name of currency]</i>:</p> <p>(i) <i>[insert percentage]</i> percent non adjustable element (coefficient A).</p> <p>(ii) <i>[insert percentage]</i> percent adjustable element (coefficient B).</p> <p>(b) For currency <i>[insert name of currency]</i>:</p> <p>(i) <i>[insert percentage]</i> percent non adjustable element (coefficient A).</p> <p>(ii) <i>[insert percentage]</i> percent adjustable element (coefficient B).</p> <p>The index I for local currency shall be <i>[insert index]</i>.</p> <p>The index I for the specified international currency shall be <i>[insert index]</i>.</p> <p><i>[These proxy indices shall be proposed by the contractor, subject to acceptance by the employer]</i></p> <p>The Index I for currencies other than the local currency and the specified international currency shall be <i>[insert index]</i>.</p> <p><i>[These proxy indices shall be proposed by the contractor, subject to acceptance by the employer.]</i></p>
GCC 50.1	<p>The proportion of payments retained is: <b>10%</b></p> <p><i>[The retention amount is usually close to 5 percent and in no case exceeds 10 percent.]</i></p>
GCC 51.1	<p>The liquidated damage for the whole of the works is: <b>0.1% per day</b>. The maximum amount of liquidated damages for the whole of the works is <b>5%</b> of the final contract price.</p>
GCC 52.2	<p>The bonus for the whole of the works is: <b>Not Applicable</b></p>
GCC 53.1	<p>The advance payments shall be :20% ( guaranteed to 100%) and shall be paid to the contractor no later than: <b>30days</b></p>

GCC 54.1	<p>An environmental and social (ES) performance security <b>shall be</b> provided to the employer.]</p> <p><i>[If an ES security is required, replace GCC sub-clause 54.1 with the following otherwise delete.]</i></p> <p>“GCC sub-clause 54.1 is replaced with the following</p> <p>The performance security and an environmental and social (ES) performance security 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 the PCC (for GCC sub-clause 54.1).</p> <p>The performance security shall be issued by a bank acceptable to the employer, and denominated in the types and proportions of the currencies in which the contract price is payable. The ES performance security shall be issued by a bank acceptable to the employer and denominated in the types and proportions of the currencies in which the contract price is payable. The performance security and, if applicable, the ES 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.”</p>
GCC 54.1	<p>The performance security amount is <i>[insert amount(s) denominated in the types and proportions of the currencies in which the contract price is payable, or in a freely convertible currency acceptable to the employer]</i></p> <p>(a) Performance security – bank guarantee: in the amount(s) of <i>[insert related figure(s)]</i> percent of the accepted contract amount and in the same currency(ies) of the accepted contract amount.</p> <p>(b) Environmental and social (ES) performance security - bank guarantee: in the amount(s) of <i>[insert related figure(s)]</i> percent of the accepted contract amount and in the same currency(ies) of the accepted contract amount]. <i>[delete if not applicable].</i></p> <p><i>[The bank guarantee shall be unconditional (on demand) (see Section VIII, contract forms). The ES performance security will normally be in the amount(s) of 1% to 3% of the accepted contract amount. The sum of the total “demand guarantees” (performance security and ES performance security) shall normally not exceed 10% of the accepted contract amount.]</i></p>
<p><b>E. Finishing the Contract</b></p>	
GCC 60.1	<p>The date by which operating and maintenance manuals are required is <i>[insert date]</i>.</p> <p>The date by which “as built” drawings are required is <i>[insert date]</i>.</p>
GCC 60.2	<p>The amount to be withheld for failing to produce “as built” drawings and/or operating and maintenance manuals by the date required in GCC sub-clause 60.1 is <i>[insert amount in local currency]</i>.</p>
GCC 61.2(g)	<p>The maximum number of days is: <i>[insert number; consistent with GCC sub-clause 51.1 on liquidated damages]</i>.</p>

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GCC 62.1	The percentage to apply to the value of the work not completed, representing the employer's additional cost for completing the works, is : <b>to be agreed on during contract signature</b>
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# Section VIII . Contract Forms

## Table of Forms

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## Notice of Intent to Award

*Insert project logo (if existing)*

For the attention of the bidder's authorized representative

Name: *[insert authorized representative's name]*

Address: *[insert authorized representative's address]*

Telephone/Fax numbers: *[insert authorized representative's telephone/fax numbers]*

Email Address: *[insert authorized representative's email address]*

**DATE OF TRANSMISSION:** *[insert date]*

**Procuring entity:** *[insert the name of the procuring entity]*

**Procurement title:** *[insert]*

**Ref no:** *[insert]*

This notice of intent to award (NOITA) notifies you of our decision to award the above contract to *[insert the successful bidder]*.

Please note that this notice does not constitute any contract between the procuring entity and the bidder and neither establishes any legal rights or obligations for the procuring entity or bidder.

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***[IMPORTANT: provide the results of the evaluation and the prices of each bidder [if applicable] in this NOITA].***

<b>Name of bidder</b>	<b>Points scored</b>	<b>Bid price</b>	<b>Evaluated bid price (if applicable)</b>
<i>[insert name]</i>	<i>[insert points]</i>	<i>[insert bid price]</i>	<i>[insert evaluated price]</i>
<i>[insert name]</i>	<i>[insert points]</i>	<i>[insert bid price]</i>	<i>[insert evaluated price]</i>
<i>[insert name]</i>	<i>[insert points]</i>	<i>[insert bid price]</i>	<i>[insert evaluated price]</i>
<i>[insert name]</i>	<i>[insert points]</i>	<i>[insert bid price]</i>	<i>[insert evaluated price]</i>
<i>[insert name]</i>	<i>[insert points]</i>	<i>[insert bid price]</i>	<i>[insert evaluated price]</i>

If your bid has not been successful, you may request a debriefing in relation to the results of the evaluation of your bid. If you decide to request a debriefing, your written request must be made within *[insert number of stated in the bidding document and see the module M1 on debriefs in the IFAD Procurement Handbook for more information]* business days of receipt of this NOITA.

If your request for a debriefing is received within the deadline above, we will provide the debriefing within *[insert number stated in the bidding document and see the module M1 on debriefs in the IFAD Procurement Handbook for more information]* business days of receipt of your request.

The debriefing may be in writing, by video conference call or in person. We shall promptly advise you in writing how the debriefing will take place and confirm the date and time.

The period within which you can protest the procurement proceedings lasts *[insert number stated in the bidding document and see the module M2 on protests in the IFAD Procurement Handbook for more information]* business days after the date of transmission of this NOITA.

Yours sincerely,

Authorised

Official

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## Letter of Acceptance

*[on 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 Bid dated .... *[insert date]* .... for execution of the .....*[insert name of the contract and identification number, as given in the PCC]* ..... for the accepted contract amount of .....*[insert amount in numbers and words and name of currency]*, as corrected and modified in accordance with the instructions to bidders is hereby accepted by our agency.

You are requested to furnish (i) the performance security and an environmental and social (ES) performance security *[delete ES performance security if it is not required under the contract]* within 28 days in accordance with the conditions of contract, using for that purpose the performance security form and the ES performance security form, *[delete reference to the ES performance security form if it is not required under the contract]*  
*[choose one of the following statements:]*

We accept that \_\_\_\_\_*[insert the name of adjudicator proposed by the bidder]* be appointed as the adjudicator.

*[or]*

We do not accept that \_\_\_\_\_*[insert the name of the adjudicator proposed by the bidder]* be appointed as the adjudicator, and by sending a copy of this letter of acceptance to \_\_\_\_\_ *[insert name of the appointing authority]*, the appointing authority, we are hereby requesting such authority to appoint the adjudicator in accordance with ITB 48.1 and GCC sub-clause 23.1.

Authorized signature:

Name and title of signatory:

Name of agency:

Attachment: contract agreement



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## Contract Agreement

This agreement made the . . . . .day of . . . . , between . . . . . [*name of the employer*]. . . . . (hereinafter “the employer”), of the one part, and . . . . . [*name of the contractor*]. . . . .(hereinafter “the contractor”), of the other part:

Whereas the employer desires that the works known as . . . . . [*name of the contract*]. . . . .should be executed by the contractor, and has accepted a bid by the contractor for the execution and completion of these works and the remedying of any defects therein,

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 Acceptance
  - (b) the Letter of Bid
  - (c) the Addenda nos \_\_\_\_\_(if any)
  - (d) the Particular Conditions
  - (e) the General Conditions of Contract, including appendices;
  - (f) the Specifications
  - (g) the Drawings
  - (h) Bill of Quantities; and
  - (i) any other document listed in the PCC as forming part of the contract, but not limited to;
    - i. the ES Management Strategies and Implementation Plans (ESIP); and
    - ii. Code of Conduct for Contractor’s Personnel (ES).
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 witness whereof the parties hereto have caused this agreement to be executed in accordance with the laws of . . . . . [*name of the borrowing country*]. . . . .on the day, month and year specified above.

Signed by		Signed by	
For and behalf of the employer		For and behalf of the contractor	
In the presence of		In the presence of:	

Witness, name, signature, address, date	Witness, name, signature, address, date
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## 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]*,<sup>1</sup> 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.

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.*

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## Environmental and Social (ES) Performance Security ES Demand Guarantee

*[Guarantor letterhead or SWIFT identifier code]*

Beneficiary: *[insert name and address of employer]*

Date: *\_ [Insert date of issue]*

ES 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 \_\_\_\_\_ (hereinafter called "the applicant") has entered into Contract no. \_\_\_\_\_ dated \_\_\_\_\_ with the beneficiary, for the execution of \_\_\_\_\_ (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 \_\_\_\_\_ ( \_\_\_\_\_ ),<sup>31</sup> 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 environmental and/or social (ES) 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...<sup>32</sup>, and any demand for payment under it must be received by us at this office indicated above 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.

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*[signature(s)]*

*Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted*

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<sup>31</sup> The guarantor shall insert an amount representing the percentage of the accepted contract amount specified in the letter of acceptance, less provisional sums, if any, and denominated either in the currency (cies) of the contract or a freely convertible currency acceptable to the beneficiary.

<sup>32</sup> Insert the date twenty-eight days after the expected completion date as described in GCC sub- clause 57.1. 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 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."

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*from the final product.*

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## 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.

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]* 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 either that the applicant:

- (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 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],<sup>33</sup> 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.

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*[signature(s)]*

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

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<sup>33</sup> Insert the expected completion date as described in GCC sub- clause 57.1. 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.”

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## Self-Certification Form

### Form *[insert number/reference]*: Self-Certification Form

#### Preamble:

In accordance with the IFAD Policy on Preventing Fraud and Corruption in its Activities and Operations, the Fund may investigate and, when applicable, sanction entities and individuals, including by debarring them, either indefinitely or for a stated period of time, to participate in any IFAD-financed or IFAD-managed activity or operation. A debarment includes, *inter alia*, ineligibility to: (i) be awarded or otherwise benefit from any IFAD-financed contract, financially or in any other manner; (ii) be a sub-contractor, consultant, manufacturer, supplier, sub-supplier, agent or service provider of an otherwise eligible firm being awarded an IFAD-financed contract; and (iii) receive the proceeds of any loan or grant provided by the Fund. The Fund may also unilaterally recognize eligible debarments by any of the International Financial Institutions signatories to the Agreement for Mutual Enforcement of Debarment Decisions.<sup>34</sup>

#### Self-Certification Form

This self-certification form is to be completed by the bidder. The bidder shall submit the completed form together with the bid/proposal to *[insert name of procuring entity]*. Instructions for completing this form are provided below.

<b>Full legal name of bidder:</b>	
<b>Full legal name of bidders's legal representative and position:</b>	
<b>Procurement title:</b>	
<b>Procurement reference:</b>	
<b>Date:</b>	

I hereby certify that I am the authorized representative of *[name of the bidder]*, as well as that the information provided above is true and accurate in all material respects and understand that any material misstatement, misrepresentation or failure to provide the information requested in this certification may result in sanctions and remedies, including the permanent ineligibility to participate in IFAD-financed and/or IFAD-managed activities and operations, in accordance with the IFAD Procurement Guidelines, the IFAD Procurement Handbook and other applicable IFAD policies and procedures, including the **IFAD Policy on Preventing Fraud and Corruption in its Activities and Operations** (accessible at [www.ifad.org/anticorruption\\_policy](http://www.ifad.org/anticorruption_policy)) and the **IFAD Policy on Preventing**

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<sup>34</sup> The Cross-Debarment Agreement was entered into by the World Bank Group, the Inter-American Development Bank, the African Development Bank, the Asian Development Bank and the European Bank for Reconstruction and Development, additional information may be located at: <http://crossdebarment.org/>.

**and Responding to Sexual Harassment, Sexual Exploitation and Abuse** (accessible at <https://www.ifad.org/en/document-detail/asset/40738506>).

**Authorized Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Printed Name of Signatory:** \_\_\_\_\_

- ☐ The bidder certifies that itself, its proprietor(s), agents, sub-consultants, sub-contractors, consortium and joint venture partners have **NOT** engaged in fraudulent, corrupt, collusive, coercive or obstructive practices in connection with the present procurement process.
- ☐ The bidder declares that the following criminal convictions, administrative sanctions (including debarments under the Agreement for Mutual Enforcement of Debarment Decisions or the "Cross-Debarment Agreement")<sup>35</sup> and/or temporary suspensions have been imposed on the bidder and/or any of its directors, partners, proprietors, key personnel, agents, sub-consultants, sub-contractors, consortium and joint venture partners:

<b>Nature of the measure (i.e., criminal conviction, administrative sanction or temporary suspension)</b>	<b>Imposed by</b>	<b>Name of party convicted, sanctioned or suspended (and relationship to bidder)</b>	<b>Grounds for the measure (i.e., fraud in procurement or corruption in contract execution)</b>	<b>Date and time (duration) of measure</b>

If no criminal convictions, administrative sanctions or temporary suspensions have been imposed, indicate "none".

- ☐ The bidder certifies that itself, including its director(s), partner(s), proprietor(s), key personnel, agents, sub-consultants, sub-contractors, consortium and joint venture partners have **NOT** engaged in acts of sexual harassment, sexual exploitation and abuse in connection with the present procurement process and this contract.
- ☐ The bidder certifies that itself, including its director(s), partner(s), proprietor(s), key personnel, agents, sub-consultants, sub-contractors, consortium and joint venture partners are **NOT** subject to a criminal conviction, administrative sanctions and/or temporary suspensions for engaging in acts of sexual harassment, sexual exploitation and abuse.
- ☐ The bidder certifies that itself, its proprietor(s), agents, sub-consultants, sub-contractors, consortium and joint venture partners have **NO** actual, potential or reasonably perceived conflicts of interest and specifically that they:

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<sup>35</sup> The Cross-Debarment Agreement was entered into by the World Bank Group, the Inter-American Development Bank, the African Development Bank, the Asian Development Bank and the European Bank for Reconstruction and Development, additional information may be located at: <http://crossdebarment.org/>.



- ☐ Do not have any actual or potential, and do not reasonably appear to have, at least one controlling partner in common with one or more other parties in the bidding process or the execution of the contract;
- ☐ Do not have any actual or potential, and do not reasonably appear to have, the same legal representative as another bidder for purposes of this bid or execution of the contract;
- ☐ Do not have any actual or potential, and do not reasonably appear to have, a relationship, directly or through common third parties, that puts them in a position to have access to undue or undisclosed information about or influence over the bid process and the execution of the contract, or influence the decisions of the procuring entity regarding the selection process for this procurement or during the execution of the contract;
- ☐ Do not participate and do not potentially or reasonably appear to participate in more than one bid/proposal in this process; and
- ☐ Do not have any actual or potential, and do not reasonably appear to have, a business or family relationship with, a member of the procuring entity's board of directors or its personnel, the Fund or its personnel, or any other individual that was, has been or might reasonably be directly or indirectly involved in any part of (i) the preparation of the bidding document, (ii) the selection process for this procurement, or (iii) execution of the contract, unless the actual, potential or reasonably conflict stemming from this relationship has been explicitly authorized by the Fund in writing.

- ☐ *[To be completed only if the previous boxes were not checked]*

The bidder declares the following actual, potential or reasonably perceived conflicts of interest, that may affect, or might reasonably be perceived by others to affect, impartiality in any matter relevant to the procurement process, including the selection process and the execution of the contract, with the understanding and acceptance that any action upon this disclosure shall be entirely under the Fund's discretion:

*[provide detailed description of any actual, potential or reasonably perceived conflicts of interest including their nature and the personnel, proprietor(s), agents, sub-consultants, sub-contractors, consortium or joint venture partners affected.]*

- ☐ The bidder certifies that **NO** gratuities, fees, commissions, gifts or anything else of value have been paid or exchanged or are to be paid or exchanged with respect to the present bidding process.

**OR**

- ☐ *[To be completed only if previous box was not checked]*

The bidder declares that the following gratuities, fees, commissions, gifts or anything else of value have been exchanged, paid or are to be exchanged or paid with respect to the present bidding process:

- [Name of Recipient/Address/Date/Reason/Amount]
- [Name of Recipient/Address/Date/Reason/Amount]

[Name of Recipient/Address/Date/Reason/Amount]

### **Instructions for completing the self-certification form**

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The World Bank listing of ineligible firms and individuals is a searchable database that returns a positive or negative search results page upon submission of a name to be searched, in order to document the eligibility.

**The bidder should print out, date, and attach the results page(s) to the self-certification form.**

If (a) record(s) has/have been found – i.e. the results page(s) shows one or more individuals or entities, including the bidder itself are ineligible for contracts of the World Bank on the grounds of “cross-debarment”, the bidder should provide a detailed account of these sanctions and their duration as applicable or notify the procuring entity and in case the bidder believes the finding is a “false positive”.