REPUBLIC OF KENYA

MINISTRY OF AGRICULTURE AND LIVESTOCK DEVELOPMENT
STATE DEPARTMENT FOR CROP DEVELOPMENT

MIRAA INDUSTRY REVITALIZATION PROJECT

NATIONAL COMPETITIVE BIDDING
INSTRUCTION TO BIDS, CONDITIONS OF CONTRACT, SPECIFICATIONS & BILLS OF QUANTITIES

TENDER NUMBER	:	**MOALD/SDCD/ENG/MIRP/07/2023-2024**
TENDER NAME	:	**CONSTRUCTION OF TIIRA MIRAA MARKET SHED IN MERU COUNTY**
ISSUED ON	:	**24TH OCTOBER, 2023**
SUBMISSION DEADLINE	:	**8TH NOVEMBER, 2023**
PROCURING ENTITY	:	**MINISTRY OF AGRICULTURE AND LIVESTOCK DEVELOPMENT** **STATE DEPARTMENT FOR CROP DEVELOPMENT** **KILIMO HOUSE, CATHEDRAL ROAD, NAIROBI** **P. O. BOX 30028 - 00100, NAIROBI** **E-mail: info@kilimo.go.ke** **Website: www.kilimo.go.ke** **Telephone: +254-20-2718870** **Hotline: 0800724891**

SPECIFIC PROCUREMENT NOTICE

REPUBLIC OF KENYA

MINISTRY OF AGRICULTURE AND LIVESTOCK DEVELOPMENT
STATE DEPARTMENT FOR CROP DEVELOPMENT

MIRAA INDUSTRY REVITALIZATION PROJECT (MIRP)

ADVERTISEMENT

Date: **24th October, 2023**

CONSTRUCTION OF TIIRA MIRAA MARKET SHED IN EMBU COUNTY

1. The Ministry of Agriculture and Livestock Development has received funds from the Government of Kenya and intends to utilize the same towards development of infrastructure under Miraa Industry Revitalization Project.

2. The Ministry of Agriculture and Livestock Development now invites sealed bids from eligible bidders for the works as shown in the table below:

Table 1: Tenders

S/No.	Tender No.	Tender Description	Bid Security (Kes)
1.	MOALD/SDCD/ENG/MIRP/ 01/2023-2024	Drilling and Equipping of Muringene Ultra-Modern Miraa Market Borehole in Meru County	230,000.00
2.	MOALD/SDCD/ENG/MIRP/ 02/2023-2024	Drilling and Equipping of Laare Ultra-Modern Miraa Market Borehole in Meru	230,000.00

S/No.	Tender No.	Tender Description	Bid Security (Kes)
		County	
3.	MOALD/SDCD/ENG/MIRP/ 03/2023-2024	Drilling and Equipping of CCM Kalisa Primary School Borehole in Embu County	230,000.00
4.	MOALD/SDCD/ENG/MIRP/ 04/2023-2024	Drilling and Equipping of FGCK Muthatari Church Borehole in Embu County	230,000.00
5.	MOALD/SDCD/ENG/MIRP/ 05/2023-2024	Drilling and Equipping of Gacharu Mung'etho Borehole in Kirinyaga County	230,000.00
6.	MOALD/SDCD/ENG/MIRP/ 06/2023-2024	Drilling and Equipping of Tumbura Market Borehole in Tharaka Nithi County	230,000.00
7.	MOALD/SDCD/ENG/MIRP/ 07/2023-2024	Construction of Tiira Miraa Market Shed in Meru County	230,000.00
8.	MOALD/SDCD/ENG/MIRP/ 08/2023-2024	Construction of B.A.T Siakago Miraa Market Shed in Embu County	230,000.00

3. Interested eligible bidders may obtain further information from the Office of the Engineering Secretary, State Department for Crop Development, Kilimo House, 5th Floor, Room 5-4B, Cathedral Road, P.O. Box 30028 00100, Nairobi.

4. A complete set of bidding documents may be downloaded from the Ministry's Website www.kilimo.go.ke.

5. The provisions in the Instructions to Bidders and in the General Conditions of Contract are the provisions of the **Public Procurement and Asset Disposal Act, 2015 for Procurement of Works.**

6. Bids should be clearly marked as detailed in Table 1(Tender Description and Tender No.) and deposited at **State Department for Crop Development Tender Box, situated at the Ground Floor, Kilimo House, Cathedral Road** or posted to:

Principal Secretary
State Department for Crop Development
Ministry of Agriculture and Livestock Development
Kilimo House, Cathedral Road

P. O. Box 30028 - 00100
NAIROBI

7. All tenders should be received on or before **Wednesday, 8th November, 2023 at 11.00am Local Time** and **MUST be accompanied by a BID GUARANTEE as indicated in the table above.**

8. Bulky bid documents that cannot fit in the tender box should be dropped at the Head: Supply Chain Management Office at Kilimo House, 4th Floor Room 4-2B.

9. Bids will be opened in the presence of bidders' representatives at **11.00am on Wednesday, 8th November, 2023** at the **Kilimo House, ASCU, Boardroom, Ministry of Agriculture and Livestock Development Head Office, Cathedral Road, Nairobi, Kenya.**

Head, Supply Chain Management Unit
State Department for Crop Development

For: **PRINCIPAL SECRETARY**

PART 1 – BIDDING PROCEDURES

Section I. Instructions to Bidders (ITB)

This Section provides relevant information to help Bidders prepare their bids. Information is also provided on the submission, opening, and evaluation of bids and on the award of Contracts.

Section II. Bid Data Sheet (BDS)

This Section consists of provisions that are specific to each procurement and that supplement the information or requirements included in Section I, **Instructions to Bidders**.

Section III. Evaluation and Qualification Criteria

This Section contains the criteria for evaluation of the bids and 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 Bidder and submitted as part of the Bid

PART 2 - EMPLOYER'S REQUIREMENTS

Section V. Requirements

This Section contains the Specification, the Drawings, and supplementary information that describe the Works to be procured.

PART 3 - CONDITIONS OF CONTRACT AND CONTRACT FORMS

Section VI. General Conditions (GC)

This Section contains the general clauses to be applied in the contract.

Section VII. Particular Conditions (PC)

This Section consists of Contract Data and Specific Provisions which

contains clauses specific to each contract. The contents of this Section supplement the General Conditions and shall be prepared by the Employer.

Section VIII. Contract Forms

This Section contains forms which, once completed, will form part of the Contract. The forms for **Performance Security** when required, shall only be completed by the successful Bidder after contract award.

Table of Contents

1.0 PART 1 - BIDDING PROCEDURES

Section I. Instructions to Bidders

Table of Clauses

1.1 Section I. Instructions to Bidders

1.1.1 General

1.1.1.1 Scope of Bid

1.1.1.1.1 The Employer indicated in Section II, **Bid Data Sheet** (**BDS**) issues this Bidding Document for the procurement of Works, as specified in Section VI, Requirements. The name, identification, and number of tenders are provided in the **BDS**.

1.1.1.1.2 Unless otherwise stated, throughout this Bidding Document definitions and interpretations shall be as prescribed in Section VII, **General Conditions**.

1.1.1.2 Source of Funds

1.1.1.2.1 The Government of Kenya (GoK) through the Miraa Revitalization Project intends to use a portion of the funds for 2023/2024 Financial Year on contract(s) for which this Bidding Document is issued.

1.1.1.3 Fraud and Corruption

1.1.1.3.1 It is the Government of Kenya (GoK) Policy as enshrined in the Public Procurement and Asset Disposal Act 2015 to require that all bidders, suppliers, and contractors, and their agents (whether declared or not), subcontractors, sub-consultants, service providers or suppliers, and any personnel thereof, observe the highest standard of ethics during the procurement and execution of such contracts[1].

(a) defines, for the purposes of this provision, the terms set forth below as follows:

(i) "Corrupt Practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party[2];

[1] *The specific financing institution shall be as stipulated in the **BDS**.*

[2] *For the purpose of this sub-paragraph, "another party" refers to a public official acting in relation to the procurement process or contract execution.*

(ii) "Fraudulent Practice" any act or omission, including a misrepresentation that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation;

(iii) "Collusive Practice" is an arrangement between two or more parties[3], designed to achieve an improper purpose, including to influence improperly the actions of another party; and

(iv) "Coercive Practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party[4];

(v) "Obstructive practice" is

(v.1) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede Government Agencies in investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation

(b) will reject a proposal for award if it determines that the bidder recommended for award, or any of its personnel, or its agents, or its sub- consultants, sub-contractors, service providers, suppliers and/or their employees has, directly or indirectly, engaged in Corrupt, Fraudulent, Collusive, Coercive, or Obstructive Practices in competing for the contract in question;

[3] *For the purpose of this sub-paragraph, "parties" refers to participants in the procurement process (including public officials) attempting either themselves, or through another person or entity not participating in the procurement or selection process, to simulate competition or to establish bid prices at artificial, non-competitive levels, or are privy to each other's bid prices or other conditions.*

[4] *For the purpose of this sub-paragraph, "party" refers to a participant in the procurement process or contract execution.*

(c) will declare mis procurement and cancel the contract if it determines at any time that representatives of the client or any party engaged in Corrupt, Fraudulent, Collusive, Coercive or Obstructive Practices during the procurement or the implementation of that contract.

(d) will sanction a firm or individual, at any time, in accordance with the prevailing Government sanctions procedures including by publicly declaring such firm or individual ineligible to bid for, or to be awarded contracts either indefinitely or for a stated period of time, (i) to be awarded a contract; (ii) to be a nominated for sub-contractor, consultant, supplier, or service provider.

(e) will require that a clause be included in bidding documents and in contracts financed by the Government of Kenya, requiring bidders, suppliers and contractors and their sub-contractors, agents, personnel, consultants, service providers, or suppliers, to permit the Government investigative Agencies to inspect all accounts and records and other documents relating to the submission of bids and contract performance and to have them audited by Office of Auditor General.

1.1.3.2 Furthermore, Bidders shall be aware of the provisions stated in Section VII, **General Conditions**

1.1.1.4 Eligible Bidders

1.1.1.4.1 A Bidder may be a natural person, private entity, government-owned entity -subject to ITB 4.5 - or any combination of such entities supported by a letter of intent to enter into an agreement or under an existing agreement in the form of a joint venture, consortium, or association (JVCA). In the case of a joint venture, consortium, or association:

(a) unless otherwise specified in the **BDS**, all partners shall be jointly and severally liable, and

(b) the JVCA shall nominate a Representative who shall have the authority to conduct all businesses for and on behalf of any and all the partners of the JVCA during the bidding process and, in the event the JVCA is awarded the Contract, during contract execution.

1.1.1.4.2 A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if:

(a). they have controlling partners in common; or

(b). they receive or have received any direct or indirect subsidy from any of them; or

(c). they have the same legal representative for purposes of this bid; or

(d). they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder, or influence the decisions of the Employer regarding this bidding process; or

(e). a Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which it is involved. However, this does not limit the inclusion of the same subcontractor, not otherwise participating as a Bidder, in more than one bid; or

(f). a Bidder participated as a consultant in the preparation of Section VI, Requirements that are the subject of the bid.

(g). a Bidder or any of its affiliates has been hired, or is proposed to be hired, by the Employer or the Borrower for the supervision of the contract.

1.1.1.5 Eligible Goods and Related Services

1.1.1.5.1 All Goods and Related Services to be supplied under the Contract will ne in accordance with the PPADA 2015.For purposes of this Clause, the term "Goods" includes commodities, raw material, machinery, equipment, and industrial plants; and "Related Services" includes services such as insurance, transportation, installation, and commissioning, training, and initial maintenance.

1.1.2 Contents of Bidding Document

1.1.2.1 Sections of Bidding Document

1.1.2.1.1 The Bidding Document consist 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** 8.

PART 1 Bidding Procedures

- Section I. Instructions to Bidders (**ITB**)
- Section II. Bid Data Sheet (**BDS**)
- Section III. Evaluation and Qualification Criteria
- Section IV. Bidding Forms

PART 2 Employer's Requirements

- Section V. Requirements

PART 3 Conditions of Contract and Contract Forms

- Section VI. General Conditions (**GC**)
- Section VII. Particular Conditions (**PC**)
- Section VIII. Contract Forms

The Invitation for Bids issued by the Employer is not part of the Bidding Document.

The Bidder shall obtain the Bidding Document from the source stated by the Employer in the Invitation for Bids; otherwise, the Employer is not

responsible for the completeness of the Bidding Document.

The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Document. Failure to furnish all information or documentation required by the Bidding Document may result in the rejection of the bid.

1.1.2.2 Clarification of Bidding Document, Site Visit, Pre-Bid Meeting

1.1.2.2.1 A prospective Bidder requiring any clarification of the Bidding Document shall contact the Employer in writing at the Employer's address indicated in the **BDS** or raise his enquiries during the pre-bid meeting if provided for in accordance with **ITB** 7.4. The Employer will respond to any request for clarification, provided that such request is received prior to the deadline for submission of bids, within the number of days specified in the **BDS**. The Employer response shall be in writing with copies to all Bidders who have acquired the Bidding Document in accordance with **ITB** 6.3, including a description of the inquiry but without identifying its source. Should the Employer deem it necessary to amend the Bidding Document as a result of a request for clarification, it shall do so following the procedure under **ITB** 8 and **ITB** 22.2.

Where applicable, the Bidder is advised to visit and examine the project site and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and entering into a contract for the provision of the Requirements. The costs of visiting the site shall be at the Bidder's own expense.

Pursuant to **ITB** 7.2, where the Bidder and any of its personnel or agents have been granted permission by the Employer to enter upon its premises and lands for the purpose of such visit, 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 visit.

The Bidder's designated representative is invited to attend a pre-bid meeting, if provided for in the **BDS**. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage. If so provided for in the **BDS**, the Employer will organize a site visit

The Bidder is requested, as far as possible, to submit any questions in writing, to reach the Employer not later than one week before the meeting.

Minutes of the pre-bid meeting, including the text of the questions raised without identifying the source, and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Bidders who have acquired the Bidding Document in accordance with **ITB** 6.3. Any modification to the Bidding Document that may become necessary as a result of the pre- bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to **ITB** 8 and not through the minutes of the pre-bid meeting.

Non-attendance at the pre-bid meeting will not be a cause for disqualification of a Bidder

1.1.2.3 Amendment of Bidding Document

1.1.2.3.1 At any time prior to the deadline for submission of bids, the Employer may amend the Bidding Document by issuing addenda.

Any addendum issued shall be part of the Bidding Document and shall be communicated in writing to all who have obtained the Bidding Document from the Employer in accordance with **ITB** 6.3.

To give prospective Bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer may, at its discretion, extend the deadline for the submission of bids, pursuant to **ITB** 22.2

1.1.3 Preparation of Bids

1.1.3.1 Cost of Bidding

1.1.3.1.1 The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Employer shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

1.1.3.2 Language of Bid

1.1.3.2.1 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 in that language, in which case, for purposes of interpretation of the Bid, such translation shall govern

1.1.3.3 Documents Comprising the Bid

1.1.3.3.1 The Bid shall comprise the following:

(a) Letter of Bid

(b) Completed Schedules as provided in Section IV, Bidding Forms;

(c) Bid Security or Bid-Securing Declaration, in accordance with **ITB** 19;

(d) at the Bidder's option, alternative proposals, if permissible, in accordance with **ITB** 13;

(e) written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with **ITB** 20.2;

(f) documentary evidence establishing the eligibility of the Goods and Related Services offered by the Bidder, in accordance with **ITB** 17.1;

(g) documentary evidence establishing the Bidder's qualifications in accordance with the requirements of

Section III, Evaluation and Qualification Criteria, using the relevant forms furnished in Section IV, Bidding Forms;

(h) documentary evidence as specified in the **BDS**, establishing the conformity of the Technical Proposal offered by the Bidder with the Bidding Document, using the relevant forms furnished in Section IV, Bidding Forms;

(i) in the case of a bid submitted by a JVCA, JVCA agreement, or letter of intent to enter into a JVCA including a draft agreement, indicating at least the parts of the Requirements to be executed by the respective partners;

(j) any other document required in the **BDS**.

1.1.3.4 Letter of Bid and Price Schedules

1.1.3.4.1 The Bidder shall submit the Letter of Bid using the form furnished in Section IV, Bidding Forms. This form must be completed without any alterations to its format, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested

1.1.3.5 Alternative Bids

1.1.3.5.1 Unless otherwise indicated in the **BDS**, alternative proposals shall not be considered. If alternative proposals are permitted, their method of evaluation shall be as stipulated in Section III, Evaluation and Qualification Criteria.

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

Except as provided under **ITB** 13.4 below, Bidders wishing to offer technical alternatives to the requirements of the bidding document must first price the Employer's requirements as described in the bidding document 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.

When specified in the **BDS**, Bidders are permitted to submit alternative technical solutions for specified parts of the requirements, and such parts shall be identified in the **BDS**, as will the method for their evaluation, and described in Section VI, Requirements

1.1.3.6 Bid Prices and Discounts

1.1.3.6.1 The prices and discounts quoted by the Bidder in the Letter of Bid and in the Price Schedules shall conform to the requirements specified in **ITB** 14.2.

Unless otherwise provided in the **BDS** and the **General Conditions** (**GC**), the prices quoted by the Bidder shall be fixed.

The Bidder shall submit a bid for the whole of the works described in **ITB** 1.1 by filling in prices for all items of the Works, as identified in Section IV, Bidding Forms. In case of admeasurement contracts, the Bidder shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by the Bidder will not be paid for by the Employer when executed and shall be deemed covered by the rates for other items and prices in the Bill of Quantities.

The price to be quoted in the Letter of Bid shall be the total price of the Bid, excluding any discounts offered.

Unconditional discounts, if any, and the methodology for their application shall be quoted in the Letter of Bid, in accordance with **ITB** 12.1.

If, pursuant to **ITB** 14.2, prices are adjustable, the Bidder shall furnish the indices and weightings for the price adjustment formula in the Schedule of Adjustment Data in Section IV (Bidding Forms) and the Employer may require the Bidder to justify its proposed indices and

weightings.

If so, indicated in **ITB** 1.1, bids are invited for individual contracts or for any combination of contracts (packages). Bidders wishing to offer any price reduction for the award of more than one Contract shall specify in their bid the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Price reductions or discounts shall be submitted in accordance with **ITB** 14.5, provided the bids for all contracts are submitted and opened at the same time.

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 and the total bid price submitted by the Bidder

1.1.3.7 Currencies of Bid and Payment

1.1.3.7.1 The currency(ies) of the bid and the currency(ies) for payment shall be as specified in the **BDS**

1.1.3.8 Documents Establishing the Qualifications of the Bidder

1.1.3.8.1 To establish its qualifications to perform the Contract in accordance with Section III, Evaluation and Qualification Criteria, the Bidder shall provide the information requested in Section IV, Bidding Forms.

Bidders, individually or in joint ventures, applying for eligibility for margin of preference, if such margin applies pursuant to **ITB** 31.2, shall supply all information required to satisfy the criteria for eligibility as described in **ITB** 31.2

1.1.3.9 Documents Establishing the Eligibility of the Goods and Related Services

1.1.3.9.1 To establish the eligibility of the Goods and Related Services in accordance with **ITB** Clause 5, Bidders shall complete the forms, included in Section IV, Bidding Forms

1.1.3.10 Period of Validity of Bids

1.1.3.10.1 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.

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 responses shall be made in writing. If a bid security is requested in accordance with **ITB** 19, the Bidder granting the request shall also extend the bid security for twenty-eight (28) days beyond the deadline of the extended validity period. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request shall not be required or permitted to modify its bid, except as provided in **ITB** 18.3.

In the case of fixed price contracts, if the award is delayed by a period exceeding fifty-six (56) days beyond the expiry of the initial bid validity, the Contract price shall be adjusted as specified in the request for extension. Bid evaluation shall be based on the Bid Price without taking into consideration the above correction

1.1.3.11 Bid Security

1.1.3.11.1 The Bidder shall furnish as part of its bid, at the option of the Employer, and as stipulated in the **BDS**, the original of either a Bid-Securing Declaration or a bid security using the relevant form included in Section IV, Bidding Forms. In the case of a bid security, the bid security amount and currency shall be as specified in the **BDS**.

A Bid-Securing Declaration shall use the form included in Section IV, Bidding Forms.

If a bid security is specified pursuant to **ITB** 19.1, the bid security shall be a demand guarantee in any of the following forms at the Bidder's option:

(a). an unconditional guarantee issued by a bank or surety;

(b). an irrevocable letter of credit; or

(c). a cashier's or certified check;

from a reputable source from an eligible country. If the unconditional guarantee is issued by an insurance company or a bonding company located outside the Employer's Country, the issuer shall have a correspondent financial institution located in the Employer's Country to make it enforceable. In the case of a bank guarantee, the bid security shall be submitted either using the Bid Security Form included in Section IV, Bidding Forms or in another substantially similar format approved by the Employer prior to bid submission. In either case, the form must include the complete name of the Bidder. The bid security shall be valid for twenty-eight days (28) beyond the original validity period of the bid, or beyond any period of extension if requested under **ITB** 18.2.

Pursuant to the option stipulated at **ITB** 19.1, any bid not accompanied by a substantially responsive bid security or Bid-Securing Declaration shall be rejected by the Employer as non-responsive.

If a bid security is specified pursuant to **ITB** 19.1, the bid security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's furnishing of the performance security pursuant to **ITB** 38.

The bid security of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the Contract and furnished the required performance security.

The bid security may be forfeited or the Bid-Securing Declaration executed:

(a). if a Bidder withdraws its bid during the period of bid validity specified by the Bidder in the Letter of Bid or

(b). if the successful Bidder fails to:

(i) sign the Contract in accordance with **ITB** 37; or

(ii) furnish a performance security in accordance with **ITB** 38.

The Bid Security or the Bid Securing Declaration of a JVCA shall be in the name of the JVCA that submits the bid. If the JVCA has not been legally constituted into a legally enforceable JVCA at the time of bidding, the Bid Security or the Bid Securing Declaration shall be in the names of all future partners as named in the letter of intent referred to in **ITB** 4.1.

If a Bid-Securing Declaration is executed in accordance with **ITB** 19.7, the Employer will declare the Bidder ineligible to be awarded a contract by the Employer for the period of time stated in the Form of Bid-Securing Declaration

1.1.3.12 Format and Signing of Bid

1.1.3.12.1 The Bidder shall prepare one original of the documents comprising the bid as described in **ITB** 11 and clearly mark it "ORIGINAL." In addition, the Bidder shall submit copies of the bid, in the number specified in the **BDS** and clearly mark them "COPY." In the event of any discrepancy between the original and the copies, the original shall prevail.

The original and all copies of the bid 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 name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the bid where entries have been made shall be signed or initialed by the person signing the bid.

A bid submitted by a JVCA shall comply with the following requirements:

(a). Unless not required in accordance with **ITB** 4.1 (a), be

signed so as to be legally binding on all partners and

(b). Include the Representative's authorization referred to in **ITB** 4.1 (b), consisting of a power of attorney signed by those legally authorized to sign on behalf of the JVCA.

Any amendments, interlineations, erasures, or overwriting shall be valid only if they are signed or initialled by the person signing the bid.

1.1.4 Submission and Opening of Bids

1.1.4.1 Submission, Sealing and Marking of Bids

1.1.4.1.1 Bidders may always submit their bids by mail or by hand. If so, specified in the **BDS**, bidders shall have the option of submitting their bids electronically. Procedures for submission, sealing and marking are as follows:

(a). Bidders submitting bids by mail or by hand shall enclose the original and copies of the Bid in separate sealed envelopes. If so, permitted in accordance with **ITB** 13, alternative proposals, and copies thereof, shall also be placed in separate envelopes. The envelopes shall be duly marked as "ORIGINAL," "ALTERNATIVE," "ORIGINAL COPY," and "ALTERNATIVE COPY" These envelopes shall then be enclosed in one single package. The rest of the procedure shall be in accordance with **ITB** 21.2 and 21.3.

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

The inner and outer envelopes shall:

(a). bear the name and address of the Bidder;

(b). be addressed to the Employer in accordance with **ITB** 22.1;

(c). bear the specific identification of this bidding process pursuant to **ITB** 1.1; and

(d). bear a warning not to open before the time and date for bid

opening

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

1.1.4.2 Deadline for Submission of Bids

1.1.4.2.1 Bids must be received by the Employer at the address and no later than the date and time indicated in the **BDS**.

The Employer may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Document in accordance with **ITB** 8, in which case all rights and obligations of the Employer and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

1.1.4.3 Late Bids

1.1.4.3.1 The Employer shall not consider any bid that arrives after the deadline for submission of bids, in accordance with **ITB** 22. Any bid received by the Employer after the deadline for submission of bids shall be declared late, rejected, and returned unopened to the Bidder

1.1.4.4 Withdrawal, Substitution, and Modification of Bids

1.1.4.4.1 A Bidder may withdraw, substitute, or modify its bid after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with **ITB** 20.2., (except that withdrawal notices do not require copies). The corresponding substitution or modification of the bid must accompany the respective written notice. All notices must be:

(a). prepared and submitted in accordance with **ITB** 20 and **ITB** 21 (except that withdrawals notices do not require copies), and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL," "SUBSTITUTION," "MODIFICATION;"

and

(b). received by the Employer prior to the deadline prescribed for submission of bids, in accordance with **ITB** 22.

Bids requested to be withdrawn in accordance with **ITB** 24.1 shall be returned unopened to the Bidders.

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 Letter of Bid or any extension thereof.

1.1.4.5 Bid Opening

1.1.4.5.1 The Employer shall conduct the bid opening in public, in the presence of Bidders` designated representatives and anyone who choose to attend, and at the address, date and time specified in the **BDS**. Any specific electronic bid opening procedures required if electronic bidding is permitted in accordance with **ITB** 21.1, shall be as specified in the **BDS**.

First, envelopes marked "Withdrawal" shall be opened and read out and the envelope with the corresponding bid shall not be opened, but returned to the Bidder. 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, envelopes 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 to the Bidder. 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. Envelopes 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 bids that are opened and read out at bid opening shall be considered further.

The Employer shall open all other envelopes one at a time and read out: the name of the Bidder, the Bid Price(s), any discounts and their application methodology, alternative bids, the presence or absence of a bid security or Bid-Securing Declaration; and any other details as the Employer may consider appropriate. Only discounts and alternative bids read out at bid opening shall be considered for evaluation. No bid shall be rejected at bid opening except for late bids, in accordance with **ITB** 23.1.

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 if applicable, including any discounts and alternative proposals; and the presence or absence of a bid security or a Bid-Securing Declaration. 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 who submitted bids in time, and posted online when electronic bidding is permitted.

1.1.5 Examination of Bids

1.1.5.1 Confidentiality

1.1.5.1.1 Information relating to the evaluation of bids shall not be disclosed to Bidders or any other persons not officially concerned with such process until information on Contract award is communicated to all Bidders.

Any attempt by a Bidder to influence improperly the Employer in the evaluation of the bids or Contract award decisions may result in the rejection of its bid.

Notwithstanding **ITB** 26.1, 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 should do so in writing

1.1.5.2 Clarification of Bids

1.1.5.2.1 To assist in the examination, evaluation, and comparison of the bids, and qualification of the Bidders, the Employer may, at its discretion, ask any Bidder for a clarification of its bid, allowing a reasonable time for response. 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 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 the Employer in the evaluation of the bids, in accordance with **ITB** 29.

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.

1.1.5.3 Determination of Responsiveness

1.1.5.3.1 The Employer's determination of a bid's responsiveness is to be based on the contents of the bid itself, as defined in **ITB**11.

A substantially responsive bid is one that meets the requirements of the Bidding Document without material deviation, reservation, or omission.

(a). "Deviation" is a departure from the requirements specified in the Bidding Document;

(b). "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Document; and

(c). "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Document.

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 Schedule of Requirements as

specified in Section VI; or

(ii) limit in any substantial way, inconsistent with the 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.

The Employer shall examine the technical aspects of the bid in particular, to confirm that all requirements of Section VI have been met without any 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 subsequently be made responsive by correction of the material deviation, reservation, or omission.

Provided that a bid is substantially responsive, the Employer may waive any quantifiable nonconformity in the bid that does not constitute a material deviation, reservation or omission.

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 in the bid related to documentation requirements. Requesting information or documentation on such nonconformities 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.

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 the non-conforming item or component. The adjustment shall be made using the methodology indicated in Section III, Evaluation and Qualification Criteria

1.1.6 Bid Evaluation and Comparison

1.1.6.1 Correction of Arithmetical Errors

1.1.6.1.1 The Employer shall use the criteria and methodologies indicated in Section III, Evaluation and Qualification Criteria. No other evaluation criteria or methodologies shall be permitted

Provided that the bid is substantially responsive, the Employer shall correct arithmetical errors as indicated in Section III, Evaluation and Qualification Criteria

If a Bidder does not accept the correction of errors, its bid shall be declared non-responsive and its Bid Security shall be forfeited or the Bid-Securing Declaration executed

1.1.6.2 Conversion to Single Currency

1.1.6.2.1 For evaluation and comparison purposes, the currency(ies) of the bid shall be converted into a single currency as specified in Section III, Evaluation and Qualification Criteria.

1.1.6.3 Bid Adjustments

1.1.6.3.1 For evaluation and comparison purposes the Employer shall adjust the bid prices using the criteria and methodology specified in Section III, Evaluation and Qualification Criteria.

Unless otherwise specified in the **BDS**, no margin of domestic or regional preference shall apply. If a margin of preference applies, the application methodology shall be as specified in Section III, Evaluation and Qualification Criteria, and in accordance with the provisions stipulated in the **Rules and Procedures for Procurement of Goods and Works**.

If in the opinion of the Employer the bid which results in the lowest Evaluated Bid, is seriously unbalanced or front loaded or substantially below the Employer's estimates, the Employer may require the Bidder

to produce detailed price analyses for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the methods and schedule proposed. After evaluation of the price analyses, 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.

1.1.6.4 Qualification of the Bidder

1.1.6.4.1 The Employer shall determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated and substantially responsive bid meets the qualifying criteria specified in Section III, Evaluation and Qualification Criteria.

The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to **ITB** 16.

An affirmative determination shall be a prerequisite for award of the Contract to the Bidder. A negative determination shall result in disqualification of the bid, in which event the Employer shall proceed to the next lowest evaluated bid to make a similar determination of that Bidder's qualifications to perform satisfactorily.

The capabilities of the manufacturers and subcontractors proposed in its Bid to be used by the lowest evaluated Bidder for identified major items of the Requirements will also be evaluated for acceptability in accordance with the criteria and methodologies defined in Section III, Evaluation and Qualification Criteria. Their participation should be confirmed with a letter of intent between the parties, as needed. Should a manufacturer or subcontractor be determined to be unacceptable, the Bid will not be rejected, but the Bidder will be required to substitute an acceptable manufacturer or subcontractor

without any change to the bid price

1.1.6.5 Comparison of Bid

1.1.6.5.1 Subject to **ITB** 29, 30 and 31, the Employer shall compare all substantially responsive bids to determine the lowest evaluated bid.

1.1.6.6 Employer's Right to Accept Any Bid, and to Reject Any or All Bids

1.1.6.6.1 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

1.1.7 Award of Contract

1.1.7.1 Award Criteria

1.1.7.1.1 Subject to **ITB** 34.1, the Employer shall award the Contract to the Bidder whose offer has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Document, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily

1.1.7.2 Notification of Award

1.1.7.2.1 Prior to the expiration of the period of bid validity, the Employer shall notify the successful Bidder, in writing, that its bid has been accepted. The notification letter (hereinafter and in the Conditions of Contract and Contract Forms called 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 Contract Forms called "the Contract Price").

Until a formal contract is prepared and executed, the notification of award shall constitute a binding Contract.

At the same time, the Employer shall also notify all other Bidders of the results of the bidding process, and shall publish in the Ministry website (www.kilimo.go.ke) or send via mail , the results identifying the bid and tender numbers and the following information: (i) name of each Bidder who submitted a Bid; (ii) bid prices as read out at bid opening; name and evaluated prices of each Bid that was evaluated; (iv) name of bidders whose bids were rejected and the reasons for their rejection; and (v) name of the winning Bidder, and the price it offered, as well as the duration and summary scope of the contract awarded. After publication of the award, unsuccessful bidders may request in writing to the Employer for a debriefing seeking explanation on the grounds on which their bids were not selected. The Employer shall promptly respond in writing to any unsuccessful Bidder who, after Publication of contract award, requests a debriefing

1.1.7.3 Signing of Contract

1.1.7.3.1 Promptly upon notification, the Employer shall send the successful Bidder the Contract Agreement.

Within twenty-eight (28) days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Employer.

Upon the successful Bidder's furnishing of the signed Contract Agreement and Performance Security pursuant to **ITB** 38, the Employer will discharge its Bid Security, pursuant to **ITB** 19.

1.1.7.4 Performance Security

1.1.7.4.1 Within twenty-eight (28) days of the receipt of notification of award from the Employer, the successful Bidder shall furnish the performance security in accordance with the conditions of contract, subject to **ITB** 31.3, using for that purpose the Performance Security Form included in Section IX, 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.

Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security, or execution of the Bid-Securing Declaration. In that event the Employer may award the Contract to the next lowest evaluated Bidder whose offer is substantially responsive and is determined by the Employer to be qualified to perform the Contract satisfactorily

1.2 Section II. Bid Data Sheet

A. General	
ITB 1.1	The number of the Invitation for Bids is: **MOALD/SDCD/ENG/MIRP/07/2023-2024**
ITB 1.1	The Employer is: **Principal Secretary,** **State Department for Crop Development,** **Ministry of Agriculture and Livestock Development**
ITB 1.1	The name of the bidding process is: **National Competitive Bidding** The identification number of the bidding process is: **MOALD/SDCD/ENG/MIRP/07/2023-2024**
ITB 2.1	The Client is: **Ministry of Agriculture and Livestock Development, State Department for Crop Development**
ITB 2.1	The specific financing institution is: **GOK**
ITB 2.1	The name of the Project is: **Miraa Industry Revitalization Project**
ITB 4.1(a)	The individuals or firms in a joint venture, consortium or association **"shall be"** jointly and severally liable.
B. Contents of Bidding Document	
ITB 7.1	Attention: **Engineering Secretary** **State Department for Crop Development** Street Address: **Kilimo House, Cathedral Road, Nairobi** **P.O. Box 30028-00100** **Nairobi, Kenya** Floor Number: **5th Floor** City: **Nairobi** ZIP Code: **N/A** Country: **KENYA** Electronic mail address: **N/A**

	Requests for clarifications should be received by the Employer no later than **ten (10) days,** prior to the deadline for submission of Bids.
ITB 7.4	A Pre-Bid meeting **"shall not"** take place.
C. Preparation of Bids	
ITB 10.1	The language of the bid is: **English**
ITB 11.1 (h)	The Bidder must provide the following Documentary Evidence to establish the conformity of the Technical Proposal with the Bidding Document: • **Evidence of similar works undertaken in the past two years** • **List of equipment proposed for the works (provide proof of ownership, lease or hire)** • **List of proposed personnel, signed CV's and clear proposed positions/tasks for each** • **Audited financial statements for the last three years** • **Clear work program/plan**
ITB 11.1 (j)	The Bidder shall submit with its bid the following mandatory additional documents: • **Certificate of registration/incorporation** • **Copy of the Bidder's VAT registration certificate or equivalent** • **A valid tax compliance certificate** • **Written authorization for the person signing the documents from the company/Power of Attorney** • **Joint venture agreement, in the required format, for those submitting bids as joint ventures** • **A bid guarantee from a Bank in the format**

	given/attached and shall be valid for twenty-eight days (28) beyond the original validity period of the bid • **Duly filled and signed letter of bid in the company letterhead and in the format attached.**
ITB 13.1	Alternative bids are not permitted.
ITB 13.2	Alternatives to the Times for Completion **"shall not be"** permitted. If alternatives to the Times for Completion are permitted, the evaluation method will be as specified in Section III, Evaluation and Qualification Criteria.
ITB 13.4	Alternative technical solutions shall be permitted for the following parts of the Works, as further detailed in the Specification: **"none".**
ITB 14.2	Prices **"shall be"** fixed.
ITB 14.6	The prices quoted by the Bidder **"shall not be"** subject to adjustment during the performance of the Contract.
ITB 15.1	The currency of the bid and payment shall be: **Kenya Shilling (KES)**
ITB 18.1	The bid validity period shall be: **120 days.**
ITB 19.1	The Bidder shall furnish a bid security, in the amount of **KES 230,000.00 Bank Guarantee**
ITB 20.1	In addition to the original of the Bid, the number of copies is: **1 copy**
ITB 20.2	The written confirmation of authorization to sign on behalf of the Bidder shall indicate: (a). The name and description of the documentation required

	to demonstrate the authority of the signatory to sign the Bid such as a Power of Attorney, authorization letter in company stationery; and (b). In the case of Bids submitted by an existing or intended JVCA an undertaking signed by all parties (i) stating that all parties shall be jointly and severally liable, if so, required in accordance with ITB 4.1(a), and (ii) nominating a Representative who shall have the authority to conduct all business for and on behalf of any and all the parties of the JVCA during the bidding process and, in the event the JV is awarded the Contract, during contract execution."]
D. Submission and Opening of Bids	
ITB 21.1	Bidders **"shall not"** have the option of submitting their bids electronically.
ITB 21.1 (b)	The electronic bidding submission procedures shall be: **None**
ITB 22.1	For bid submission purposes only, the Employer's address is: Attention: **Principal Secretary, State Department for Crop Development** Street Address: **Cathedral Road** Floor/Room number: **Ground Floor, State Department of Agriculture Tender Box** City: **Nairobi** ZIP Code: **P.O. Box 30028-00100, Nairobi, Kenya** Country: **KENYA** The deadline for bid submission is: **Date: 06/10/2023** Time: **11.00am**
ITB 25.1	The bid opening shall take place at: Street Address: **Cathedral Road, State Department for Crop Development,** Floor/Room number: **ASCU Boardroom, Kilimo House** City: **Nairobi** Country: **Kenya** Date: **06/10/2023**

	Time: **11.00am**
ITB 25.1	The electronic bid opening procedures shall be: **None**
E. Bid Evaluation and Comparison	
ITB 31.2	A margin of domestic or regional preference **"shall not"** apply.

1.3 Section III. Evaluation and Qualification Criteria

1.3.1 Evaluation Criteria and Methodology

1.3.1.1 General Provisions

Wherever a Tenderer is required to state a monetary amount, Tenderers should indicate the Kenya Shilling equivalent using the rate of exchange determined as follows:

a) 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 that year is to be converted) was originally established.
b) Value of single contract - Exchange rate prevailing on the date of the contract signature.
c) Exchange rates shall be taken from the publicly available source identified in the ITT 14.3. Any error in determining the exchange rates in the Tender may be corrected by the Procuring Entity.

This section contains the criteria that the Employer shall use to evaluate tender and qualify tenderers. No other factors, methods or criteria shall be used other than specified in this tender document. The Tenderer shall provide all the information requested in the forms included in Section IV, Tendering Forms. The Procuring Entity should use **the Standard Tender Evaluation Document for Goods and Works** for evaluating Tenders.

Evaluation and contract award Criteria

The Procuring Entity shall use the criteria and methodologies listed in this Section to evaluate tenders and arrive at the Lowest Evaluated Tender. The tender that (i) meets the qualification criteria, (ii) has been determined to be substantially responsive to the Tender Documents, and (iii) is determined to have the Lowest Evaluated Tender price shall be selected for award of contract.

1.3.1.2 Preliminary examination for Determination of Responsiveness

The Procuring Entity will start by examining all tenders to ensure they meet in all respects the eligibility criteria and other requirements in the ITT, and that the tender is complete in all aspects in meeting the requirements of "Part 2 – Procuring Entity's Works Requirements", including checking for tenders with unacceptable errors, abnormally low tenders, abnormally high tenders and tenders that are front loaded. The Standard Tender Evaluation Report Document for Goods and Works for evaluating Tenders provides very clear guide on how to deal with review of these requirements. Tenders that do not pass the Preliminary Examination will be considered irresponsive and will not be considered further.

[The Procuring Entity will provide the preliminary evaluation criteria. To facilitate, a template may be attached or clearly described all information and list of documentation to be submitted by Tenderers to enable preliminary evaluation of the Tender]

1.3.1.3 Tender Evaluation (ITT 35) Price evaluation: in addition to the criteria listed in ITT 35.2 (a) – (c) the following criteria shall apply:

i) **Alternative Completion Times, i**f permitted under ITT 13.2, will be

evaluated as follows:
……

ii) **Alternative Technical Solutions** for specified parts of the Works, if permitted under ITT 13.4, will be evaluated as follows: ……

iii) **Other Criteria; i**f permitted under ITT 35.2(d):
……

1.3.1.4 Multiple Contracts

Multiple contracts will be permitted in accordance with ITT 35.4. Tenderers are evaluated on basis of Lots and the lowest evaluated tenderer identified for each Lot. The Procuring Entity will select one Option of the two Options listed below for award of Contracts.

OPTION 1

(i.) If a tenderer wins only one Lot, the tenderer will be awarded a contract for that Lot, provided the tenderer meets the Eligibility and Qualification Criteria for that Lot.

(ii.) If a tenderer wins more than one Lot, the tender will be awarded contracts for all won Lots, provided the tenderer meets the aggregate Eligibility and Qualification Criteria for all the Lots. The tenderer will be awarded the combination of Lots for which the tenderer qualifies and the others will be considered for award to second lowest the tenderers.

OPTION 2
The Procuring Entity will consider all possible combinations of won Lots [contract(s)] and determine the combinations with the lowest evaluated price. Tenders will then be awarded to the Tenderer or Tenderers in the combinations provided the tenderer meets the aggregate Eligibility and Qualification Criteria for all the won Lots.

1.3.1.5 Alternative Tenders (ITT 13.1)

An alternative if permitted under ITT 13.1, will be evaluated as follows:

The Procuring Entity shall consider Tenders offered for alternatives as specified in Part 2- Works Requirements. Only the technical alternatives, if any, of the Tenderer with the Best Evaluated Tender conforming to the basic technical requirements shall be considered by the Procuring Entity.

1.3.1.6 Margin of Preference is not applicable

1.3.1.7 Post qualification and Contract ward (ITT 39), more specifically,

a) In case the tender was subject to post-qualification, the contract shall be awarded to the lowest evaluated tenderer, subject to confirmation of pre-qualification data, if so required.

b) In case the tender was not subject to post-qualification, the tender that has been determined to be the lowest evaluated tenderer shall be considered for contract award, subject to meeting each of the following conditions.

i) The Tenderer 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 of Kenya Shillings _____.

ii) Minimum average annual construction turnover of Kenya Shillings_____ *[insert amount]*, equivalent calculated as total certified payments received for contracts in progress and/or completed within the last_____*[insert of year]*years.

iii) At least_____(*insert number)* of contract(s) of a similar nature executed within Kenya, or the East African Community or abroad, that have been satisfactorily and substantially completed as a prime contractor, or joint venture member or sub-contractor each of minimum value Kenya shillings_____equivalent.

iv) Contractor's Representative and Key Personnel, which are specified as

v) Contractors key equipment listed on the table "Contractor's Equipment" below and more specifically listed as *[specify requirements for each lot as applicable]* _____

vi) Other conditions depending on their seriousness.

(a). History of non-performing contracts:
Tenderer and each member of JV in case the Tenderer is a JV, shall demonstrate that non-performance of a contract did not occur because of the default of the Tenderer, or the member of a JV in the last_____(*specify years*). The required information shall be furnished in the appropriate form.

(b). Pending Litigation
Financial position and prospective long-term profitability of the Single Tenderer, and in the case the Tenderer is a JV, of each member of the JV, shall remain sound according to criteria established with respect to Financial Capability under Paragraph (i) above if all pending litigation will be resolved against the Tenderer. Tenderer shall provide information on pending litigations in the appropriate form.

(c). Litigation History
There shall be no consistent history of court/arbitral award decisions against the Tenderer, in the last (*specify years*). All parties to the contract shall furnish the information in the appropriate form about any litigation or arbitration resulting from contracts completed or ongoing under its execution over the years specified. A consistent history of awards against the Tenderer or any member of a JV may result in rejection of the tender

1.4 Section IV. Bidding Forms

Table of Forms

1.4.1 Qualification Form Summary

1	2	3	*4*
Item No.	**Qualification Subject**	**Qualification Requirement**	***Document To be Completed by Tenderer***
1	Nationality	Nationality in accordance with ITT 3.6	Forms ELI – 1.1 and 1.2, with attachments
2	Tax Obligations for Kenyan Tenderers	Has produced a current tax clearance certificate or tax exemption certificate issued by the the Kenya Revenue Authority in accordance with ITT 3.14.	Form of Tender
3	Conflict of Interest	No conflicts of interest in accordance with ITT 3.3	Form of Tender
4	PPRA Eligibility	Not having been declared ineligible by the PPRA as described in ITT 3.8	Form of Tender
5	State- owned Enterprise	Meets conditions of ITT 3.7	Forms ELI – 1.1 and 1.2, with attachments
6	Goods, equipment and services to be supplied under the contract	To have their origin in any country that is not determined ineligible under ITT 4.1	Forms ELI – 1.1 and 1.2, with attachments
7	History of Non-Performing Contracts	Non-performance of a contract did not occur as a result of contractor default since 1st January [……./.	Form CON-2
8	Suspension Based on Execution of Tender/Proposal Securing Declaration by the Procuring Entity	Not under suspension based on-execution of a Tender/Proposal Securing Declaration pursuant to ITT 19.9	Form of Tender
9	Pending Litigation	Tender's financial position and prospective long-term profitability still sound according to criteria established in 3.1 and assuming that all pending litigation will NOT be resolved against the Tenderer.	Form CON – 2
10	Litigation History	No consistent history of court/arbitral award decisions against the Tenderer since 1st January *[insert year]*	Form CON – 2
11	Financial Capabilities	(i) The Tenderer shall demonstrate that it has	Form FIN – 3.1, with attachments

1	2	3	*4*
Item No.	**Qualification Subject**	**Qualification Requirement**	***Document To be Completed by Tenderer***
		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 Kenya Shillings *[insert amount]* equivalent for the subject contract(s) net of the Tenderer's other commitments. (ii) The Tenderers shall also demonstrate, to the satisfaction of the Procuring Entity, that it has adequate sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments. (iii) The audited balance sheets or, if not required by the laws of the Tenderer's country, other financial statements acceptable to the Procuring Entity, for the last *[insert number of years]* years shall be submitted and must demonstrate the current soundness of the Tenderer's financial position and indicate its prospective long-term profitability.	
12	Average Annual Construction Turnover	Minimum average annual construction turnover of Kenya Shillings *[insert amount]*, equivalent calculated as total certified payments received for contracts in progress and/or completed within the last *[insert of year]* years, divided by *[insert number of years]* years	Form FIN – 3.2
13	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 *[insert*	**4.** Form EXP – 4.1 **Experience**

1	2	3	*4*
Item No.	**Qualification Subject**	**Qualification Requirement**	***Document To be Completed by Tenderer***
		number of years] years, starting 1st January *[insert year]*.	
	Specific Construction & Contract Management Experience	A minimum number of *[state the number]* similar contracts specified below that have been satisfactorily and substantially completed as a prime contractor, joint venture member, management contractor or sub-contractor between 1st January [*insert year*] and tender submission deadline i.e. …. (number) contracts, each of minimum value Kenya shillings…….. equivalent. [*In case the Works are to be tender as individual contracts under multiple contract procedure, the minimum number of contracts required for purposes of evaluating qualification shall be selected from the options mentioned in ITT 35.4]* The similarity of the contracts shall be based on the following: [*Based on Section VII, Scope of Works, specify the minimum key requirements in terms of physical size, complexity, construction method, technology and/or other characteristics including part of the requirements that may be met by specialized subcontractors, if permitted in accordance with ITT 34.3]*	Form EXP 4.2(a)

1.4.2 QUALIFICATION FORMS

1.4.2.1 FORM EQU: EQUIPMENT

The Tenderer shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment listed in Section III, Evaluation and Qualification Criteria. A separate Form shall be prepared for each item of equipment listed, or for alternative equipment proposed by the Tenderer.

Item 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 the equipment ☐ Owned ☐ Rented ☐ Leased ☐ Specially manufactured	

Omit the following information for equipment owned by the Tenderer.

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	

1.4.3 FORM PER -1

1.4.3.1 Contractor's Representative and Key Personnel Schedule

Tenderers should provide the names and details of the suitably qualified Contractor's Representative and Key Personnel to perform the Contract. The data on their experience should be supplied using the Form PER-2 below for each candidate.

1.4.3.2 Contractor' Representative and Key Personnel

1.	**Title of position: Contractor's Representative**	
	Name of candidate:	
	Duration of appointment:	[*insert the whole period (start and end dates) for which this position will be engaged*]
	Time commitment: for this position:	[*insert the number of days/week/months/ that has been scheduled for this position*]
	Expected time schedule for this position:	[*insert the expected time schedule for this position (e.g. attach high level Gantt chart*]
2.	**Title of position:** *[_____]*	
	Name of candidate:	
	Duration of appointment:	[*insert the whole period (start and end dates) for which this position will be engaged*]
	Time commitment: for this position:	[*insert the number of days/week/months/ that has been scheduled for this position*]
	Expected time schedule for this position:	[*insert the expected time schedule for this position (e.g. attach high level Gantt chart*]
3.	**Title of position:** *[_____]*	
	Name of candidate:	
	Duration of appointment:	[*insert the whole period (start and end dates) for which this position will be engaged*]
	Time commitment: for this position:	[*insert the number of days/week/months/ that has been scheduled for this position*]
	Expected time schedule for this position:	[*insert the expected time schedule for this position (e.g. attach high level Gantt chart*]
4.	**Title of position:** *[_____]*	
	Name of candidate:	
	Duration of appointment:	[*insert the whole period (start and end dates) for which this position will be engaged*]
	Time commitment: for this position:	[*insert the number of days/week/months/ that has been scheduled for this position*]
	Expected time schedule for this position:	[*insert the expected time schedule for this position (e.g. attach high level Gantt chart*]
5.	**Title of position:** *[insert title]*	

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

1.4.4 FORM PER-2:

Resume and Declaration - Contractor's Representative and Key Personnel.

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

Name of Tenderer

Position [*# 1*]: [*title of position from Form PER-1*]		
Personnel information	Name:	Date of birth:
	Address:	E-mail:
	Professional qualifications:	
	Academic qualifications:	
	Language proficiency: *[language and levels of speaking, reading and writing skills]*	
Details		
	Address of Procuring Entity:	
	Telephone:	Contact (manager / personnel officer):
	Fax:	
	Job title:	Years with present Procuring Entity:

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

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

1.4.4.1 Declaration

I, the undersigned *[insert either "Contractor's Representative" or "Key Personnel" as applicable]*, 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 Tender:

Commitment	**Details**
Commitment to duration of contract:	*[insert period (start and end dates) for which this Contractor's Representative or Key Personnel is available to work on this contract]*
Time commitment:	*[insert period (start and end dates) for which this Contractor's Representative or Key Personnel is available to work on this contract]*

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

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

Name of Contractor's Representative or Key Personnel: [*insert name*]

Signature: _____

Date: (day month year): _____

Countersignature of authorized representative of the Tenderer:

Signature:_____

Date: (day month year): _____

1.4.5 TENDERER'S QUALIFICATION WITHOUT PRE-QUALIFICATION

To establish its qualifications to perform the contract in accordance with Section III, Evaluation and Qualification Criteria the Tenderer shall provide the information requested in the corresponding Information Sheets included hereunder.

1.4.5.1 FORM ELI -1.1

Tenderer Information Form

Date: _____

ITT No. and title: _____

Tenderer's name
In case of Joint Venture (JV), name of each member:
Tenderer's actual or intended country of registration: *[indicate country of Constitution]*
Tenderer's actual or intended year of incorporation:
Tenderer's legal address [in country of registration]:
Tenderer's authorized representative information Name: _____ Address: _____ Telephone/Fax numbers: _____ E-mail address: _____
1. Attached are copies of original documents of ☐ Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above, in accordance with ITT 3.6 ☐ In case of JV, letter of intent to form JV or JV agreement, in accordance with ITT 3.5 ☐ In case of state-owned enterprise or institution, in accordance with ITT 3.8, documents establishing: • Legal and financial autonomy • Operation under commercial law • Establishing that the Tenderer is not under the supervision of the Procuring Entity 2. Included are the organizational chart and a list of Board of Directors.

1.4.5.2 FORM ELI -1.2

Tenderer's JV Information Form
(to be completed for each member of Tenderer's JV)
Date: _____

ITT No. and title: _____

Tenderer's JV name:
JV member's name:
JV member's country of registration:
JV member's year of constitution:
JV member's legal address in country of constitution:
JV member's authorized representative information Name: _____ Address: _____ Telephone/Fax numbers: _____ E-mail address: _____
1. Attached are copies of original documents of ☐ Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITT 3.6. ☐ In case of a state-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and that they are not under the supervision of the Procuring Entity, in accordance with ITT 3.8. 2. Included are the organizational chart and a list of Board of Directors.

1.4.5.3 FORM CON – 2

Historical Contract Non-Performance, Pending Litigation and Litigation History

Tenderer's Name: _____
Date: _____
JV Member's Name_____
ITT No. and title: _____

Non-Performed Contracts in accordance with Section III, Evaluation and Qualification Criteria			
☐ Contract non-performance did not occur since 1st January *[insert year]* specified in Section III, Evaluation and Qualification Criteria, Sub-Factor 2.1. ☐ Contract(s) not performed since 1st January *[insert year]* specified in Section III, Evaluation and Qualification Criteria, requirement 2.1			
Year	**Non-performed portion of contract**	**Contract Identification**	**Total Contract Amount (current value, currency, exchange rate and Kenya Shilling equivalent)**
[insert year]	*[insert amount and percentage]*	Contract Identification: *[indicate complete contract name/ number, and any other identification]* Name of Procuring Entity: *[insert full name]* Address of Procuring Entity: *[insert street/city/country]* Reason(s) for nonperformance: *[indicate main reason(s)]*	*[insert amount]*
Pending Litigation, in accordance with Section III, Evaluation and Qualification Criteria			
☐ No pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3. ☐ Pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3 as indicated below.			

Year of dispute	**Amount in dispute (currency)**	**Contract Identification**	**Total Contract Amount (currency), Kenya Shilling Equivalent (exchange rate)**

		Contract Identification: _____ Name of Procuring Entity: _____ Address of Procuring Entity: _____ Matter in dispute: _____ Party who initiated the dispute: ____ Status of dispute: _____	
		Contract Identification: Name of Procuring Entity: Address of Procuring Entity: Matter in dispute: Party who initiated the dispute: Status of dispute:	

Litigation History in accordance with Section III, Evaluation and Qualification Criteria

☐ No Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4.

☐ Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4 as indicated below.

Year of award	**Outcome as percentage of Net Worth**	**Contract Identification**	**Total Contract Amount (currency), Kenya Shilling Equivalent (exchange rate)**
[insert year]	*[insert percentage]*	Contract Identification: [indicate complete contract name, number, and any other identification] Name of Procuring Entity: *[insert full name]* Address of Procuring Entity: *[insert street/city/country]* Matter in dispute: *[indicate main issues in dispute]* Party who initiated the dispute: *[indicate "Procuring Entity" or "Contractor"]* Reason(s) for Litigation and award decision *[indicate main reason(s)]*	*[insert amount]*

1.4.5.4 FORM FIN – 3.1:

Financial Situation and Performance

Tenderer's Name: _____
Date: _____
JV Member's Name_____
ITT No. and title: _____

4.4.1. 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 ITT 15 for the exchange rate

4.4.2 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 (Kenya Shilling equivalent)**
1		

2		
3		

4.4.3 Financial documents

The Tenderer and its parties shall provide copies of financial statements for _____years pursuant Section III, Evaluation and Qualifications Criteria, Sub-factor 3.1. The financial statements shall:

(a) reflect the financial situation of the Tenderer 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[5] for the _____years required above; and complying with the requirements

[5] If the most recent set of financial statements is for a period earlier than 12 months from the date of Tender, the reason for this should be justified.

1.4.5.5 FORM FIN – 3.2:

Average Annual Construction Turnover

Tenderer's Name: _____
Date: _____
JV Member's Name_____
ITT No. and title: _____

	Annual turnover data (construction only)		
Year	**Amount Currency**	**Exchange rate**	**Kenya Shilling equivalent**
[indicate year]	*[insert amount and indicate currency]*		
Average Annual Construction Turnover *			

* See Section III, Evaluation and Qualification Criteria, Sub-Factor 3.2.

1.4.5.6 FORM FIN – 3.3:

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, Evaluation and Qualification Criteria

Financial Resources		
No.	**Source of financing**	**Amount (Kenya Shilling equivalent)**
1		
2		
3		

1.4.5.7 FORM FIN – 3.4:

Current Contract Commitments / Works in Progress

Tenderers 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	Procuring Entity's **Contact Address, Tel,**	**Value of Outstanding Work [Current Kenya Shilling /month Equivalent]**	**Estimated Completion Date**	**Average Monthly Invoicing Over Last Six Months [Kenya Shilling /month)]**
1					
2					
3					
4					
5					

1.4.5.8 FORM EXP - 4.1

General Construction Experience

Tenderer's Name: _____
Date: _____
JV Member's Name_____
ITT No. and title: _____

Page _____of _____pages

Starting Year	Ending Year	Contract Identification	Role of Tenderer
		Contract name: _____ Brief Description of the Works performed by the Tenderer: _____ Amount of contract: _____ Name of Procuring Entity: _____ Address: _____	
		Contract name: _____ Brief Description of the Works performed by the Tenderer: _____ Amount of contract: _____ Name of Procuring Entity: _____ Address: _____	
		Contract name: _____ Brief Description of the Works performed by the Tenderer: _____ Amount of contract: _____ Name of Procuring Entity: _____ Address: _____	

1.4.5.9 FORM EXP - 4.2(a)

Specific Construction and Contract Management Experience

Tenderer's Name: _____
Date: _____
JV Member's Name_____
ITT No. and title: _____

Similar Contract No.	**Information**			
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor ☐	Member in JV ☐	Management Contractor ☐	Sub-contractor ☐
Total Contract Amount			**Kenya Shilling**	
If member in a JV or sub-contractor, specify participation in total Contract amount				
Procuring Entity's Name:				
Address: Telephone/fax number E-mail:				

1.4.5.10 FORM EXP - 4.2 (a) (cont.)

Specific Construction and Contract Management Experience (cont.)

Similar Contract No.	**Information**
Description of the similarity in accordance with Sub-Factor 4.2(a) of Section III:	
1. Amount	
2. Physical size of required works items	
3. Complexity	
4. Methods/Technology	
5. Construction rate for key activities	
6. Other Characteristics	

1.4.5.11 FORM EXP - 4.2(b)

Construction Experience in Key Activities

Tenderer's Name: _____
Date: _____
Tenderer's JV Member Name: _____
Sub-contractor's Name[6] (as per ITT 34): _____
ITT No. and title: _____

All Sub-contractors for key activities must complete the information in this form as per ITT 34 and Section III, Evaluation and Qualification Criteria, Sub-Factor 4.2.

1. Key Activity No One: _ _____

	Information			
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor ☐	Member in JV ☐	Management Contractor ☐	Sub-contractor ☐
Total Contract Amount			**Kenya Shilling**	
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				
Procuring Entity's Name:				
Address: Telephone/fax number E-mail:				

	Information

[6] If applicable

Description of the key activities in accordance with Sub-Factor 4.2(b) of Section III:	

2. Activity No. Two
3. .....

1.4.6 OTHER FORMS

1.4.6.1 FORM OF TENDER

1.4.6.1.1 (Amended **and** issued pursuant to PPRA CIRCULAR No. 02/2022)

INSTRUCTIONS TO TENDERERS

i) All italicized text is to help the Tenderer in preparing this form.

ii) The Tenderer must prepare this Form of Tender on stationery with its letterhead clearly showing the Tenderer's complete name and business address. Tenderers are reminded that this is a mandatory requirement.

iii) Tenderer must complete and sign CERTIFICATE OF INDEPENDENT TENDER DETERMINATION and the SELF DECLARATION FORMS OF THE TENDERER as listed under (s) below.

Date of this Tender submission:.....*[insert date (as day, month and year) of Tender submission]* **Tender Name and Identification**:.....*[insert identification]* **Alternative No.**:.....*[insert identification No if this is a Tender for an alternative]*

To: ..... *[Insert complete name of Procuring Entity]*

Dear Sirs,

1. In accordance with the Conditions of Contract, Specifications, Drawings and Bills of Quantities for the execution of the above-named Works, we, the undersigned offer to construct and complete the Works and remedy any defects therein for the sum of Kenya Shillings [*[Amount in figures]*_____Kenya S

   The above amount includes foreign currency amount (s) of [*state figure or a percentage and currency*] [figures]_____[words]_____.

   The percentage or amount quoted above does not include provisional sums, and only allows not more than two foreign currencies.

2. We undertake, if our tender is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Project Manager's notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Special Conditions of Contract.

3. We agree to adhere by this tender until_____*[Insert date],* and it shall remain binding upon us and may be accepted at any time before that date.

4. Unless and until a formal Agreement is prepared and executed this tender together with your written acceptance thereof, shall constitute a binding Contract between us. We further understand that you are not bound to accept the lowest or any tender you

may receive.

5. We, the undersigned, further declare that:

i) *No reservations:* We have examined and have no reservations to the tender document, including Addenda issued in accordance with ITT 28;

ii) *Eligibility:* We meet the eligibility requirements and have no conflict of interest in accordance with ITT 3 and 4;

iii) *Tender-Securing Declaration:* We have not been suspended nor declared ineligible by the Procuring Entity based on execution of a Tender-Securing or Proposal-Securing Declaration in the Procuring Entity's Country in accordance with ITT 19.8;

iv) *Conformity:* We offer to execute in conformity with the tendering documents and in accordance with the implementation and completion specified in the construction schedule, the following Works: *[insert a brief description of the Works];*

v) *Tender Price:* The total price of our Tender, excluding any discounts offered in item 1 above is: *[Insert one of the options below as appropriate]*

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

Option 2, in case of multiple lots:

a) Total price of each lot [*insert the total price of each lot in words and figures, indicating the various amounts and the respective currencies*]; and

b) Total price of all lots (sum of all lots) [*insert the total price of all lots in words and figures, indicating the various amounts and the respective currencies*];

vii) *Discounts:* The discounts offered and the methodology for their application are:

viii) The discounts offered are: [*Specify in detail each discount offered.*]

ix) The exact method of calculations to determine the net price after application of discounts is shown below: [*Specify in detail the method that shall be used to apply the discounts*];

x) *Tender Validity Period:* Our Tender shall be valid for the period specified in TDS 18.1 (as amended, if applicable) from the date fixed for the Tender submission deadline specified in TDS 22.1 (as amended, if applicable), and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

xi) *Performance Security:* If our Tender is accepted, we commit to obtain a Performance Security in accordance with the Tendering document;

xii) *One Tender Per Tender:* We are not submitting any other Tender(s) as an individual Tender, and we are not participating in any other Tender(s) as a Joint Venture member or as a subcontractor, and meet the requirements of ITT 3.4, other than alternative Tenders submitted in accordance with ITT 13.3;

xiii) *Suspension and Debarment:* We, along with any of our subcontractors, suppliers, Project Manager, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the Public Procurement Regulatory Authority or any other entity of the Government of Kenya, or any international organization.

xiv) *State-owned enterprise or institution:* [*select the appropriate option and delete the other*] [*We are not a state-owned enterprise or institution*] / [*We are a state-owned enterprise or institution but meet the requirements of ITT 3.8*];

xv) *Commissions, gratuities, fees:* We have paid, or will pay the following commissions, gratuities, or fees with respect to the tender process or execution of the Contract: *[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.")

xvi) Binding Contract: We understand that this Tender, together with your written acceptance thereof included in your Letter of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed;

xvii) Not Bound to Accept: We understand that you are not bound to accept the lowest evaluated cost Tender, the Most Advantageous Tender or any other Tender that you may receive;

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

xix) Collusive practices: We hereby certify and confirm that the tender is genuine, non-collusive and made with the intention of accepting the contract if awarded. To this effect we have signed the "Certificate of Independent Tender Determination" attached below.

xx) We undertake to adhere by the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal, copy available from_(*specify website*) during the procurement process and the execution of any resulting contract.

xxi) **Beneficial Ownership Information:** We commit to provide to the procuring entity the Beneficial Ownership Information in conformity with the Beneficial Ownership Disclosure Form upon receipt of notification of intention to enter into a contract in the event we are the successful tenderer in this subject procurement proceeding.

xxii) We, the Tenderer, have duly completed, signed and stamped the following Forms as part of our Tender:

a) Tenderer's Eligibility; Confidential Business Questionnaire – to establish we are not in any conflict to interest.
b) Certificate of Independent Tender Determination – to declare that we completed the tender without colluding with other tenderers.
c) Self-Declaration of the Tenderer – to declare that we will, if awarded a contract, not engage in any form of fraud and corruption.

d) Declaration and commitment to the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal

Further, we confirm that we have read and understood the full content and scope of fraud and corruption as informed in **"Appendix 1- Fraud and Corruption**" attached to the Form of Tender.

Name of the Tenderer: *[*insert complete name of person signing the Tender*]

Name of the person duly authorized to sign the Tender on behalf of the Tenderer: **[*insert complete name of person duly authorized to sign the Tender*]

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

Signature of the person named above: [*insert signature of person whose name and capacity are shown above*] **Date signed** [*insert date of signing*] day of [*insert month*], [*insert year*]

Date signed_____day of_____, _____

Notes

** In the case of the Tender submitted by joint venture specify the name of the Joint Venture as Tenderer*
*** Person signing the Tender shall have the power of attorney given by the Tenderer to be attached with the Tender.*

1.4.6.2 TENDERER'S ELIGIBILITY- CONFIDENTIAL BUSINESS QUESTIONNAIRE

1.4.6.2.1 Instruction to Tenderer

Tender is instructed to complete the particulars required in this Form, *one form for each entity if Tender is a JV.* Tenderer is further reminded that it is an offence to give false information on this Form.

1.4.6.2.2 (a) Tenderer's details

	ITEM	**DESCRIPTION**
1	Name of the Procuring Entity	
2	Reference Number of the Tender	
3	Date and Time of Tender Opening	
4	Name of the Tenderer	
5	Full Address and Contact Details of the Tenderer.	1. Country 2. City 3. Location 4. Building 5. Floor 6. Postal Address 7. Name and email of contact person.
6	Current Trade License Registration Number and Expiring date	
7	Name, country and full address (*postal and physical addresses, email, and telephone number*) of Registering Body/Agency	
8	Description of Nature of Business	
9	Maximum value of business which the Tenderer handles.	
10	State if Tenders Company is listed in stock exchange, give name and full address (*postal and physical addresses, email, and telephone number*) of state which stock exchange	

General and Specific Details

b) **Sole Proprietor,** provide the following details.

Name in full_____Age_____ Nationality_

c) **Partnership,** provide the following details.

	Names of Partners	Nationality	Citizenship	% Shares owned
1				
2				
3				

d) **Registered Company,** provide the following details.

i) Private or public Company_____

ii) State the nominal and issued capital of the Company_____ N

iii) Give details of Directors as follows.

	Names of Director	Nationality	Citizenship	% Shares owned
1				
2				
3				

1.4.6.3 DISCLOSURE OF INTEREST- Interest of the Firm in the Procuring Entity.

i) Are there any person/persons in .... (*Name of Procuring Entity)* who has/have an interest or relationship in this firm? Yes/No.....

If yes, provide details as follows.

	Names of Person	**Designation in the Procuring Entity**	**Interest or Relationship with Tenderer**
1			
2			
3			

ii) Conflict of interest disclosure

	Type of Conflict	**Disclosure YES OR NO**	**If YES provide details of the relationship with Tenderer**
1	Tenderer is directly or indirectly controls, is controlled by or is under common control with another tenderer.		
2	Tenderer receives or has received any direct or indirect subsidy from another tenderer.		
3	Tenderer has the same legal representative as another tenderer		
4	Tender has a relationship with another tenderer, directly or through common third parties, that puts it in a position to influence the tender of another tenderer, or influence the decisions of the Procuring Entity regarding this tendering process.		
5	Any of the Tenderer's affiliates participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the tender.		
6	Tenderer would be providing goods, works, non-consulting services or consulting services during implementation of the contract specified in this Tender Document.		
7	Tenderer has a close business or family relationship with a professional staff of the Procuring Entity who are directly or indirectly involved in the preparation of the Tender document or specifications of the Contract, and/or the Tender evaluation process of such contract.		
8	Tenderer has a close business or family relationship with a professional staff of the Procuring Entity who would be involved in the implementation or supervision of the such		

	Type of Conflict	Disclosure YES OR NO	If YES provide details of the relationship with Tenderer
	Contract.		
9	Has the conflict stemming from such relationship stated in item 7 and 8 above been resolved in a manner acceptable to the Procuring Entity throughout the tendering process and execution of the Contract.		

f) Certification

On behalf of the Tenderer, I certify that the information given above is complete, current and accurate as at the date of submission.

Full Name_____ Title or

(Signature) *(Date)*

1.4.6.4 CERTIFICATE OF INDEPENDENT TENDER DETERMINATION

I, the undersigned, in submitting the accompanying Letter of Tender to the_____ to be true and complete in every respect:

I certify, on behalf of_____[Name of Tenderer] that:

1. I have read and I understand the contents of this Certificate;

2. I understand that the Tender will be disqualified if this Certificate is found not to be true and complete in every respect;

3. I am the authorized representative of the Tenderer with authority to sign this Certificate, and to submit the Tender on behalf of the Tenderer;

4. For the purposes of this Certificate and the Tender, I understand that the word "competitor" shall include any individual or organization, other than the Tenderer, whether or not affiliated with the Tenderer, who:
   a) has been requested to submit a Tender in response to this request for tenders;
   b) could potentially submit a tender in response to this request for tenders, based on their qualifications, abilities or experience;

5. The Tenderer discloses that [check one of the following, as applicable:
   a) The Tenderer has arrived at the Tender independently from, and without consultation, communication, agreement or arrangement with, any competitor;
   b) the Tenderer has entered into consultations, communications, agreements or arrangements with one or more competitors regarding this request for tenders, and the Tenderer discloses, in the attached document(s), complete details thereof, including the names of the competitors and the nature of, and reasons for, such consultations, communications, agreements or arrangements;

6. In particular, without limiting the generality of paragraphs (5)(a) or (5)(b) above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
   a) prices;
   b) methods, factors or formulas used to calculate prices;
   c) the intention or decision to submit, or not to submit, a tender; or
   d) the submission of a tender which does not meet the specifications of the request for Tenders; except as specifically disclosed pursuant to paragraph (5)(b) above;

7. In addition, there has been no consultation, communication, agreement or arrangement with any competitor regarding the quality, quantity, specifications or delivery particulars of the works or services to which this request for tenders relates, except as specifically authorized by the procuring authority or as specifically disclosed pursuant to paragraph (5)(b) above;

8. the terms of the Tender have not been, and will not be, knowingly disclosed by the Tenderer, directly or indirectly, to any competitor, prior to the date and time of the official tender opening, or of the awarding of the Contract, whichever comes first, unless otherwise required by law or as specifically disclosed pursuant to paragraph (5)(b) above.

Name_____ Title_ Date

_____

[Name, title and signature of authorized agent of Tenderer and Date].

1.4.6.5 SELF - DECLARATION FORMS

FORM SD1

SELF DECLARATION THAT THE PERSON/TENDERER IS NOT DEBARRED IN THE MATTER OF THE PUBLIC PROCUREMENTAND ASSET DISPOSALACT 2015.

I, ……., of Post Office Box ……. being a resident of
…….. in the Republic of ……. do hereby make a statement as follows: -

1. THAT I am the Company Secretary/ Chief Executive/Managing Director/Principal Officer/Director of
……..... *(insert name of the Company)* who is a Bidder in respect of Tender No.
…….. for ……. *(insert tender title/description)* for ……. *(insert name of the Procuring entity)* and duly authorized and competent to make this statement.

2. THAT the aforesaid Bidder, its Directors and subcontractors have not been debarred from participating in procurement proceeding under Part IV of the Act.

3. THAT what is deponed to herein above is true to the best of my knowledge, information and belief.

…….	…….	…….
(Title)	(Signature)	(Date)

Bidder Official Stamp

1.4.6.6 FORM SD2

1.4.6.6.1 SELF DECLARATION THAT THE PERSON/TENDERER WILL NOT ENGAGE IN ANY CORRUPT OR FRAUDULENT PRACTICE

I, ... of P. O. Box ..... being a resident of ..... in the Republic of ..... do hereby make a statement as follows: -

1. THAT I am the Chief Executive/Managing Director/Principal Officer/Director of ..... *(insert name of the Company)* who is a Bidder in respect of Tender No. ..... for ..... *(insert tender title/description)* for ..... *(insert name of the Procuring entity)* and duly authorized and competent to make this statement.

2. THAT the aforesaid Bidder, its servants and/or agents /subcontractors will not engage in any corrupt or fraudulent practice and has not been requested to pay any inducement to any member of the Board, Management, Staff and/or employees and/or agents of ..... *(insert name of the Procuring entity)* which is the procuring entity.

3. THAT the aforesaid Bidder, its servants and/or agents /subcontractors have not offered any inducement to any member of the Board, Management, Staff and/or employees and/or agents of ..... (name of the procuring entity)

4. THAT the aforesaid Bidder will not engage /has not engaged in any corrosive practice with other bidders participating in the subject tender

5. THAT what is deponed to herein above is true to the best of my knowledge information and belief.

....
..... (Title)
(Signature)
(Date)

Bidder's Official Stamp

1.4.6.7 DECLARATION AND COMMITMENT TO THE CODE OF ETHICS

I ………………………………………………………………………. (person) on behalf of *(Name of the Business/ Company/Firm*) …………………………………………………. declare that I have read and fully understood the contents of the Public Procurement & Asset Disposal Act, 2015, Regulations and the Code of Ethics for persons participating in Public Procurement and Asset Disposal and my responsibilities under the Code.

I do hereby commit to abide by the provisions of the Code of Ethics for persons participating in Public Procurement and Asset Disposal.

Name of Authorized signatory…………………………………………………………………. Sign……………………………….

Position………………………………………………………………………………………………. ……………………………….

Office address……………………………………………….

Telephone……………………………………………………. E-mail………………………………………………………………………………………………. ………………………………

Name of the Firm/Company………………………………………………………………………………. …………………

Date…………………………………………………………………………………………

(Company Seal/ Rubber Stamp where applicable)

Witness

Name ……………………………………………………………….

Sign…………………………………………….. Date…………………………………………………

1.4.6.8 APPENDIX 1- FRAUD AND CORRUPTION

(Appendix 1 shall not be modified)

(1). Purpose

The Government of Kenya's Anti-Corruption and Economic Crime laws and their sanction's policies and procedures, Public Procurement and Asset Disposal Act *(no. 33 of 2015)* and its Regulation, and any other Kenya's Acts or Regulations related to Fraud and Corruption, and similar offences, shall apply with respect to Public Procurement Processes and Contracts that are governed by the laws of Kenya.

(2). Requirements

The Government of Kenya requires that all parties including Procuring Entities, Tenderers, (applicants/proposers), Consultants, Contractors and Suppliers; any Sub-contractors, Sub-consultants, Service providers or Suppliers; any Agents (whether declared or not); and any of their Personnel, involved and engaged in procurement under Kenya's Laws and Regulation, observe the highest standard of ethics during the procurement process, selection and contract execution of all contracts, and refrain from Fraud and Corruption and fully comply with Kenya's laws and Regulations as per paragraphs 1.1 above.

Kenya's public procurement and asset disposal act *(no. 33 of 2015)* under Section 66 describes rules to be followed and actions to be taken in dealing with Corrupt, Coercive, Obstructive, Collusive or Fraudulent practices, and Conflicts of Interest in procurement including consequences for offences committed. A few of the provisions noted below highlight Kenya's policy of no tolerance for such practices and behavior: -

1) a person to whom this Act applies shall not be involved in any corrupt, coercive, obstructive, collusive or fraudulent practice; or conflicts of interest in any procurement or asset disposal proceeding;
2) A person referred to under subsection (1) who contravenes the provisions of that sub-section commits an offence;
3) Without limiting the generality of the subsection (1) and (2), the person shall be: -
   a) disqualified from entering into a contract for a procurement or asset disposal proceeding; or
   b) if a contract has already been entered into with the person, the contract shall be voidable;
4) The voiding of a contract by the procuring entity under subsection (7) does not limit any legal remedy the procuring entity may have;
5) An employee or agent of the procuring entity or a member of the Board or committee of the procuring entity who has a conflict of interest with respect to a procurement: -
   a) shall not take part in the procurement proceedings;
   b) shall not, after a procurement contract has been entered into, take part in any decision relating to the procurement or contract; and
c) shall not be a subcontractor for the bidder to whom was awarded contract, or a member of the group of bidders to whom the contract was awarded, but the

subcontractor appointed shall meet all the requirements of this Act.

6) An employee, agent or member described in subsection (1) who refrains from doing anything prohibited under that subsection, but for that subsection, would have been within his or her duties shall disclose the conflict of interest to the procuring entity;

7) If a person contravenes subsection (1) with respect to a conflict of interest described in subsection (5)(a) and the contract is awarded to the person or his relative or to another person in whom one of them had a direct or indirect pecuniary interest, the contract shall be terminated and all costs incurred by the public entity shall be made good by the awarding officer. Etc.

In compliance with Kenya's laws, regulations and policies mentioned above, the Procuring Entity:

a) Defines broadly, for the purposes of the above provisions, the terms set forth below as follows:

i) "corrupt practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;

ii) "fraudulent practice" is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation;

iii) "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;

iv) "coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

v) "obstructive practice" is:

- deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede investigation by Public Procurement Regulatory Authority (PPRA) or any other appropriate authority appointed by Government of Kenya into allegations of a corrupt, fraudulent, coercive, or collusive practice; and/or threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or
- acts intended to materially impede the exercise of the PPRA's or the appointed authority's inspection and audit rights provided for under paragraph 2.3 e. below.

b) Defines more specifically, in accordance with the above procurement Act provisions set forth for fraudulent and collusive practices as follows:

"fraudulent practice" includes a misrepresentation of fact in order to influence a procurement or disposal process or the exercise of a contract to the detriment of the procuring entity or the tenderer or the contractor, and includes collusive practices amongst tenderers prior to or after tender submission designed to establish tender prices at artificial non-competitive levels and to deprive the procuring entity of the benefits of free and open competition.

c) Rejects a proposal for award[1] of a contract if PPRA determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;

d) Pursuant to the Kenya's above stated Acts and Regulations, may sanction or recommend to appropriate authority (ies) for sanctioning and debarment of a firm or individual, as applicable under the Acts and Regulations;

e) Requires that a clause be included in Tender documents and Request for Proposal documents requiring (i) Tenderers (applicants/proposers), Consultants, Contractors, and Suppliers, and their Sub-contractors, Sub-consultants, Service providers, Suppliers, Agents personnel, permit the PPRA or any other appropriate authority appointed by Government of Kenya to inspect[2] all accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have them audited by auditors appointed by the PPRA or any other appropriate authority appointed by Government of Kenya; and

f) Pursuant to Section 62 of the above Act, requires Applicants/Tenderers to submit along with their Applications/Tenders/Proposals a "Self-Declaration Form" as included in the procurement document declaring that they and all parties involved in the procurement process and contract execution have not engaged/will not engage in any corrupt or fraudulent practices.

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[1]For the avoidance of doubt, a party's ineligibility to be awarded a contract shall include, without limitation, (i) applying for pre-qualification, expressing interest in a consultancy, and tendering, 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.

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

1.4.6.9 **FORM OF TENDER SECURITY-**[**Option 1–Demand Bank Guarantee**]

Beneficiary:_____ Request forTenders No:____Date:_____ TENDER GUARANTEE No.:_____

Guarantor: _____

1. We have been informed that_____(here inafter called "the Applicant") has submitted or will submit to the Beneficiary its Tender (here inafter called" the Tender") for the execution of_____ under Request for Tenders No._____

2. Furthermore, we understand that, according to the Beneficiary's conditions, Tenders must be supported by a Tender guarantee.

3. 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_____(_____) upon receipt by us of the Beneficiary's complying demand, supported by the Beneficiary's statement, whether in the demand itself or a separate signed document accompanying or identifying the demand, stating that either the Applicant:

(a) has withdrawn its Tender during the period of Tender validity set forth in the Applicant's Letter of Tender ("the Tender Validity Period"), or any extension thereto provided by the Applicant; or

b) having been notified of the acceptance of its Tender by the Beneficiary during the Tender Validity Period or any extension there to provided by the Applicant, (i) has failed to execute the contract agreement, or (ii) has failed to furnish the Performance.

4. This guarantee will expire: (a) if the Applicant is the successful Tenderer, upon our receipt of copies of the contract agreement signed by the Applicant and the Performance Security and, or (b) if the Applicant is not the successful Tenderer, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Applicant of the results of the Tendering process; or (ii) thirty days after the end of the Tender Validity Period.

5. Consequently, any demand for payment under this guarantee must be received by us at the office indicated above onor before that date.

_____

[signature(s)]

Note: All italicized text is for use in preparing this form and shall be deleted from the final

product.

1.4.6.10 FORMAT OF TENDER SECURITY [Option 2–Insurance Guarantee]

TENDER GUARANTEE No.: _____

1. Whereas ..... [*Name of the tenderer]* (hereinafter called "the tenderer") has submitted its tender dated ..... [*Date of submission of tender]* for the ..... *[Name and/or description of the tender]* (hereinafter called "the Tender") for the execution of__under Request for Tenders No._____("the ITT").

2. KNOW ALL PEOPLE by these presents that WE ..... of ..... [**Name of Insurance Company**] having our registered office at ..... (hereinafter called "the Guarantor"), are bound unto ..... [*Name of Procuring Entity*] (hereinafter called "the Procuring Entity") in the sum of ..... (Currency and guarantee amount) for which payment well and truly to be made to the said Procuring Entity, the Guarantor binds itself, its successors and assigns, jointly and severally, firmly by these presents.

   Sealed with the Common Seal of the said Guarantor this ___day of _____ 20 __.

3. NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Applicant:

   a) has withdrawn its Tender during the period of Tender validity set forth in the Principal's Letter of Tender ("the Tender Validity Period"), or any extension thereto provided by the Principal; or

   b) having been notified of the acceptance of its Tender by the Procuring Entity during the Tender Validity Period or any extension thereto provided by the Principal; (i) failed to execute the Contract agreement; or (ii) has failed to furnish the Performance Security, in accordance with the Instructions to tenderers ("ITT") of the Procuring Entity's Tendering document.

   then the guarantee undertakes to immediately pay to the Procuring Entity up to the above amount upon receipt of the Procuring Entity's first written demand, without the Procuring Entity having to substantiate its demand, provided that in its demand the Procuring Entity shall state that the demand arises from the occurrence of any of the above events, specifying which event(s) has occurred.

4. This guarantee will expire: (a) if the Applicant is the successful Tenderer, upon our receipt of copies of the contract agreement signed by the Applicant and the Performance Security and, or (b) if the Applicant is not the successful Tenderer, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Applicant of the results of the Tendering process; or (ii)twenty-eight days after the end of the Tender Validity Period.

5. Consequently, any demand for payment under this guarantee must be

received by us at the office indicated above on or before that date.

_____	_____
[Date]	*[Signature of the Guarantor]*
_____	_____
[Witness]	*[Seal]*

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

1.4.6.11 TENDER-SECURING DECLARATION FORM

[The Bidder shall complete this Form in accordance with the instructions indicated]

Date:.....*[insert date (as day, month and year) of Tender Submission]*
Tender No.:.....*[insert number of tendering process]*
To:..... *[insert complete name of Purchaser]* I/We, the undersigned,

declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Tender-Securing Declaration.

2. I/We accept that I/we will automatically be suspended from being eligible for tendering in any contract with the Purchaser for the period of time of [insert number of months or years] starting on [insert date], if we are in breach of our obligation(s) under the bid conditions, because we – (a) have withdrawn our tender during the period of tender validity specified by us in the Tendering Data Sheet; or (b) having been notified of the acceptance of our Bid by the Purchaser during the period of bid validity, (i) fail or refuse to execute the Contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the instructions to tenders.

3. I/We understand that this Tender Securing Declaration shall expire if we are not the successful Tenderer(s), upon the earlier of:
   a) our receipt of a copy of your notification of the name of the successful Tenderer; or
   b) thirty days after the expiration of our Tender.

4. I/We understand that if I am/we are/in a Joint Venture, the Tender Securing Declaration must be in the name of the Joint Venture that submits the bid, and the Joint Venture has not been legally constituted at the time of bidding, the Tender Securing Declaration shall be in the names of all future partners as named in the letter of intent.

Signed:..... Capacity / title (director or partner or sole proprietor, etc.) ..... Name: ..... Duly authorized to sign the bid for and on behalf of: *[insert complete name of Tenderer]*

Dated on ..... day of ..... *[Insert date of signing]* Seal or stamp

1.4.7 Appendix to Tender

1.4.8 Schedule of Currency requirements

Summary of currencies of the Tender for_____*[insert name of Section of the Works]*

Name of currency	***Amounts payable***
Local currency: _____	
Foreign currency #1: _____	
Foreign currency #2: _____	
Foreign currency #3: _____	
Provisional sums expressed in local currency _____	[To be entered by the Procuring Entity]

1.4.9 Bill of Quantities/Schedules of Prices

CONSTRUCTION OF TIIRA MIRAA MARKET SHED IN MERU COUNTY

BILL No.01: PRELIMINARY AND GENERAL					
ITEM No	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE (KES)**	**AMOUNT (KES)**
1.1	Allow provisional sum for access road to site as directed by the Project Engineer	Lumpsum	1		
1.2	Allow for Mobilization/Demobilization of Plant/Equipment. Personnel and setting up of the Camp	Lumpsum	1		
1.3	Provide, erect and maintain sign boards at locations shown by the Project Engineer at site of works	No.	2		
1.4	Allow provisional sum for supervision to be expended as directed by the Project Engineer	Lumpsum	1	800,000	800,000
1.5	Allow a provisional sum for Environmental Impact Assessment (EIA)and License	Lumpsum	1	250,000	250,000
1.6	Allow a provisional Sum for County Government Licenses and Procedures	Lumpsum	1		
1.7	Allow a percentage (10%) for Contractors Overheads and Profits for items (1.1 to 1.7) above	%	10%		
	TOTAL BILL NO. 01 CARRIED TO GRAND SUMMARY				
BILL No.02: SUBSTRUCTURES (ALL PROVISIONAL)					
ITEM No	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE (KES)**	**AMOUNT (KES)**
	Excavations				
2.1	Clear site of all shrubs and undergrowth including grubbing up of roots and dispose off as directed.	SM	221		
2.2	Excavate top vegetable soil average 200mm thick and dispose away from site	SM	109		
2.3	Excavate to reduce levels not	CM	33		

	exceeding 1.50m deep from striped level				
2.4	Excavate for foundation trenches not exceeding 1.5 metres deep from reduced level	CM	48		
2.5	Excavate for column bases not exceeding 1.5 metres deep from reduced level	CM	7		
2.6	Extra over excavation for excavation in rock irrespective of class	CM	4		
2.7	Allow for keeping the whole of the excavations free from all water; include for draining or otherwise keeping all works free from water as necessary over the entire contract period	ITEM	1		
2.8	Allow for maintaining and upholding sides of excavations and keeping excavations clear of all fallen materials, rubbish etc	ITEM	1		
	Disposal				
2.9	Load and cart away excavated materials from site	CM	33		
2.10	Return, fill and ram with selected and approved excavated material around excavations	CM	69		
	MS/02				
2.11	***Hardcore:***				
2.12	Approved hardcore bed hand packed, well-watered and compacted laid in layers of 150mm thick	CM	33		
	Blinding				
2.13	50 mm selected fine material to hardcore surfaces, well rolled and leveled to receive concrete	SM	109		
2.14	Apply "Termidor" or any other similar and approved anti termite chemical treatment on blinded surfaces	SM	109		
	Dump proof membrane				
2.15	500-gauge polythene sheeting with sides and end laps as described laid on blinded surfaces	SM	109		
	In-situ concrete work				
	Plain concrete (1:4:8) in				

2.16	50mm Thick blinding to strip foundation	SM	33		
	Vibrated reinforced concrete grade 20/20 (1:2:4) in:				
2.17	Strip foundations	CM	8		
2.18	Column bases	CM	6		
2.19	Columns	CM	2		
2.20	150mm Thick ground bed	SM	33		
	MS/02				
	Steel Reinforcement. Mild Steel reinforcement as described including cutting to length, bending and fixing including all necessary tying wires and spacing blocks (all provisional)				
2.21	12mm diameter high tensile bars	KG	1,800		
2.22	10 mm diameter high tensile square twisted bars	KG	1,100		
2.23	8 mm diameter high tensile square twisted bars	KG	1,100		
	Steel fabric mesh reinforcement to B.S. 4483				
2.24	No. A 142 fabric weighing 2.22Kg/sm fixed in bed	SM	33		
	Steel stud columns				
2.25	100mm diameter x 4mm RHS steel stud column with 200x200x6mm steel plate (ms) welded at top and 4No 100mm long 8mm diameter steel rod plugs column (aprox. Length 1.60 metres)	NO	15		
	Sawn formwork to:				
2.26	Vertical sides of foundations	LM	79		
2.27	Vertical sides of columns	SM	42		
2.28	Vertical sides of column bases	SM	22		
2.29	Edge of floor slab 75-150mm high	LM	100		

	Foundation Walling:				
	Natural stone walling in cement and sand (1:3) mortar and including reinforcing with 20 x 3mm thick hoop iron in every alternate course.				
2.30	200mm Thick walling	SM	65		
	Plinth & finishes				
2.31	12mm thick cement and sand (1:3) wood float render to plinth area	SM	13		
2.32	Prepare and apply three coats bituminous paint to rendered plinths	SM	13		
	TOTAL BILL NO. 02 CARRIED TO GRAND SUMMARY				
BILL No.03: STEEL SUPERSTRUCTURE					
ITEM No	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE (KES)**	**AMOUNT (KES)**
	100mm diameter x 4mm CHS steel columns with 200x200x6mm steel plate (MS) welded at top and bottom 4No holes drilled into each plate bottom bolted to steel stud columns.				
3.1	Columns 2850mm high	NO	15		
	Fittings				
3.2	200x200x6mm gusset plate with 4NO holes to receive bolts	NO	30		
3.3	12mm diameter 50mm long bolts with head nut and washer	NO	60		
	Painting				
	Prepare and apply one coat lead oxide prime on gloss oil paint to:				
3.4	General Surfaces of metal	SM	8		
	Knot, stain prepare and apply three coats gloss oil				

	paint to:				
3.5	General Surfaces of metal	SM	8		
	TOTAL BILL NO. 03 CARRIED TO GRAND SUMMARY				
BILL No. 04: CONSTRUCTION OF SHED STRUCTURE					
ITEM No.	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE (KES)**	**AMOUNT (KES)**
4.1	**OFFICES**				
4.1.1	**ELEMENT NO. 01 SUPERSTRUCTURE (ALL PROVISIONAL)**				
	Damp Proof Course				
4.1.1.1	200 mm wide approved quality 3-ply bituminous felt damp proof course under walls	LM	26		
	Machine cut natural stone walling in cement and sand (1:3) mortar reinforced with and including 25 x 3mm thick hoop iron in every alternate course				
4.1.1.2	200mm Thick walling externally	SM	73.2		
	Vibrated reinforced concrete grade 20/20 (1:2:4) to;				
4.1.1.3	Ring Beam	CM	3		
	Steel Reinforcement to Ring beam				
	Mild Steel reinforcement as described including cutting to length, bending and fixing including all necessary tying wires and spacing blocks (all provisional)				
4.1.1.4	D 8mm	KG	71		
4.1.5	D 12mm	KG	149		
4.1.2	**ELEMENT NO. 02 DOORS & WINDOWS**				

	Windows				
4.1.2.1	Standard 2000mm x 1200mm Steel window casement complete with hinges, stays, fasters, permanent vent with mosquito gauze and sheet metal hood assembled and fixed to opening including cutting and pinning lugs to wall surround; with 6mm coloured one way glass, well placed with putty and silicon	NO	2		
	Doors				
4.1.2.2	Standard 2100X900mm steel casement door comprising 40X25X3mm stiles, bottom & top rail, & 4No intermediate rails all primed with red oxide complete with hinges, stays, fasterners, permanent vent with mosquito gauze and sheet metal hood assembled and fixed to opening including cutting and pinning lugs to walls surround and bedding frame in cement and sand mortar (1:4)	NO	2		
4.1.3	**ELEMENT NO. 03 INTERNAL FINISHES:**				
	WALL FINISHES:				
	12 mm (minimum) two-coat plaster; 9 mm first coat of cement and sand (1:6), 3 mm second coat of cement and lime putty (1:10); steel trowelled smooth to:				
4.1.3.1	Stone wall surfaces	SM	100		
	FLOOR FINISHES:				
	Cement and sand (1:4) as described in:				
4.1.3.2	40mm to receive ceramic floor tiles	SM	38		
	300mm x 300mm x 6 mm Ceramic floor tiles jointed and				

	pointed with matching cement mortar as described on:				
4.1.3.3	Floor	SM	38		
4.1.3.4	150mm Skirting	LM	45		
	CEILING FINISHES:				
	Ceiling boards				
4.1.3.5	4X2 wall plates to receive (3x2) joists	LM	33		
4.1.3.6	F3X2 Joists	LM	68		
4.1.3.7	2X2 brandering at 600 mm x 600 mm grids spiked to joists	LM	66		
4,1.3.8	Chipboard flowered (8'X4'X9mm)	SM	38		
4.1.3.9	25X100 mm wrot cypress covetto moulded cornice plugged	LM	34		
	PAINTING & DECORATIONS				
	Prepare and apply first grade plastic emulsion paint to plastered walls				
4.1.3.10	Vinyl silk/ wall sheen emulsions	SM	100		
	Prepare and apply emulsion paint to ceiling chipboards				
4.1.3.11	Vinyl acrylic paint	SM	38		
4.1.3.12	Gloss paint to doors and windows	SM	6		
	EXTERNAL FINISHES:				
4.1.3.13	External keying at the mansory wall	SM	43		
	12 mm (minimum) two-coat plaster; 9 mm first coat of cement and sand (1:6), 3 mm second coat of cement and lime putty (1:10); steel trowelled smooth to:				
4.1.3.14	Ring beam	SM	28		

	Prepare and apply first grade plastic emulsion paint to plastered Ring Beam				
4.1.3.15	Vinyl silk/ wall sheen emulsions	SM	28		
4.1.4	**ELEMENT NO. 04 ELECTRICAL INSTALLATIONS**				
	(All Provisional)				
	Builder's work in connection with Electrical Installations:				
	Cut away for, make good and attend in all trades on the electrician installing the following points, including associated switch points in concealed electrical system, including cutting all chases and holes, notching and boxing timber etc. making good all finishes and leave clean to satisfaction of the Architect:				
	Consumer Units				
4.1.4.1	4 way 100A isolator	NO	1		
4.1.4.2	Switches (two gang) one way	NO	5		
4.1.4.3	Socket outlets (Double)	NO	8		
	P.V.C insulated 450/750V - Single core 6491X				
4.1.4.4	1.5mm2	LM	75		
4.1.4.5	2.5mm2	LM	126		
	Heavy gauge plastic conduits laid in screed or wall chases including all boxes, bends, saddles and accessories				
4.1.4.6	20mm	LM	133		
	Low power factor (L.P.F) Batten fluorescent fittings with tube				
4.1.4.7	4 ft single X 36 watt	NO	2		
4.1.4.8	Bulb holders	NO	2		

4.2	**OPEN SHED AREA**				
4.2.1	**ELEMENT NO. 01 SUPERSTRUCTURE (ALL PROVISIONAL)**				
	Damp Proof Course				
4.2.1.1	200 mm wide approved quality 3-ply bituminous felt damp proof course under walls	LM	18		
	Machine cut natural stone walling in cement and sand (1:3) mortar reinforced with and including 25 x 3mm thick hoop iron in every alternate course				
4.2.1.2	200mm Thick walling externally	SM	54		
4.2.2	**ELEMENT NO.02 FINISHES**				
	FLOORS				
4.2.2.1	40mm thick coloured cement sand screed steel trowelled smooth	SM	75		
4.2.2.2	100 x 20mm Thick coloured screed skirting	LM	70		
	PLASTER WORKS				
	12mm (minimum) two-coat plaster; 9mm first coat of cement sand (1:6), 3mm second coat of cement and lime putty (1:10); steel trowelled to: -				
4.2.2.3	Walls	SM	20		
	PAINTING				
	Prepare and apply three coats first grade plastic emulsion paint to:				
4.2.2.4	Plastered walls	SM	20		
4.2.3	**ELEMENT NO.03 WALL GRILLS (BALUSTRANDING)**				
4.2.3.1	Patterned mild steel grill	NO	12		

	between CHS steeL columns 1m high comprising 50x50x2mm framing, 25x25x2mm RHS horizontal members at 200mm centres and 25x25x2mm RHS vertical members at 100mm centres as per Architect's drawing				
4.2.3.2	Grill Painting	ITEM	1		
	TOTAL BILL NO. 04 CARRIED TO GRAND SUMMARY				

BILL No.05: ROOFING CONSTRUCTION AND RAIN WATER DISPOSAL

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE (KES)	AMOUNT (KES)
	STEEL TRUSSES **The following Roof trusses welded and bolted in accordance with the fabricators shop drawing to Engineer's approval**				
5.1	60x60x4mm SHS Rafters curved appropriate radius	LM	107		0.00
5.2	60x60x4mm SHS joist curved appropriate radius	LM	101		0.00
5.3	60x60x4mm SHS joist curved appropriate radius (small)	LM	22		0.00
5.4	40 x 40x3.2mm SHS struts and ties	LM	184		0.00
	Fittings				
5.5	200x200x6mm gusset plate with 4NO. Holes to receive bolts	NO	30		0.00
5.6	12mm diameter x 50mm long bolts with head nut and washer	NO	60		0.00
	Purlins				
5.7	125x50x20x2mm thick steel Z purlins	LM	521		0.00

	Roof covering				
5.8	IT5 gauge 28 resincot prepainted galvanized corrugated crimped iron sheets with radius fixed with and including U bolts cups and washers on steel purlins	SM	159		0.00
	TOTAL BILL NO.05 CARRIED TO GRAND SUMMARY				**0.00**
BILL No.06: CONSTRUCTION OF RAIN WATER GOODS					
ITEM No.	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE (KES)**	**AMOUNT (KES)**
6.1	**RAIN WATER GOODS**				
	The following in G28 Galvanized mild steel				
6.1.1	200x200mm box gutter fixed with and including 30x2mm flat gutter strips at 600mm centers	NO	30		
6.1.2	Extra over gutter for stopped end piece with 200x200mm square outlet 600 mm girth valley flushing ditto	NO	4		
6.1.3	200x200mm down pipe fixed to steel columns with and including steel strips at 600mm centres	LM	23		
6.1.4	Extra over down pipe for swan neck	NO	8		
6.1.5	Extra over down pipe for water shoe	NO	8		
	Decoration and painting				
	Prepare and apply one coat of calcium plumbate and two coats of gloss oil paint to:				
6.1.6	General Surfaces of metal gutters	SM	42		
6.1.7	Ditto down pipes	SM	18		
6.2	**WATER STORAGE STRUCTURES**				
6.2.1	Supply and install a 10,000Lts PVC Water tank	NO	1		

6,2,2	Constructed a 2,600mm diameter x 1,000mm high reinforced masonary raised base	NO	1		
	TOTAL BILL NO.06 CARRIED TO GRAND SUMMARY				
BILL No.07: CONSTRUCTION OF GOODS DISPLAY TABLES & SHELVES					
ITEM No	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE (KES)**	**AMOUNT (KES)**
	12No. Good Display Tables and Shelves				
	Masonary				
	Construct a 1000mm x 1000mm Masonary Stand with a reinforced slab cover at the top				
	Damp Proof Course				
7.1	200 mm wide approved quality 3-ply bituminous felt damp proof course under walls	LM	36		
	Machine cut natural stone walling in cement and sand (1:3) mortar reinforced with and including 25 x 3mm thick hoop iron in every alternate course				
7.2	200mm Thick walling externally	SM	43.2		
	Reinforced Concrete 1:2:4 - 20mm Gauge mix in: -				
7.3	Concrete for 300mm thick slab top	CM	3.6		
	Reinforcement				
7.4	Reinforce with a 10-gauge welded wire mesh	NO	5		
	Flap Doors				
7.5	50mm thick wrot cypress match boarded door size 550x1000mm	No	32		
	Iron mongery				
7.6	75mm pressed steel butt hinges	PRS	64		
7.7	100mm steel padlock bolt	NO	32		

	complete				
	TOTAL BILL NO.07 CARRIED TO GRAND SUMMARY				
BILL NO.08: CONSTRUCTION OF BIO-DIGESTER					
ITEM No	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE (KES)**	**AMOUNT (KES)**
8.1	**BIO-DIGESTER**				
8.1.1	**ELEMENT NO.01 SUBSTRUCTURES (ALL PROVISIONAL)**				
	EARTH WORK AND EXCAVATIONS				
	Excavations including maintaining and supporting sides of excavations from fallen soil, mud and surface water by baling pumping or otherwise				
8.1.1.1	Clear the whole site of all grass, weeds, shrubs, crops, rubbish, bushes, old stumps, etc and grub up all roots, trees or similar obstructions and burn or cart away.	SM	63.62		
	Excavations				
	Oversite excavations				
8.1.1.2	Oversite excavation to reduce levels not exceeding 250mm deep from existing ground level, spread on site as directed, and cart away surplus.	CM	15.91		
8.1.1.3	Excavate foundation 2.125 metres deep commencing from reduced level.	CM	135.19		
8.1.1.4	Excavate hard rock 2.0 metres deep	CM	127.24		
8.1.1.5	Backfill excavated foundation	CM	105.41		

	with approved materials				
8.1.1.6	Disposal of surplus excavated material from site	CM	195.65		
8.1.1.7	Keep excavation free from mud and water	Item	1.00		
8.1.1.8	Planking and strutting sides of excavation	Item	1.00		
8.1.2	**ELEMENT NO.02 CONCRETING**				
	Mass concrete; 1:4:8 class 15 in;				
8.1.2.1	50mm thick blinding to foundation	CM	3.13		
	Reinforced concrete; class 20:20				
	Insitu concrete mix, vibrated and reinforced as: -				
8.1.2.2	Base foundation	CM	9.54		
8.1.2.3	Dome structure	CM	2.35		
8.1.2.4	Manholes base	CM	1.29		
	Formwork				
	Formwork to In- situ concrete Rough (sawn) finish TP; -				
8.1.2.5	Dome structure	SM	14.14		
8.1.3	**ELEMENT NO.03 REINFORCING BARS**				
	Mild Steel reinforcement as described including cutting to length, bending and fixing including all necessary tying wires and spacing blocks (all provisional)				
	Foundation Base				
8.1.3.1	D12	KG	149.24		
	In dome structure				

8.1.3.2	D10	KG	139.24		
	Masonry Walling (Natural Quarry Stones)				
	Natural quarry stone walling in cement and sand (1:3) mortar reinforced with and including 25 x 3mm thick hoop iron in every alternate course				
8.1.3.3	150mm thick masonry walling	SM	24.00		
	Machine cut stone walling in cement and sand (1:3) mortar reinforced with and including 25 x 3mm thick hoop iron in every alternate course				
8.1.3.4	150mm thick machine cut stones @ manholes	SM	8.09		
8.1.4	**ELEMENT NO.04 PIPING SYSTEM**				
	(All Provisional)				
	Builder's work in connection with PIPING:				
	Cut away for, make good and attend in all trades on the plumber installing the following points, including cutting all chases and holes, notching and boxing timber etc. making good all finishes and leave clean to satisfaction of the R.E				
8.1.4.1	6" uPVC waste pipe (heavy duty)	LM	22.00		
8.1.4.2	6" 90^{o} bend	NO	4.00		
8.1.4.3	4" uPVC waste pipe (heavy duty)	LM	6.00		
8.1.4.4	4" Upvc bend	NO	4.00		

8.1.4.5	6" Tee	NO	3.00		
	Square C.I Manhole Cover & Frame (H.D)				
8.1.4.6	600x600mm	NO	2.00		
8.1.4.7	450x450mm	NO	1.00		
8.2	**SOCK PIT (2m Width x 10m Length x 2.5m Height)**				
8.2.1	**ELEMENT NO.01 SUBSTRUCTURES (ALL PROVISIONAL)**				
	EARTH WORK AND EXCAVATIONS				
	Excavations including maintaining and supporting sides of excavations from fallen soil, mud and surface water by baling pumping or otherwise				
8.2.1.1	Clear the whole site of all grass, weeds, shrubs, crops, rubbish, bushes, old stumps, etc and grub up all roots, trees or similar obstructions and burn or cart away.	SM	12.00		
	Excavations				
	Oversite excavations				
8.2.1.2	Oversite excavation to reduce levels not exceeding 250mm deep from existing ground level, spread on site as directed, and cart away surplus.	CM	5.00		
8.2.1.3	Excavate 2.25 metres deep commencing from reduced level.	CM	45.00		
8.2.1.4	Dispose off surplus excavated material from site	CM	50.00		
8.2.1.5	Keep excavation free from mud	Item	1.00		

	and water				
8.2.1.6	Planking and strutting sides of excavation	Item	1.00		
	Hardcore boulders filling				
8.2.1.7	Fill 1250mm hardcore boulders as shown in the drawings	CM	25.00		
8.2.1.8	Perforated 1000g DPM	SM	20.00		
	Red soil filling				
8.2.1.9	Fill 1250mm red soil as shown in the drawings	CM	25.00		
8.2.1.10	Plant & water approved grass at sock pit top surface (watering shall be till full establishment)	SM	48.00		
	TOTAL BILL NO.08 CARRIED TO GRAND SUMMARY				
BILL No. 09: CONSTRUCTION OF ABOLUTION BLOCK					
ITEM No	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE (KES)**	**AMOUNT (KES)**
9.0	**TOILETS (TOILETS FOR MEN AND WOMEN, 1 URINAL FOR MEN AND A PUMP HOUSE)**				
9.1	**ELEMENT NO.01 SUBSTRUCTURE (ALL PROVISIONAL)**				
	Excavation, including maintaining and supporting sides and keeping bottoms free from water and mud or other fallen material				
9.1.1	Excavate oversite to remove vegetable soil average 150mm deep; wheel and deposit on site i.e., 100M away in permanent spoils	SM	24		

	heaps				
9.1.2	Excavate for strip footing not exceeding 1.50m deep.	CM	24		
	PIT LATRINE				
9.1.3	Excavate for pit latrine not exceeding 1.50m deep.	CM	20		
9.1.4	Ditto 1.50m-3.0m deep	CM	10		
9.1.5	Ditto 3.0m-4.5m deep	CM	10		
9.1.6	Extra over excavation for excavating in rock Class 1; not exceeding 1.5 m	CM	20		
	Disposal				
9.1.7	Back filling selected excavated materials around foundation.	CM	12		
	Hardcore				
9.1.8	250mm thick filling: deposit, spread, level and compact: to receive blinding	SM	18		
9.1.9	50mm murram blinding to surface of hardcore.	SM	18		
9.1.10	Polythene sheet damp proofing;500gauge	SM	18		
	Anti-Termite Treatment				
9.1.11	Chemical anti-termite treatment supplied by Rentokil Laboratories Limited or equal and approved pest control firm under a ten-year guarantee, applied to surface of excavation and floor	SM	0		
	Concrete Work				
	Plain Concrete 1:4:8 mix in:				
9.1.12	50 mm blinding bed under strip footing and floor slab	CM	20		
	Reinforced Concrete 1:2:4-20mm gauge mix in				
9.1.13	150 mm floor slab	SM	24		
9.1.14	Strip Footing	SM	2		
9.1.15	Ground floor beams:	CM	2		
	Reinforcement				
	High Tensile Steel Reinforcement to B.S. 4483				
9.1.16	Y8mm Bars	KG	44		
9.1.17	Y12mm Bars	KG	36		
9.1.18	Y10mm Bars	KG	30		

	Sawn formwork to				
9.1.19	sides and soffits of beams	SM	4		
9.2	**ELEMENT NO.02 SUPERSTRUCTURE MASONRY**				
	Medium quarry dressed stone walling in cement and sand (1:3) mortar:20-gauge x 25mm wide hoop iron reinforcement and column-wall ties in every alternate course: to				
9.2.1	200mm walling in Foundation	SM	40		
9.2.2	200 mm walling	SM	40		
9.2.3	150mm walling	SM	14		
9.3	**ELEMENT NO.03 ROOFING AND RAINWATER DISPOSAL AND FINISHES**				
	Sawn Treated Cypress				
9.3.1	75mmx50mm Braces, ties, strut, and posts	LM	32		
9.3.2	100 x 50mm wall plate	LM	9.75		
	Wrought Treated Cypress				
9.3.3	225mm x38mm Fascia or barge board	LM	17.7		
	Roof Covering 28 Gauge Corrugated 'Resincot' Iron Sheeting and Accessories as approved				
9.3.4	Roofing Covering with 1 ½ Corrugation side laps nailed to timber Purlins with galvanized roofing nails with rubber washers (Measured out and allow for laps)	SM	13.5		
9.4	**ELEMENT NO.04 VENT PIPES**				
9.4.1	110 mm Diameter Upvc Pipes	LM	12		
9.5	**ELEMENT NO.05 FINISHES**				
	DOOR				
9.5.1	Supply and install 1000 x 2100 mm high mild steel doors complete with all auxilaries and accessories	NO	3		

	FLOOR				
	Cement and sand (1:4) paving: steel trowelled: on concrete				
9.5.2	50mm thick floors screed	SM	24		
	WALL				
	12mm lime plaster: steel trowelled finish: on block work: to				
9.5.3	Walls(internals)	SM	48		
	Prepare and apply three coats approved emulsion paint to:				
9.5.4	Plastered walls	SM	48		
9.5.5	Extra over walling for medium chisel dressing	SM	48		
9.6	**ELEMENT NO.06 CONCRETE ROOF SLAB**				
	Reinforced Concrete 1:2:4 - 20mm Gauge mix in: -				
9.6.1	Concrete for 125mm thick roof slab and Lintols	CM	1		
	High Tensile Steel Reinforcement to BS 4461				
9.6.2	10 mm Bars	KG	100		
	Mild Steel Reinforcement to BS 4461				
9.6.3	6 mm Bars	KG	2		
	Sawn Formwork, to: -				
9.6.4	Sides and soffits of slab and lintols.	SM	4.5		
	TOTAL BILL NO.09 CARRIED TO GRAND SUMMARY				

BILL No.10: OTHER PROVISIONAL COST AND PROVISIONAL SUMS

ITEM No	DESCRIPTION	UNIT	QUANTITY	RATE (KES)	AMOUNT (KES)
10.1	Allow for KPLC power supply & connections	Lumpsum	1		

10.2	Allow a percentage (10%) for Contractors Overheads and Profits for item above	%	10		
	TOTAL BILL NO. 10 CARRIED TO GRAND SUMMARY				

GRAND SUMMARY

BILL NO	DESCRIPTION	CONTRACT AMOUNT (KES)
Bill No. 1	Preliminaries and General	
Bill No. 2	Substructures (All Provisional)	
Bill No. 3	Steel Superstructure	
Bill No. 4	Construction of Shed Structure	
Bill No. 5	Roof Construction and Rain Water Disposal	
Bill No. 6	Construction of Rain Water Goods	
Bill No. 7	Construction of Goods Display Tables and Shelves	
Bill No. 8	Construction of Bio-Digester	
Bill No. 9	Construction of Ablution Block	
Bill No. 10	Other Provisional Cost and Provisional Sums	
	SUB-TOTAL 1	
	ADD 10% CONTINGENCIES	
	SUB-TOTAL 2	
	ADD 16% VAT	

TOTAL	

2.0 PART 2 - EMPLOYER'S REQUIREMENTS

2.1 Section V. Requirements

Table of Contents

TECHNICAL SPECIFICATION

Specifications

Wherever reference is made in the Contract to specific standards and codes to be met by the goods and materials to be furnished, and work performed or tested, the provisions of the latest current edition or revision of the relevant standards and codes in effect shall apply, unless otherwise expressly stated in the Contract. Where such standards and codes are national, or relate to a particular country or region, other authoritative standards that ensure a substantially equal or higher quality than the standards and codes specified will be accepted subject to the Project Manager's prior review and written consent. Differences between the standards specified and the proposed alternative standards shall be fully described in writing by the Contractor and submitted to the Project Manager at least 28 days prior to the date when the Contractor desires the Project Manager's consent. In the event the Project Manager determines that such proposed deviations do not ensure substantially equal or higher quality, the Contractor shall comply with the standards specified in the documents.

TECHNICAL SPECIFICATION GENERAL

GENERAL

General Description of the Works

The main works to be undertaken under this Contract comprise the following:

1. Excavation Works
2. Construction of substructure and superstructure
3. Construction of Shed Structure
4. Roof Construction and Rain Water Disposal
5. Construction of Rain Water Goods
6. Construction of Goods Display Tables & Shelves
7. Construction of Bio-Digester
8. Construction of Ablution Block

Drawings and Documents

The drawings listed in Section 6 of the Tender Documents and any modifications to those drawings and any other drawings that may be prepared by the Contractor and approved by the Engineer shall subsequently become the Contract Drawings.

Drawings Designed by the Contractor

All drawings, calculations, plans, reports, instruction manuals, pamphlets, data and all other documents required to be submitted by the Contractor under the Contract shall be clear and readable. The Contractor shall submit these drawings and documents in a logical order to the Engineer for review or approval at least fifty-six (56) calendar days prior to execution of the Works.

All shop drawings, including field erection, layout and construction details shall be furnished by the Contractor for the approval of the Engineer.

All the drawings and calculation to substantiate the design shall be checked, signed and approved by the Contractor prior to submission. The drawings shall also be signed by a qualified engineer responsible for the design.

Approval of the drawings by the Engineer shall not be construed as a complete check but will indicate only that the general method and detailing is satisfactory. The approval by the Engineer shall not relieve the Contractor of the requirements of the Contract or responsibility for correct installation and assembly of parts in final position or responsibility for the adequacy of the method of construction.

All the cost thereof will be deemed to be included in the Contractor's unit rates and Contract Price.

"As Built" Drawings

Within sixty (60) days after the receipt of the Completion Certificate, the Contractor shall submit to the Engineer all the approved drawings and documents (including operation and maintenance manuals), clearly revised and brought up to date by the Contractor to show the permanent construction actually made. The submission shall be made in the following manner and quantity:

(a). One (1) set of the A1 size reproducible drawings on high quality polyester transparent film or similar material,

(b). One (1) bound set of reduced size, clearly photocopied drawings with hard cover (A3 size).

The submission shall contain the drawing index.

No separate payments will be made for the provision of the drawings as the cost thereof shall be deemed to be included in the unit rates and the Contract Price.

Standard Specifications

For convenience, and in order to establish the necessary standards of quality, reference will be made to specifications issued by national or other widely recognised bodies. Such specifications shall be referred to as "Standard Specifications" and shall be the latest editions of such Standard Specifications issued prior to the issue of Tender Documents, together with such additions and amendments as may have been issued prior to the same date.

Subject to the written approval of the Engineer, any other internationally accepted standard which requires an equal quality of work may be used.

In referring to Standard Specifications, the following abbreviations are used:

BS	British Standard
ISO	International Organization for Standardization
AASHTO	American Association of State Highways and Transportation Officials

ASTM	American Society for Testing and Materials
ASA	American Standards Association
KS	Kenya Standard
EN	Normalized European Standards

In cases where no particular Specification or Standard is given for any article or material to be used in the Contract the relevant Specification of the British Standards Institution or other relevant Standard shall apply unless otherwise stated. The latest version of the standards referred to shall be used where applicable.

If the Contractor proposes to use a Standard Specification other than that specified, three copies of the proposed Standard Specification, in the English Language, shall be submitted to the Engineer not less than 28 days before approval of the Standard Specification is required.

Site Meetings

The Contractor shall be obliged to attend all meetings at the appointed time when called upon by the Resident Engineer. The discussions of such meetings shall include but not be limited to the progress of work and problems having direct bearing on the immediate and long-term activities (construction, procurement, transport, labour etc.).

Progress Photographs

The Contractor shall furnish the Engineer with coloured photographs (not less 8 cm x 120 cm size) of the work in progress throughout the Contract period. The photographs shall be taken at the start, during and at the completion of each major task of the work as directed by the Engineer. A brief description and date of each photograph shall be included.

The Contractor shall make a soft copy of all the photos. This copy will be retained on the site and on completion of the Works the negatives shall become the property of the Employer.

The Contractor shall supply cameras to the Engineer for taking of photographs

Level Datum

The survey control points and bench marks shown on the drawings shall be handed over to the Contractor as basis for surveying and setting out of the Works. The Contractor shall be responsible for carrying out the field surveys for the performance of the Works.

Before using the control points and bench marks for setting out of the Works, the Contractor shall carry out a check survey thereon and satisfy himself as to their accuracy. The Employer shall bear no responsibility for the accuracy of any control point or bench mark.

The Contractor may establish additional temporary bench marks for his own convenience but each temporary bench mark shall be of a design and in a location approved by the Engineer and shall be accurate in relation to the bench marks established by the Engineer.

The Contractor shall protect the reference points and level bench marks and in the event of any damage he shall re-survey and re-establish the points and bench marks all to the satisfaction of the Engineer.

Setting Out

The Contractor shall appoint and employ the necessary qualified and experienced staff to set out the Works accurately. The Contractor shall establish and locate all lines and levels and be responsible for the correct location of all Works.

Where directed by the Engineer, the Contractor shall take such levels and dimensions as may be required for the purposes of measurements prior to disturbance of the ground. These shall be agreed between the Contractor and the Engineer in writing before any of the surface is disturbed or covered up.

Construction and Checking of Work

The Contractor shall be solely responsible for and shall provide all labour, tools, lifting tackle and other equipment required for the construction and checking of the Works.

No operatives shall be allowed to execute any type of work, which is normally carried out by a skilled tradesman, unless the operative is thoroughly experienced and proficient in the trade concerned. Supervisors and operatives may be required to demonstrate their proficiency or produce certificate of competence to the satisfaction of the Engineer.

As each part of the work is carried out it shall be subject to the approval by the Engineer.

Supervision and Labour

The Contractor will be required to maintain a competent supervising Site Agent and staff on site throughout the construction period until completion of the Works, and thereafter as may be required during the period of maintenance. The Engineer shall give prior approval to the appointment of this supervising Site Agent and shall have authority to withdraw this approval at any time in accordance with the Conditions of Contract.

All staff and labour employed on the Works shall be employed in accordance with the local labour and employment laws and regulations.

Works Executed by the Employer or by other Contractors

The Employer reserves the right to execute, on the site, works not included under this Contract and to employ for this purpose either his own employees or other contractors whose contracts may be either a sub-contract under this Contract, or an entirely separate contract. The Contractor shall ensure that neither his own operations nor trespass by his employees shall interfere with the operations of the Employer, or his contractors employed on such works and the same obligations shall be imposed on the Employer or other contractors in respect of work being executed under this Contract.

Contractor's Site Offices, Workshops, Storage and Working Areas

The Contractor shall at his own cost provide office and other temporary accommodation for his Site Personnel including sanitary facilities and canteen where necessary.

The Sanitary facilities shall be kept in a clean and orderly condition to the approval of the Engineer and public health authorities. Any employee found fouling the site shall be removed from Site immediately.

Site office and sanitary facilities shall be removed on completion of the work and all trenches shall be chemically treated and completely back-filled to the satisfaction of the Engineer.

The Contractor shall be deemed to have included for the costs thereof in his Tender.

Definition and Use of the Site

Definition of the Site

The Site shall include all those areas of land which, being public or private:

(a). Are being provided by the Employer for the purpose of constructing the permanent works.

(b). Are being provided by the Employer or leased by the Contractor for Temporary Works, including camps, offices and stores.

(c). Are acquired, leased, or operated by the Contractor as borrow pits or spoil tips for the Permanent Works, including all access roads.

Use of the Site

The lands and other places outside the Site which are the property of or under the control of the Employer shall not be used except with the approval of the Engineer.

The Contractor shall at any time remove any vehicle or vessel or any other obstruction under his control that may be required to be removed by the Engineer for any purpose. The Contractor shall move such obstruction promptly on instruction being given.

The Contractor shall maintain access for the inspection, operation and maintenance of any of the Employer's plant or works which lies within the Site or elsewhere.

The Contractor shall not use any portion of the Site for any purpose not connected with the Works unless the written permission of the Engineer has been obtained.

Except with the written permission of the Employer, to be given when necessary for the execution of the Works, the Contractor's employees will not be permitted to enter any of the Employer's buildings or lands or sites under the control of other contractors or the Engineer. The Contractor shall warn his employees that any person found within such buildings or sites without authority is liable to be removed from the Works in accordance with the Conditions of Contract.

Possession of the Site

The Contractor shall restrict his activities to those areas of the Site adjacent to the works being executed and shall avoid any encroachment upon lands outside the areas for which possession has been given. Any trespass or damage or any claim arising from such encroachment shall be the Contractor's sole responsibility and he shall hold the Employer indemnified against all claims arising from such trespass or damage.

Interference with the Works

The Contractor shall not interfere in any way with any existing works, whether the property of the Employer or of a third party, whether or not the position of such works is indicated to the Contractor by the Engineer, except where such interference is specifically described as part of the Works, either in the Contract or in an instruction from the Engineer.

Material for the Works

All material shall comply with appropriate Standard Specifications unless otherwise required hereinafter.

The Contractor shall, before placing any order of materials, manufactured articles or machinery for incorporation in the Works, submit for the approval of the Engineer the names of the suppliers from whom he proposes to obtain such materials, manufactured articles or machinery, together with a list of the same, giving the origin, quality, weight, strength, description and other relevant details. No materials, manufactured articles or machinery shall be ordered or obtained from any suppliers which the Engineer has not approved in writing.

All materials shall be delivered to the Site a sufficient period of time before they are required for use in the Works, to enable the Engineer to take such samples as he may wish for testing and approval.

Notwithstanding the fact that approval has been given to the source of supply, the Engineer may forbid the use of any materials if, upon delivery, they are found to be defective, or he considers them unsuitable for incorporation in the Works. Such rejected materials shall be removed from the site forthwith.

The Contractor may propose alternative materials of equivalent quality to those specified, and subject to the approval, such materials may be used in the Works.

The Contractor shall have no claim against the Employer in respect of any financial loss which he may suffer as a result of the rejection of any such materials, and he shall also bear the cost of removing them from the Site.

The Engineer shall have the right to inspect materials and plant for the permanent works during the course of manufacture. The Contractor shall arrange for the right of access to manufacturing premises for the Engineer and his staff during normal working hours. The Engineer shall be given sufficient notice by the Contractor to allow him to observe the testing of any materials for the works at the place of manufacture. The Engineer shall also be given the opportunity to inspect any material or plant in their completed state prior to packing for transport to the site.

If requested by the Engineer, the Contractor shall provide to the Engineer copies of orders for the supply of goods or materials required in connection with the works.

Rejected Materials and Defective Work

Materials or work which, in the opinion of the Engineer, do not comply with the Specification, shall be classified as rejected materials or defective work, and shall be cut out and removed from the Works and replaced as directed by the Engineer.

Existing Works and Services

The Contractor shall acquaint himself with the positions of all existing works and services including water mains, stormwater drains, cables, and service poles before any excavation are commenced.

The Contractor will be held responsible for any damage, however caused, in the course of the execution of the Works, to such existing works and services.

Such existing works and services, where exposed by the execution of the works, shall be properly shored, hung-up and supported to the satisfaction of the Engineer and of the authority concerned.

Poles supporting cables and the like adjacent to the Works shall be kept securely in place until the Works are completed and shall then be made as safe and permanent as before.

Notwithstanding the foregoing requirements and without lessening the Contractor's responsibility, the Contractor shall inform the Engineer immediately any existing works have been exposed and shall comply with any requirements of the authority concerned.

Only when and as directed by the Engineer shall the position of existing works or services be changed by the Contractor to meet the requirements of the proposed work.

The Contractor shall make adequate provision so that when carrying out his work, no interference, damage or pollution is caused to roads and footpaths, or to any mains, drains, and the like or other parts of the Works. Wherever loads have to be carried over ground in which pipes, valves, culverts, and the like are buried, the Contractor shall take all precautions including where necessary, the provision and use of sleepered roads, light gauge railways or other means to prevent damage occurring to such underground works. The Contractor shall not store any plant or materials or spoil heaps over existing water mains, or in such positions that interference with access to the mains, control gates and the like, is created. Approval by the Engineer to the means of protection employed shall not relieve the Contractor of any responsibility in respect of damage occasioned by his operations.

The laying of pipework, ducts, drains, and the like shall be arranged so as to cause as little interference as possible with the smooth operation of existing works.

When breaking out and making good existing structures, the Contractor shall disturb the existing structures as little as possible. All structures shall be made good with materials similar to those used in the existing works, or such materials which are considered by the Engineer to be of similar appearance and suitable in all other respects.

Existing Access

Existing access to lands, property and all other places shall be maintained by the Contractor during the continuance of the Works to the Engineer's satisfaction.

Liaison with Police and other Officials

The Contractor shall keep in close contact with the police and other officials in the areas concerned regarding their requirements for the control of workmen, movement of traffic, or other matters and shall provide all assistance and facilities which may be required by such officials in the execution of their duties.

Water and Power for Use on the Works

The Contractor shall be solely responsible for the location, procurement and maintenance of a water supply adequate in quality and quantity to meet his obligations under the Contract.

The Contractor shall be solely responsible for the location and continuity of the supply of water for use on the Works. Supplies may be derived from rivers and streams, but shall in all cases to be to the Engineer's approval, and the abstraction of water from any sources shall not interfere with any permanent water supply and be to the requirements and permitted by Water Resources Management Authority (WRMA). The Contractor shall be solely responsible for the transporting of water from its source to the point at which it is required for construction purposes, and in such quantities and quality as to enable the Works to proceed without hinderance due to the shortage of adequate water supplies.

The Contractor shall make his own arrangements for power supplies and shall be solely responsible for the location, procurement and maintenance of a power supply, adequate to meet his obligations under the Contract.

The Contractor shall make his own arrangements for the supply of adequate safe drinking water, electricity and other services to the Permanent Works, Temporary Works and plant and shall provide and maintain all pipes, cables and fittings which may be necessary to carry such services to his operations

Employer as a Supplier of Water and Power

The position of the Employer or his Agent as a supplier of water or power shall be identical with that of other suppliers, and quite separate from his position as Employer under the Contract. As in the case of a supplier, a failure on the part of the Employer or his Agent to supply water or power will not relieve the Contractor of any of his obligations under the Contract, nor, in respect of any such failure, shall the Contractor have any claim under the Contract against the Employer.

Inspection by Engineer during Period of Maintenance

The Engineer will give the Contractor due notice of his intention to carry out any inspection during the period of maintenance. The Contractor shall, upon receipt of such notice, arrange for responsible representatives to be present at the times and dates named by the Engineer. This representative shall render all necessary assistance and shall take note of all matters and things to which his attention is directed by the Engineer.

Sign Boards

Before the erection of any sign boards or posters by the Contractor, the Contractor shall obtain the approval of the Employer and the Engineer to the size, location and wording of such sign boards or posters.

Unless otherwise agreed, the signboard shall be in the following sections.

Section one shall contain:

- Name of Financing Governments
- In white lettering on a blue background

The Second section shall bear the words:

- Names of the Program and Project
- In white lettering on a blue background

The Third section shall bear the words:

- Name of the Financier
- In white lettering on a blue background

The Fourth section shall bear the words:

- Name of the Employer
- In white lettering on a blue background

The Fifth section shall bear the words:

- Name of the Implementing Agency
- In white lettering on a blue background

The Sixth section shall bear the words:

- Name of the Executing Agency
- In white lettering on a blue background

The Seventh section (Contractors Board) shall bear the words:

- Name of the Contractor
- In white lettering on a blue background

The Eighth section shall bear the words:

- Name of the Engineer
- In white lettering on a blue background

Further boards may be added with the names of sub-contractors.

Lettering on these boards shall be as directed by the Engineer

Further boards may be added with the names of sub-contractors.

Tracked Plant

The Contractor's tracked plant may not be run on any public or private road without the written permission of the owner or authority concerned.

Fuel Supplies

The Contractor shall arrange for obtaining, storing and distributing all fuel oils required for the completion of the Works. The storage of fuel on site shall comply with the Petroleum Act and Factories Act applicable in Kenya. Copies of this can be purchased by the Contractor at the Government Printers.

Telephone and Communications

The Contractor shall obtain suitable means of communications during the course of the Contract. The use of radio communications may be permitted but the Contractor shall be responsible for obtaining all the necessary permission and licenses.

Preservation of Trees

No tree shall be removed without prior written permission of the Engineer who will limit the removal of trees to the minimum necessary to accommodate the Permanent Works.

If trees are removed or damaged by the Contractor or his employees, without approval, then the Contractor shall replace such trees.

Replacement of trees shall not be with seedlings less than two years of age, obtained from a reputable nursery and of a species approved by the Engineer. The Contractor shall plant, water and ensure that the replacement trees are properly established, all at his own costs.

Protection from Water

The Contractor shall keep the whole of the Works free from water and shall be deemed to have included in his Contract Sum all costs for pumping, shoring, temporary drains, sumps and other measures and provisions necessary for such purposes and for clearing away and making good to the satisfaction of the Engineer any damage caused thereby.

Protection against Fires

The Contractor is advised that, at all times, it is necessary to guard against fires starting within the Site or in the environs thereof, particularly as the result of the Works or from the actions of his employees. The Contractor shall have available, at all times, a trained fire-fighting team provided with adequate fire-fighting equipment and shall deal with all fires on the Site howsoever caused.

The Contractor shall be responsible for maintaining qualified firefighting crew on the Site at all times as well as maintaining an efficient fire alarm system. The Contractor shall also submit a fire prevention and firefighting program for the Engineer's approval.

The Contractor shall provide suitable and adequate firefighting equipment, to the satisfaction of the Engineer, for ready use at all the times in all the Engineer's site establishment including Contractor's residential quarters, labour camps and ancillary buildings. These shall be maintained until the completion of the construction and handing over of the works to the Employer.

The Contractor shall comply with laws and regulations such as Occupational Health and Safety Act 2007 legislation and any other legislations and regulations regarding fires and with respect to the prevention of fires. No fire may be lit in the dry season without written permission from the Engineer and/ or the relevant Authority.

Safety Precautions

The Contractor shall adhere to the current legislative requirements from Factories Inspectorate, Ministry of Labour, in respect of the appointment of Safety Supervisors on Building and Works of Engineering Construction. In accordance with these requirements, the Contractor shall appoint a Safety Supervisor who shall be qualified in safety and familiar with the works being performed. The Safety Officer shall ensure that adequate measures and rules for the protection of health and safeguarding against accidents are enforced.

The Contractor shall take all necessary precautions against risks of loss of life or of injury to any person employed on the Works or to employees of the Employer and to the Engineer or to visitors or to persons having good and sufficient reasons to be about the Works, and to this end he shall properly safeguard the Works to the satisfaction of the Engineer and in accordance with the Occupational Health and Safety Act 2007 legislation and any other legislations that govern safety at construction sites in Kenya.

The Contractor shall at all times comply with any accident prevention regulations and any safety regulations peculiar to the various trades employed on the Works, and any safety regulations published by the Government.

The Contractor shall report promptly to the Engineer all accidents involving the death of or serious injury to any person on the Site or resulting from the Contractor's operations.

The Contractor shall, at his own expense, educate all his employees on safety precautions based on good practice on site. This shall be done in both English and Kiswahili languages. Safety instructions shall deal with all safety measures including but not be limited to the following; protective clothing, helmets and footwear, use of lifting equipment, precautions against electrical shock, welding, routine procedures in case of accidents, fires, etc., watchmen, warning notices and barriers, use of drilling equipment and dust suppression and use and storage of explosive.

Explosives and Fuels

The Contractor shall make arrangements to transport, store and handle explosives and fuels in a safe manner for protecting the public in accordance with the laws and security regulations in force in the Republic of Kenya. In this regard, he shall submit a program to the Engineer for approval for the safe handling and storage of explosives and fuels. The programme shall be accompanied by material data sheets for each of the explosives and fuels. When approved, the Contractor shall issue a copy to each of his personnel involved with the handling of explosives and fuels.

The Contractor shall obtain all necessary licenses and shall pay all fees and charges in respect of the same as may be necessary for the purpose of moving explosives and fuels from place to place and storing the same, and shall make all applications and obtain approvals from the relevant authorities of the Government of Kenya.

The Contractor shall construct his explosives magazines at locations and in a manner complying with the relevant regulations of Kenya and approved by the Engineer. Detonators and fuse shall be stored in a separate magazine away from explosives. In no case shall they be transported in the same vehicle with explosives.

The Contractor shall provide adequate protective facilities to safely store and to prevent the loss or theft of explosives. Overnight storage of explosives and detonators outside of the magazines will not be permitted. Magazines shall be securely locked when not in use.

The Contractor shall maintain an inventory record of storage and withdrawal of all explosives including detonators. This record shall be available to the Engineer, and the Engineer shall be promptly notified of any loss or theft of explosives.

The Contractor shall supply and install sirens and loudspeakers systems, so that adequate warning may be given to all persons who may be endangered when explosives charges are to be fired. The Contractor shall ensure, prior to discharging explosives, that the area to be blasted is clear of all workmen, residents, pedestrians etc. in addition he shall post flagmen on each of the roads entering the said area so as to stop and prevent any traffic from entering into the area until "all clear" notification is given.

During thunderstorms and other electrical disturbances, no charging and firing will be permitted.

Above Ground Fuel Storage Tanks

The fuel storage tank shall comply with BS 21, 1387, 799, 2594 and 5410 and shall have internal working pressure up to and including 0.4 bar, measured at the top of the tank, and a maximum internal vacuum of 10 mbar. Unless otherwise shown on the drawings, the tank shall have a manhole whose centre shall be 450 mm from one end. Filling point shall be fitted to the highest point in the tank shell and vent and dip point shall be fitted preferably at the centre of the manhole lid. The Contractor shall supply the dip stick.

The drain point shall be fitted at the lowest point in the tank and flush with the inside of the shell. This shall be at a minimum of 150 mm from the ground level. The draw off shall be welded near the base of the tank on the vertical centre-line and at the opposite end to the drain.

The tank shall be suspended from the ground by saddle supports and the bond between the tank and the supports shall be broken by application of bituminous paint on the tank and the saddles. The tank shall be fitted with lifting tugs /hooks of sufficient strength at locations shown on the drawings. The location of the tank shall be firm ground with reinforced concrete slab with a provision of catch pits and sumps of sufficient capacities and to the satisfaction of the Engineer. A bund wall shall be provided round the hard standing concrete slab.

The tank shall be earthed in accordance with BS 7430 AND 6651. The earth system shall terminate with copper earth rod in earth test pit.

Watching, Fencing and Lighting

The Contractor shall employ competent watchmen to guard the Works both by day and night.

Any excavations, material dumps, spoil dumps or other obstructions likely to cause injury to any person or thing shall be suitably fenced off and at night marked by red warning lights.

Fences shall consist of at least three 15 millimetres diameter hemp ropes or 4mm diameter wires, or more if required, stretched tightly between poles, and standards securely planted in solid ground, well clear of the excavation.

The poles, and standards shall not be more than 15 metres apart, and where circumstances require, they shall be placed closer. Ropes or wires shall be stretched tight approximately 0.4 metres, 0.8 metres and 1.2 metres respectively above the ground. Banks of spoil may be accepted by the Engineer in lieu of fencing if of suitable height and form.

Fences and spoil banks shall be clearly marked at the ends, all corners, and along the length at intervals of not more than 15 metres by means of white limewashed boards, discs, stones or oil drums during the daytime and by red lamps burning at night. Markers shall be freshly limewashed at regular intervals to ensure that they are white and clean.

If a road is closed, or partly closed to traffic, temporary traffic and barricades shall be erected by the Contractor to the satisfaction of the Engineer and the police, or other relevant authority, to give proper warning to traffic and the public. Lettering on road signs shall be black on a yellow background and shall incorporate reflective material. The signs shall be adequately illuminated at night.

Soil Conservation

All precautions shall be taken by the Contractor to prevent the erosion of soil from any lands used or occupied by the Contractor for the purpose of the execution of the Temporary Works.

If in the opinion of the Engineer, the Contractor's operations in areas other than the permanent works caused soil erosion, the Contractor shall undertake soil conservation measures in these areas as directed by the Engineer. The details of the proposed soil conservation measures shall be submitted by the Contractor for the Engineer's approval prior to the execution of the said works.

All soil conservation measures shall be carried out at the earliest possible time, as approved by the Engineer, to ensure that the required protection is established most effectively during the progress of Works.

No separate payment will be made for the soil conservation measures and such costs shall be deemed to be included in the respective unit rates and the Contract Sum

Dust Abatement

During the performance of the work the Contractor shall carry out proper and efficient measures wherever and as often as necessary to reduce the dust nuisance resulting from his operations. Measures shall include, but not be limited, to installation of dust suppression units on his rock drilling equipment, watering down of excavated material during loading operations, and use of water tankers to sprinkle access roads, disposal areas, etc.

The Contractor shall be held liable for any damage to crops, cultivated fields and dwellings of persons in the neighbourhood of the Works resulting from his operations.

In addition, the Contractor shall provide his employees, visitors or any other individual on site with personal protective equipment against dust at all times so that they are not exposed to the dust hazard.

No separate payment will be made for the dust abatement measures and the costs thereof shall be deemed to be included in the respective unit rates and the Contract Sum

Noise Control

All work shall be carried out without unreasonable noise. Compressors used on site shall be silenced either by using only full silenced models or fitted with effective exhaust silencers and properly lined and scaled acoustic covers all to the design of the manufacturers of the compressor or by the use of effective acoustic screens to enclose the noise source. Pneumatic percussion tools used on Site shall be fitted with silencers of a type recommended by the manufacturers of the tools. Compressors, silencers or other equipment shall be maintained in good and efficient working order.

Additionally, where noise from the equipment cannot be minimised using silencers and other equipment related measures, the Contractor shall at all times provide the correct Personal protective equipment for the employees, visitors and any other person on site working within the noise range.

No separate payment will be made for noise suppression measures and the costs thereof shall be included in the unit rates and the Contract Sum.

Sanitation

The Contractor shall provide adequate sanitation and refuse collection and disposal facilities complying with state laws and local by-laws for all houses,

offices, workshops, and the like, erected on the site, all to the satisfaction of the Engineer.

The toilet facilities provided at the site by the Contractor shall be made available, free of charge, to the employees of the Contractor and any of his subcontractors.

The Contractor shall warn his employees and sub-contractors that any employee found fouling the site shall be removed from the site immediately in accordance with the Conditions of Contract.

The Contractor shall remove all rubbish and to this end shall provide adequate number of covered garbage bins/containers placed at convenient points around the site establishments. The Contractor shall institute and maintain a regular garbage collection and disposal system. Garbage shall be disposed of by burning, by burial or by other means approved by the Engineer.

No separate payment will be made for such sanitary arrangements and all such costs will be deemed to be included in the unit rates and Contract Sum.

First Aid and Medical Services

The Contractor shall provide and maintain all equipment necessary to render first aid in case of accidents, snake bites or other emergencies according to Occupational Health and Safety Act 2007 legislations regarding workplace health and safety and any other relevant legislation. This equipment shall be kept in readiness at the sites of the works, at camps and wherever the Contractor's staff may regularly live and work. The Contractor shall ensure that there are persons available to all such places with knowledge of simple first aid procedures and able to administer snake bite treatment.

In addition, the Contractor shall provide at his own cost, training to the relevant employees on ways and means of preventing snake bites.

In general, the contractor shall be guided by the following,

- Where the number of workers exceeds 25 - provide a stretcher and a vehicle that can carry a person on a stretcher
- Where the number of workers exceeds 250 - provide first aid room with a qualified nurse to be on duty during all shifts.

Notwithstanding the minimum requirements prescribed above, the Contractor shall be responsible for the adequacy of all the arrangements made.

HIV/AIDS Awareness

The Contractor shall implement an HIV/AIDS awareness programme for his Personnel.

Pollution

During the execution of the Works, the Contractor shall ensure that no pollution of existing watercourses is allowed to take place as a result of his operations. The Contractor shall take all reasonable steps to protect the environment on and off the site and to avoid damage or nuisance to persons or to property of the republic or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation.

Maintenance of Irrigation Water Supplies

The Contractor shall be responsible for maintaining perennial irrigation water supplies so that the supply may be used in any part of the command area at all times unless otherwise agreed in advance with the Irrigators' Association and approved by the Engineer.

Restoration of Drains, Streams, Canals etc.

Subject to any requirement of the Works whereby a permanent change is to be effected, all drains, canals, pipes, channels, water-courses or streams temporarily cut through or disturbed by the excavation of the Works are to be restored so that the water flowing in them may continue to flow in as full and free manner as it did before the disturbance.

Site Clearance

On completion of the Works, the Contractor shall clear the site and remove all temporary buildings, equipment and debris. The Contractor shall level off and grade all areas used for haul roads and all building, store and workshop areas. The whole of the site shall be left in a clean and tidy condition.

Weather Records

The Contractor shall erect two rain gauges ("Nylex 600" or similar approved) and a double bulb, minimum/maximum thermometer (0.1°C accuracy) at sites agreed with the Engineer. The Contractor shall be responsible for the daily

measurement of rainfall and minimum and maximum temperature to be taken at 8:00am each day.

Units and Abbreviations

The units of measurement used in these Contract Documents are metric.

The following abbreviations have been used for units and for other words or phrases as indicated.

Abbreviations in the Contract Documents shall have the following meanings:

mm	millimetre
m	meter
km	kilometre
sq.mm2	square metre
ha	hectare
cu mm3	cubic metre
sec,s	second
hr	hour
min	minute
wk	week
l	litre
gm	gram
kg	kilogram
t	tonne
No	Number
nr	Number (in bill of quantities)
dia	diameter
max	maximum
min	minimum
AD	above datum (levels in metres)
ch	chainage (distance in metres)
eo	extra over
e	exceeding
ne	not exceeding
PQ	Provisional Quantity
PS	Provisional Sum

Do	Ditto
fob	free on board
cif	cost, insurance, freight
wt	weight
%	percent
mh	manhole
ic	inspection chamber
HYS	high yield steel
PCC	precast concrete
uPVC	uplasticised polyvinylchloride
GMS	galvanised mild steel
DI	ductile iron
SV	sluice valve
ISO	International Standards Organisation
KS	Kenyan Standard
BS	British Standard
KES.	Kenya Shillings

EARTHWORKS

Site Clearance and Stripping

General clearance is defined as the clearing, grubbing, removal and disposal of all vegetation, grass, debris, bushes, dense bush, trees, hedges, undergrowth, stumps, roots, shrubs plants and backfilling of holes left by the removal of stumps and roots.

The widths and length over which site clearance is to be carried out shall be instructed by the Engineer. Site clearance over the area of quarries, borrow pits, stockpiles and spoil tips shall be carried out where instructed by the Engineer. The Engineer may give instructions that specific trees, stumps or objects shall not be removed during site clearance operation.

If termite moulds are excavated, the whole of the mould shall be removed.

Where the Engineer instructs that site clearance is required, the entire area shall be cleared and all materials thus cleared shall become the property of the Employer. Unless otherwise instructed, vegetation and perishable materials shall be disposed of by burning. Where material or debris cannot be burnt, it shall be carted to spoil areas, which spoil areas shall be provided in accordance with requirement of this Specification.

If the Contractor clears the Site in advance of the main Works such that the grass and other vegetation re-grows prior to the main Works commencing at any particular location then any additional, or repeating of, site clearance required shall be at the Contractor's expense.

When instructed by the Engineer, the Contractor shall demolish wholly or in part, remove and dispose of all buildings, foundations, structures, fences and any other obstructions which have not been designed to remain.

The Contractor shall carefully take down such buildings, structures; fences etc. and the components shall be dismantled, cleaned and stacked in separate heaps. All materials which, in the opinion of the Engineer, are not fit for re-use shall be removed from the site to spoil areas provided in accordance with the requirements of this Specification. All materials, which are re-usable, shall remain the property of the Employer and shall be preserved and protected by

the Contractor until removed by the Employer or until the expiry of the Period of Maintenance.

All existing paths, fences, walls, hedges, trees, shrubs, lawn and other features which the Engineer instructs not to be removed or otherwise dealt with, shall be protected from the damage, and any damage which occurs due to the Contractor's failure to take adequate precautions shall be repaired at the Contractor's expense.

Site clearance shall be measured in square metre, calculated as the plan area instructed by the Engineer to be cleared. The rate for the site clearance shall include for the cost of complying with the requirements of Clauses 2.1, 2.13 and 2.14.

Stripping work shall basically consist of removal of top soil, grasses, vegetative material to a depth of 150 mm below ground level and its disposal to a stockpile. Stripping shall include for removal, stockpiling and for reinstatement or spreading as directed by the Engineer. Measurement and payment of this shall be in square metres, calculated as the plan area instructed by the Engineer.

Surface Levels

After the area of any section of the Works has been cleared and after trees have been felled, stumps removed and termite moulds excavated to the satisfaction of the Engineer, but before any other work is commenced, surface levels of the ground shall be taken. The levels shall be taken at spacings agreed with the Engineer. Levels shall similarly be taken on the surface of the ground after the removal of unsuitable overburden prior to placing fill and at the interface between natural ground, rock or artificial hard material layers. The levels shall be agreed with the Engineer. The Contractor shall prepare plans and sections which shall, when finally and mutually agreed, be signed by the Engineer and Contractor as truly representing the configurations of the areas in question at the commencement of excavation or fill construction.

Definition of Earthwork Materials

The following definitions of earthworks materials shall apply to this and other Clauses of the Specification in which reference is made to the defined materials:

(a). "Top soil" shall mean the top layer of soil that can support vegetation

(b). "Suitable material" shall comprise all material which arises from excavations within the Site and which is approved by the Engineer as acceptable for use in the Works

(c). "Unsuitable material" shall mean material other than suitable material and shall comprise:

- Material from swamps, marshes and bogs
- Logs, stumps and perishable materials
- Material susceptible to spontaneous combustion
- Clay of liquid limit exceeding ninety (90) and/or plasticity index exceeding sixty five (65)

(d). "Rock" or "hard material

Rock or hard material shall be material which cannot be ripped to an average depth of greater than 300mm by a track type crawler tractor complying with the following:

- In good order complete with all equipment and accessories as supplied;
- Rated 300 BHP flywheel power or over;
- With an operating weight of not less than 37.2 tonnes;
- Equipped with a hydraulically operated single tine ripper compatible with the tractor used; and
- Operated by a qualified operator in accordance with the manufacturer's recommendations and to the satisfaction of the Engineer.

  Where it is impractical to prove hard material by the above method then the quantity of hard material, if any, shall be determined by the Engineer.

  Where excavation contains individual boulders of hard material greater than 0.3 m3 each in volume then such boulders shall be classified as hard material.

(e). "Soft material" material shall mean all material other than that defined as "rock" or "hard material".

Removal of Unsuitable Material

Where directed by the Engineer the Contractor shall remove unsuitable material to the depth as ordered or agreed with the Engineer and shall dispose of it in approved spoil tips.

Excavation General

Excavation shall be carried out with the allowances for working space given in the Method of Measurement to the Bill of Quantities, unless otherwise shown as lines, levels and profiles on the Drawings or to such other lines, levels and profiles as the Engineer may direct or approve in writing. The work shall be carried out by the Contractor in such a way as to avoid disturbance to the surrounding ground. Particular care shall be taken to maintain stability when excavating in close proximity to existing works.

The work shall be carried out in a careful manner to ensure that the exposed surfaces are as sound as the nature of the material permits and that no point shall protrude inside the lines shown on the Drawings except as otherwise specified or agreed by the Engineer. In soft excavation, which is to remain open permanently, exposed faces shall be formed accurately to the required slopes and profiles. Excavations in rock where the faces shall remain open permanently shall be trimmed so that no point protrudes within the required profile.

The Contractor shall examine all excavated faces regularly and shall remove all insecure material or materials resulting from any falls. Where instructed in writing by the Engineer, the Contractor shall wash down exposed surfaces of excavated rock for inspection.

The Contractor shall dispose of all material arising from excavations. If it is suitable and required for the Permanent Works it shall be placed directly in such Works or set aside for use as and when required in suitable approved dumps, otherwise it shall be removed to tips provided by the Contractor unless otherwise provided or directed by the Engineer.

The Contractor shall be responsible for keeping all excavations free from water from whatever cause arising and shall provide such pumping capacity and other measures as may be necessary for this purpose. The Contractor shall make good any damage that may result from his failure to keep the excavations free from water.

All excavation shall be carried out with care and the method and plant to be used in execution thereof shall be to the satisfaction of the Engineer. The Contractor shall be responsible for the safety and security of all excavations at all times during the execution of the contract and where necessary shall provide timbering, shoring or other measures required by the Engineer to prevent movement or loss of ground outside the boundaries, settlement of or damage to property, or injury to persons. The Contractor shall make good any damage to structures, services or other properties caused by such movement, loss of ground and settlement. The Contractor shall also take precautions to route his plant in such a manner as to minimise the likelihood of slips occurring due to vibration or surcharge from the working or movement of heavy machinery.

The Contractor will be permitted, subject to the approval of the Engineer, to adjust side slopes of excavations in soft materials which are to remain open temporarily in preference to shoring or strutting. However no payment shall be made for extra excavation volume as a result of these measures.

The Contractor shall notify the Engineer without delay of any permeable strata, fissures or unusual ground encountered during excavation.

Blasting

The Contractor shall not be permitted to use explosives for rock excavation without the approval of the Engineer. The Contractor shall only employ suitably qualified and experienced personnel to manage and supervise blasting operations. For each blasting operation, the Contractor shall submit to the Engineer for approval a statement detailing the type of explosives to be used, method of transport, storage, blasting procedures, safety precautions to be observed and the names and experience of the personnel who will supervise the work. Notwithstanding the Engineer's approval, the Contractor will be responsible for the blasting operations and shall accept full and absolute liability for any claims resulting either directly or indirectly from the use of explosives on the Site.

The blasting operations shall comply in every respect with the regulations and laws covering the use of explosives and the Contractor shall be responsible for obtaining all necessary permits.

Excavation Beyond Line or Level

If from any cause whatsoever excavations are carried out beyond their true line and level other than on the instructions of the Engineer, the Contractor shall make good to the required line and level with the appropriate grade of filling to be contained in the true excavation, or with concrete or other approved material in such a manner as the Engineer may direct. This shall be at the Contractor's expense.

Approval of Excavation

When excavations have been taken out accurately to the profiles or dimensions required for the work the Contractor shall inform the Engineer who shall carry out an inspection of the excavation. If, after his inspection the Engineer requires additional excavation to be carried out, the Contractor shall do so to such new profiles or dimensions as the Engineer may direct.

Excavation for Structures

Open excavation to form a foundation for a structure shall be carried out to the lines necessary to permit the proper construction of the structure to the approval of the Engineer.

Where a structure is to be founded on soft ground, the excavation shall be taken down until the required formation is exposed and prepared to the approval of the Engineer. Where concrete has to be placed on a soft foundation, the Engineer may direct that a blinding layer of lean concrete be placed beneath the structural concrete immediately after completion and approval of the excavation, or require the Contractor to remove the last 100 mm of excavation immediately prior to placing the concrete. If foundation conditions are very soft the Engineer may instruct that additional material be excavated and replaced with compacted gravel or hardcore.

Where a structure is required to be founded on rock but is not required to penetrate into it, all soft overburden shall be removed and the surface of the rock cleared of any loose material by barring and wedging. Where the foundation is required to penetrate into the rock, excavation of the rock may be carried out by blasting but in such a manner as to prevent the shattering of the rock which is to remain. The Engineer may direct that the last 300 mm of rock be left and be removed by barring and wedging or by the use of approved pneumatic tools so that the exposed surface is sound.

The Contractor shall report to the Engineer whenever excavations are ready to receive concrete. No concrete shall be placed in the foundations until the Contractor has obtained the Engineer's agreement that a secure foundation has been reached and that the excavation has been carried out to the lines and levels required.

Excavation for Fill Foundation

Foundations for embankments shall be excavated to the depths or to the soil or rock grade indicated on the Drawings or described in the Specification. The suitability of each part of the foundation for placing fill thereon shall be determined by the Engineer. No fill shall be placed before acceptance of the foundation by the Engineer and recording of the geology.

Where specified in the Drawings or Specification or directed by the Engineer, seams and other defects below the general level of the foundations shall be excavated and filled or covered with materials including mortar and concrete to the satisfaction of the Engineer before fill is placed thereon.

Where embankments are to be constructed on sloping ground, and where shown on the Drawings, benches shall be excavated in the foundations to the dimensions shown on the Drawings.

Except where specifically permitted by the Engineer all foundations for fill shall be kept free of water when placing fill thereon.

Earth foundations shall have the top 150 mm sufficiently moistened and, if necessary, harrowed or scarified and compacted to at least ninety five per cent (95%) of the maximum dry density as determined by the AASHTO T99. Material too wet to be so compacted shall, as directed by the Engineer, be allowed to dry, harrowed or scarified to reduce the moisture content to the required amount and then be re-compacted.

Trench Excavation

Trench excavation shall be performed by the use of hand tools and approved mechanical equipment, in such manner as to minimise disturbance of the sides and bottom of the excavation.

Trenches for pipes shall be excavated to a sufficient depth to enable the pipe and the specified joint, bedding, haunching and surround to be

accommodated. Unless otherwise stated, the width of the trench shall be equal to the nominal diameter of the pipe plus 600 mm.

The Contractor shall fill any over excavation beneath the pipe or bedding at his own cost with well rammed selected general excavation material as per requirement of this Specification. The Contractor shall dispose of surplus excavated material not required for backfill to spoil tips.

The sides of trenches shall be adequately supported at all times. Alternatively, where the Contractor has to excavate the trenches in open cut the Contractor shall ensure that the side slopes of the excavation are sufficient for stability.

Where rock or boulders are present in the sides or base of a trench in which a pipe is to be installed, the trench shall be trimmed so that when the pipeline is laid, no projection of rock comes within 200 mm of the outside of the pipe at any point. The over excavated portion shall be backfilled as set out in this Specification with approved granular material at the Contractor's expense.

The Contractor shall be entirely responsible for the sufficiency of all temporary supports and side slopes to the excavations. The excavation shall be carried out in such a way as to maintain the stability of all roads and other adjacent structures or works.

Channel Excavation

The excavation of all channels shall be executed in such a manner as to ensure that the stability of side slopes is not endangered. Should slips or undercutting occur for reasons attributable to the Contractor's negligence or method of working, the Engineer will give instructions for remedial works to be carried out by the Contractor at the expense of the Contractor.

Where channels are to be reshaped, cleared and trimmed, the width, depth, side slopes and centre line radius shall be as shown on the Drawings. The Contractor shall clear all weeds and growth from existing channels and grade the beds to required levels. The area of waterway shown is the minimum required and sides of channels shall be trimmed to the required slope so as to provide widths not less than those shown on the Drawings.

Any channels, streams, drains or pipes taking water to or from cultivated land shall be diverted so as to maintain their flow before being moved or broken into unless express permission to the contrary is given by the Engineer. All

diversions and their subsequent reinstatement are to be carried out to the satisfaction of the Engineer. The Contractor shall be deemed to have included the cost of dealing with this in his rates.

Side banks of channels shall be trimmed to a neat appearance and even surface.

In the construction of channels and embankments a local balance of cut and fill shall be maintained as far as possible unless the cut is unsuitable material or is specified in the drawings that the fill should be imported. A deficiency of fill material shall be made up by bed borrow or gleaning. Surplus material, if suitable and approved by the Engineer may be used for an increased width of embankment otherwise it may be spread at the toe of the embankment or placed on spoil tips as directed by the Engineer.

Where required the Contractor shall control the rates of filling and draw-down of water in channels so as not to endanger the stability of earthworks.

Disposal of Excavated Material

Material obtained from excavations which are suitable for forming embankments or other fill areas shall be placed directly in the Works or set aside for use as and when required in suitable approved dumps. Any such suitable material which may be surplus to the total requirements of the Works shall be taken to spoil in tips provided by the Contractor, unless otherwise provided or permitted by the Engineer.

If the Contractor is permitted to remove suitable material from the site to suit his operational procedure or to take such material for purposes other than forming embankments or other fill areas, he shall make good any consequent deficit of filling arising there from, unless otherwise agreed by the Engineer.

All material not suitable for embankments or other filling shall, unless otherwise directed by the Engineer, be taken to separate spoil tips provided by the Contractor.

The cost of disposal of surplus or unsuitable materials shall be deemed to be included in the respective unit rates for the excavation work and the Contract Sum.

Spoil Tips

The Contractor shall be responsible for the provision and sufficiency of tips for the permanent disposal of spoil and shall select their location within the general areas as designated or approved by the Engineer. The Contractor shall submit his proposals for the locations and detailed treatment of tips to the Engineer for approval, which will in no way relieve the Contractor of his responsibilities and obligations under the Contract, whether or not locations are shown on the Drawings or otherwise designated.

No spoil shall be permanently deposited elsewhere than on approved spoil tips unless approved by the Engineer. Spoil tips shall be built up and compacted and trimmed and regulated to levels and profiles approved by the Engineer. Where directed by the Engineer, upper surfaces and slopes of the tips shall be soiled to specified thickness.

The rate for fill shall include for the supply, processing and compaction of material inclusive of extraction, loading and transportation to Site for a maximum haulage distance of 30 km, one way. Where suitable borrow pit is not available within this distance, overhaul will be paid for. Measurement shall be the product of the volume of compacted material in situ and the haulage distance in excess of 30 km, one way, along the shortest route, as determined by the Engineer. The Contractor shall be responsible for the maintenance of this selected route, at his own cost.

Earth Filling

Material for filling shall be obtained from approved sources and shall not contain more than 1% of vegetation matter, rubbish and humus material and shall contain no boulders or rock of a size greater than half the compacted thickness of the layer. No material shall be used which is so uniformly graded that D60 divided by D10 is 4 or less, where D60 and D10 are sizes such that 60% and 10% by width of the particles are finer than D60 and D10 respectively.

Unless otherwise specified the fill material for the canal and stilling basin embankments shall meet the following requirements:

(a). CBR after 4 days soaking compacted to 100% of AASHTO T99 at optimum moisture content of not more than 3%.

(b). Plasticity Index (PI) of not more than 40%.

(c). Permeability of less than 1 x 10-6 mm/s

Prior to commencement of filling, the Contractor shall submit in writing to the Engineer for approval his proposals for carrying out the work such that the optimum use may be made of excavated material as far as possible. The proposals shall include the compaction plant and methods for adjusting the moisture content of the material which he intends to use. No filling shall be carried out until the proposals and the material intended to be used are approved by the Engineer.

Fill shall be placed in layers not exceeding 150 mm compacted thickness, each layer being scarified and thoroughly compacted to obtain a dry density of not less than 95% of the maximum dry density as determined by AASHTO T99. The moisture content shall be adjusted as necessary to achieve the compaction standards. All silt or mud shall be removed from the base and sides of canals before the commencing the filling. Fill on canal side slopes shall allow benching of a minimum 500mm width for each two successive 150mm compacted layers.

The Contractor shall take all necessary measures to prevent any damage or defects to the Works which may be caused by settlements, slips or falls of embankments and shall make good such damage or defects as may occur to the satisfaction of the Engineer, all at his own cost.

Any instability of any adjacent excavation resulting from the embankment not being formed to the lines, levels and profile shown in the Drawings or as ordered by the Engineer will be the responsibility of the Contractor. Where double-handling of excavated material is necessary, the Contractor will be responsible for the temporary disposition of the material such that it does not endanger the stability of the excavation.

Backfilling of Structural Excavations

Backfilling of structural excavations shall be carried out with excavated material selected or approved by the Engineer. The material shall be placed in layers not exceeding 150 mm compacted thickness or such other thickness as the Engineer may approve or direct and shall be compacted as specified in Clause 2.16.

When material is filled up to or over any structure, the filling shall be brought up equally on each side or as otherwise agreed by the Engineer so that no unequal pressures likely to cause damage to the structure are applied.

Filling under Raised Foundations

The material to be used as filling under raised foundations shall consist of suitable material obtained from adjacent excavations or approved borrow sources, and shall be placed in layers not exceeding 150 mm compacted thickness. The material shall be compacted in accordance with Clause 2.16.

Frequency of Testing

Testing will be carried out as instructed by the Engineer with the following being the minimum testing frequencies:

- Field Dry Density Moisture Content Test. Every 500 square meters of compacted fill layer placed or at least 3 tests in any one length of compacted fill, whichever is greater.
- Particle Size Sieving Analysis, Atterberg Limits and AASHTO T180 test. Every 1000 cubic meters of compacted fill or at least 3 tests in any one length of compacted fill, whichever is greater.

The apparatus for these tests and the manner in which they are carried out will be as described in BS 1377/1990 and AASHTO T99. All results of these tests shall be submitted to the Engineer with the least possible delay.

Granular Bedding

Granular bedding material shall comply with BS 882 for aggregates within the sizes range 14 mm to 5 mm. Material complying with BS 882 except in respect of grading may be used provided that it has a maximum size not exceeding 14 mm.

Slopes and Batters

Where a slope is given in the Specification or on the Drawings as a ratio of vertical and horizontal components, it shall be understood that the first component is vertical in all cases e.g. a "slope of 1 in 2" will mean one vertical in two horizontal and a "batter of 4 to 1" will mean four vertical to one horizontal. This meaning will be attributed to all other terms such as "inclination" and "gradient".

Trial Pits

The Contractor shall excavate, maintain and afterwards refill any trial pits ordered by the Engineer. The sides of the pits shall, where deemed necessary by the Engineer for safety purposes, be supported by sheeting or boarding with adequate framing. A ladder shall be provided for inspection purposes.

Sheet Piling

Where shown on the drawings or instructed by the Engineer the construction of sheet piling shall comply with the codes of practice for earth retaining structures, BS 8002: 1994.

CONCRETE

Concrete General

Concrete shall consist of cement, graded aggregate (coarse and fine) and water carefully proportioned, thoroughly mixed, placed and compacted as specified.

The Contractor shall obtain formal approval from the Engineer before pouring any concrete for the permanent works. The Engineer shall allow concreting after ascertaining the required lines and levels, suitability of formwork, availability of required plant and labour, proper fabrication and spacing of the steel bars and quality and quantity of cement and aggregates.

Cement

Cement for use in the permanent works shall be Ordinary Portland Cement from approved manufacture and shall comply with BS 12. Where sulphate-resisting cement is specified, it shall comply with BS.4027.

All cements shall be certified by the manufacturers as complying with the requirements of the specification. Before orders are placed the Contractor shall submit details of the proposed supplier(s) together with such information on the proposed methods of transport, storage and certification so that the Engineer may satisfy himself that the quantity and quality required can be supplied and maintained throughout the construction period. Where necessary the Engineer may require representative samples of the proposed cement to be taken and forwarded to a nominated laboratory for analysis and testing before the source is approved.

No cement shall be used in the Works until deemed satisfactory by the Engineer.

Supply of Cement

Cement shall be obtained from one manufacturer unless otherwise authorised by the Engineer. Should the use of cement from different manufacturers be authorised, the different supplies of cement shall be stored separately and shall not be mixed.

The Contractor shall supply to the Engineer copies of the manufacturer's test certificates certifying that each consignment of cement has been tested and

analysed in accordance with Clause 3.5 of the specifications, and that the results comply in all respects with the above standards. Each certificate shall state clearly the date of despatch and the number of bags despatched in each consignment.

Bagged cement shall be delivered in sealed 50 kilogramme sacks. Each bag shall be marked with the parcel number of the cement contained. Bagged cement shall be transported so that at no time is it exposed to damp and so that moisture cannot be absorbed from the atmosphere. Cement in bulk shall be transported in totally enclosed water tight and sealed containers.

If cement is obtained from an intermediate agent, such agent's arrangements for transporting and storing cement shall be to the approval of the Engineer.

Storage of Cement

The Contractor shall provide sufficient storage capacity on Site to ensure that his anticipated programme of work is not interrupted due to lack of cement. Factors outside the Contractor's control such as transport, weather conditions, holidays and breakdowns shall be taken into account.

Cement delivered to the Site in bulk shall be stored in dry, well-ventilated weather-proof silos or bins which shall be self-clearing. Cement delivered to the Site in bags shall be stored in dry, weather-proof sheds which shall have floors of damp proof construction raised at least 150 millimetres above the surrounding ground.

Cement of different consignments shall be stored separately and consignments shall be used in the same order as they are delivered to the site. No cement shall be stored on the site for longer than three months from the date of despatch by the manufacturer. If not used within that period, the cement shall be removed from the site.

Any bag of cement which is damaged or found to contain cement which has set or partly set, shall be discarded and not used in the permanent works.

Testing of Cement

Cement shall be tested by the manufacturer. If the manufacturer's test certificate is not made available, representative samples shall be taken from different bags or containers of each consignment. They shall be suitably packed and sent to an approved laboratory for testing to prove the cement's

compliance with the specified standards.

The Engineer may require cement to be tested after its delivery to the site. Any cement which has been in store at the site for longer than one month shall be re-tested.

The Engineer may take samples of cement from cement bins or bagged cement, from a parcel of cement after its delivery to the site, or from a parcel of cement which has been stored at the site for longer than one month.

In addition to the manufacturer's tests the Engineer may require the following tests to be carried out:

(a). Comprehensive strength on mortar cubes in accordance with Method 1 of Clause 6A of BS.12

(b). Soundness in accordance with Clause 9 of BS.12.

Any cement which fails to meet the specified requirements shall not be used in the Permanent Works.

Aggregate for Concrete

General

Aggregates for concrete shall comply with BS 822, and shall be obtained from a source or sources approved by the Engineer and shall be transported and stored in such a manner as will prevent:

1. Contamination of the aggregates from the ground, rubbish, vegetation, dust or any other foreign material.
2. Segregation.
3. Intermixing of aggregates of differing characteristics.

Before aggregates from each source are approved for use in the Permanent Works, tests shall be carried out at an approved testing laboratory on representative samples submitted by the Contractor to check that the aggregates comply with the requirements of the Specification.

During concreting operations, tests shall be carried out to check that aggregates delivered for use in the Permanent Works comply with the requirements of the Specification.

Sampling and testing of aggregates for concrete shall be carried out in accordance with the requirements of BS 812 except where described otherwise.

Moisture contents of aggregates shall be determined as the moisture content of the aggregate compared with that of the aggregate in the saturated surface-dry condition. Specific gravities of aggregate shall be determined on aggregate in the saturated surface-dry condition.

Aggregates shall be stored on a clean, free draining surface. The various types and sizes of aggregates shall be kept separate from each other and each stockpile shall be kept as large as possible to maintain a reasonably uniform content in the aggregate.

Fine Aggregates

Fine aggregates shall be clean and durable and shall be natural sand, crushed gravel sand or crushed rock sand complying with BS 882. All the material shall pass through a 5-millimetre BS sieve and the grading shall be in accordance

with Zones 1, 2 or 3 of BS 882. In order to achieve an acceptable grading, it may be necessary to blend materials from more than one source.

As an alternative, fine aggregate for mortar only shall comply with BS 1199 and 1200.

The fine aggregate shall not contain iron pyrites or iron oxides. It shall not contain mica, shale, coal or other laminar, soft or porous materials unless the Contractor can show by tests on finished concrete as set out in BS 1881 that the presence of such materials does not adversely affect the properties of the concrete.

The proportion of clay, silt and other impurities passing a 75 microns BS sieve shall not exceed three per cent for natural or crushed gravel sand or 15 per cent for crushed rock sand. The shell content shall not exceed 15 per cent by weight.

Chlorides soluble in a 10 per cent solution by weight of nitric acid shall not exceed 0.05 per cent by weight expressed as chloride ion when tested as set out in BS 812, subject to the further restriction given in the note on total chloride content in sub-clause 3.5.5.

Soundness: After five cycles of the test set out in ASTM C88-76, the aggregate shall not show a weight loss of more than 10 per cent.

Samples taken from the fine aggregate shall pass the colour test for organic impurities described in sub-clause 3.6.4.

(a). Tests on fine aggregates shall be carried out daily or as required by the Engineer on site during concreting operations as follows:
(b). Sieve analysis
(c). Moisture content. An approved "rapid" test may be used for this test.
(d). Percentage of material passing a 75 microns BS sieve by the Field Settling Test, checked, when necessary, by the Decantation Method.
(e). Test for organic impurities as described in sub-clause 3.5.4.

The Contractor shall arrange to carry out the following tests when requested by the Engineer:

(a). Specific gravity and water absorption.

(b). Bulk density.

(c). Other tests described in BS 812.

Coarse Aggregates

Coarse aggregates shall be clean, hard and durable crushed rock, crushed gravel or natural gravel complying with the requirements of BS 882. The material shall be frost resistant and shall not contain any iron pyrites, iron oxides, flaky or laminated material, hollow shells, coals or other soft or porous material, or organic matter. The pieces shall be predominantly angular, rounded or irregular as defined in BS 812.

Coarse aggregate shall be supplied in the nominal sizes called for in the Contract and shall be graded in accordance with BS 882 for each nominal size.

The proportions of clay, silt and other impurities passing a 75 microns BS sieve shall be not more than one per cent by weight.

The content of hollow and flat shells shall not be such as will adversely affect the concrete quality when tested as set out in BS 1881. The total shell content shall not be more than the following:

40mm nominal size and above	2 per cent of dry weight
20mm nominal size	5 per cent of dry weight
10mm nominal size	15 per cent of dry weight

Chlorides soluble in a 10 percent solution by weight of nitric acid shall not exceed 0.03 per cent by weight, expressed as chloride ion when tested as set out in BS 812 but subject also to the further restriction on total chloride content given in sub-clause 3.5.5.

When tested in accordance with ASTM C289, the aggregate shall be non-reactive.

Soundness: After 5 cycles of the test set out in ASTM C88-76, the aggregate shall not show a weight loss of more than 12 per cent.

Flakiness Index: When tested in accordance with BS 812 shall be as set out hereunder:

40mm nominal size and above	Not more than 40

20mm nominal size and below Not more than 34

If the flakiness index of the coarse aggregate varies more than five units from the average value of the aggregate used in the approved trial mix, a new set of trial mixes shall be carried out in the workability of the mixes have been adversely affected by such variation.

Impact Value: Not more than 45 per cent when tested in accordance with BS 812.

Ten per cent fines value: Not less than 50 kilonewtons when tested in accordance with BS 812.

Shrinkage: When mixed with other ingredients in the approved proportions for concrete and tested as set out in BS 1881, the shrinkage factor shall not exceed 0.05 per cent.

Water absorption: The aggregate shall not have a water absorption of more than 2.5 per cent when tested as described in BS 812.

Tests on coarse aggregate shall be carried out daily or as required by the Engineer on site during concreting operations as follows:

(a). Sieve analysis

(b). Moisture content: An approved "rapid" test may be used for this test.

(c). Percentage of materials passing a 75 microns BS sieve by the Field Settling Test, checked, when necessary, by the Decantation Method.

The Contractor shall arrange to carry out the following tests when requested by the Engineer:

(a). Determination of flakiness index.

(b). Specific gravity and water absorption.

(c). Determination of "ten per cent fines" and of Los Angeles Abrasion.

(d). Other tests described in BS 812.

Test for Organic Impurities

Aggregates shall be tested for organic impurities by means of discoloration of a sodium hydroxide solution as follows:

340 millilitres graduated prescribed bottle shall be filled to the 123 millilitres mark with a sample of the aggregate to be tested. A 3 per cent solution of sodium hydroxide in water shall be added until the volume of the aggregate and liquid after shaking gives a total volume of 194 millilitres. The bottle shall be stoppered, shaken thoroughly and allowed to stand for 24 hours. Should the liquid then be darker than the standard colour solution the aggregate shall not be used for making concrete.

The standard colour solution shall be prepared in a 340 millilitres prescription bottle as follows:

2.5 millilitres of a 2 per cent solution of tannic acid in 10 per cent alcohol shall be added to 97.5 millilitres of a 3 per cent solution of sodium hydroxide in water. The mixture shall be shaken and allowed to stand for 24 hours.

A glass of the standard colour may be used in place of the standard solution.

Total Chloride and Sulphate Contents

The total chloride content arising from all ingredients in a mix, expressed as chloride ions as a percentage of the weight of cement in a mix, shall not exceed 0.5 per cent in any one sample nor 0.3 per cent in 95 per cent of the samples tested. For pre-stressed concrete, steam cured concrete or concrete containing sulphate resisting cement or super sulphated cement, the total chloride content shall not exceed 0.5 per cent of the weight of cement in the mix.

The total sulphate content arising from all ingredients in a mix shall not exceed 0.4 per cent by weight of the aggregates or 4 per cent of the weight of cement in the mix, whichever is less. For this purpose, the sulphate contents shall be expressed as SO3 and shall be calculated form the sulphate contents of the cement, aggregates and any admixtures. Where applicable, sulphate contents shall be determined in accordance with tests described in BS 1047 and 3892.

Pulverised fuel ash shall not be used in conjunction with a cement complying with the requirements of BS 4027 in concrete required to be resistant to sulphates.

Admixtures

Admixtures for improving workability, accelerating or retarding setting of

concrete, or for any other purpose, shall only be used with the Engineer's written approval. Calcium chloride or admixture containing chlorides will, however, not be approved.

The Contractor shall submit samples of the admixtures he proposes to use to the Engineer for testing. If an admixture is approved for use it shall be obtained from an approved supplier and the Contractor's arrangement for measuring, mixing and adding the admixture to the concrete batch shall be strictly in accordance with the manufacturer's instructions or recommendations and subject to the approval of the Engineer.

The proportions of the concrete mixes and water/cement ratio shall be adjusted to the satisfaction of the Engineer so that the strength of the concrete with admixture is at least equal to the strength of the equivalent concrete without admixture.

Water for Concrete

Clean fresh water is to be used for the mixing of all concrete and mortar, and is to be from a source approved by the Engineer. If required by the Engineer, samples shall be taken from the proposed source of supply and submitted to a nominated laboratory for testing in accordance with BS 3148, "Methods of test for water for making concrete" and on the results of these tests the Engineer will decide whether the source is acceptable.

Concrete Mixes

The design of concrete mixes shall be the sole responsibility of the Contractor, but may be undertaken in conjunction with the Engineer. Concrete mixes shall be designed mixes in accordance with the requirements of BS 5328 having the characteristics specified in Table 3.1 of this Specification. Concrete for use in water retaining structures shall comply with BS 8007.

Evidence shall be submitted to the Engineer, for all classes of concrete to be used, showing that at the intended workability the proposed mix proportions and production methods will produce concrete of the required quality.

The following information shall be provided before any designed mix is supplied:

(a). Nature and source of each material.
(b). Full details of tests on trial mixes including workability.

(c). Proposed quantities of each ingredient for one cubic metre of fully compacted concrete.

No change in the approved mix design will be permitted, unless the Contractor carries out trials on the proposed mix design to show that compliance with this Specification can be maintained.

Mix design shall in all cases be subject to the approval of the Engineer, but such approval shall in no way relieve the Contractor of his responsibility for the design and production of concrete in compliance with this Specification.

Trial Mixes

At least six (6) weeks before commencing the placing of any concrete in the works, trial mixes shall be prepared for each class of concrete to be used on the works. Three (3) batches of each class of concrete shall be made using materials typical of the proposed supply and under full scale production conditions.

The workability of each of the trial batches shall be determined and three (3) cubes made from each batch for testing at 28 days. A further three (3) cubes made from each batch may be made for tests at an earlier age if required.

The trial mix proportions shall be approved if the average compressive strength of the nine (9) cubes tested at 28 days exceeds the specified characteristic strength by 3 Newtons per square millimetre, or if nine tests at an earlier age indicate that it is likely to be exceeded by this amount.

To demonstrate that the maximum free water/cement ratio is not exceeded, two batches of concrete shall be made in a laboratory with cement and surface-dry aggregate known from past records of the supplier of the material to be typical. The proposed mix proportions will not be accepted unless both batches have the cement content specified and free water/cement ratio below the maximum specified in Table 3.1.

Classes of Concrete

Class	Characteristic Compressive Strength N/mm^2	Maximum Free Water/cement Ratio	Minimum Cement Content kg/m^3	Maximum Cement Content kg/m^3	Maximum Aggregate Size mm
C25/10/A	25	0.55	360	400	10
C25/20/A	25	0.55	360	400	20
C25/20/B	25	0.55	290	400	20

C25/20/C	25	-	240	540	20
C20/20/B	20	0.55	290	400	20
C20/40/B	20	0.55	260	400	40
C20/40/C	20	-	220	540	40
C15/40/C	15	-	180	540	40
C15/20/C	15	-	180	540	20
C10/40/C	10	-	150	540	40

A, B and C denote exposure conditions for the finished concrete as defined in BS 8007.

Testing of Concrete

General

All concrete shall be sampled and tested in accordance with the requirements of BS 1881 unless otherwise stated in this Specification or instructed by the Engineer.

The Contractor shall allow for all the necessary labour, materials, plant and equipment necessary for the regular sampling and testing of concrete to be placed in the Works.

Cement Content

Tests shall be carried out as required by the Engineer to determine the cement content of the mix. The cement content of any batch of concrete shall not be less than the specified minimum value minus 5 per cent of that value nor more than the specified maximum value plus 5 per cent of that value.

Workability

The workability of the concrete shall be measured as required by the Engineer by slump tests or compaction factor tests and shall be within the following limits:

Slump +25mm or + one third of required value whichever is greater.

Compacting Factor +0.03 where required value is 0.90 or more

+0.04 where required value is 0.90 to 0.80

+0.05 where required value is 0.80 or less

The required value shall be that which has been accepted under Clause 3.8 of

this Specification.

Water/Cement Ratio

The water/cement ratio shall be determined as required by the Engineer and shall not exceed the specified maximum value by more than 5 per cent of that value.

Compressive Strength

Samples of concrete shall be taken for compressive strength at a rate of one sample per 15 cubic metres of concrete placed or 15 batches of concrete placed whichever is the lesser volume. A greater frequency of sampling may be instructed by the Engineer until compliance with specified strength requirements has been confirmed for each class of concrete used in the Works.

Two test specimens shall be prepared from each sample and shall be cured for 28 days, or by any other method approved by the Engineer that enables the prediction of 28-day strength at an earlier time.

On completion of curing, the two test specimens shall be tested. Provided the difference between the two results does not exceed 14 per cent of the mean of the two results, the mean shall be taken as the test result. Where the difference between the two results exceeds 14 per cent of their mean, the lower of the two results shall be taken as the test result.

Compliance with the specified strength may be assumed if the conditions given in both (a) and (b) below are satisfied.

(a). The average compressive strength determined from any one group of four consecutive 28-day test results exceeds the specified characteristic strength by not less than 3 Newtons per square millimetre for classes of concrete C20, C25 and C30 and not less than 2 Newtons per square millimetre for class C15 concrete.

(b). Each individual 28-day test results are greater than the specified characteristic strength minus 3 Newtons per square millimetre for classes of concrete C20, C25 and C30 or 2 Newtons per square millimetre for class C15 concrete.

If only one tests result fails to meet the second requirement, then that result

may be considered to represent only the particular batch of concrete from which that sample was taken provided the average strength of the group satisfies the first requirement.

If more than one result in a group fails to meet the second requirement or if the average strength of any group of four consecutive test results fails to meet the first requirement, then all the concrete in all the batches represented by all such results shall be deemed not to comply with the strength requirements. For the purposes of this Clause, the batches of concrete represented by a group of four consecutive test results shall include the batches from which samples were taken to make the first and the last tests in the group of four, together with all the intervening batches.

Failure to Comply with Specified Requirements

Failure of concrete to comply with the specified requirements will result in it being classified as defective work. Immediately on notification by the Engineer that concrete work is defective, the Contractor shall take all measures necessary to improve concrete quality before further concrete is placed in the Works. If required by the Engineer, the rate of sampling of concrete shall be increased until adequate control is again established. Tests shall be carried out on the defective concrete or test cores taken from it to establish its in-situ strength. If the results of these tests satisfy the Engineer that the defective concrete will fulfil its design function then it may be accepted. If not, the Contractor shall propose strengthening or remedial work where possible or shall remove the defective concrete from the Works.

Concrete Returns and Records

The Contractor shall send weekly to the Engineer a return showing the quantities of cement and the number of mixings of each class of concrete used in each section of the Works.

Records shall be kept by the Contractor of the positions in the Works of all batches of concrete, of their class and of all test cubes or other specimens taken from them. Copies of these records shall be supplied to the Engineer.

Plant, Equipment and Construction Procedure

The design, layout, installation and operation of plant and equipment for processing, handling, transporting, storing and proportioning concrete

ingredients and for mixing, transporting and placing concrete shall be to the satisfaction of the Engineer. Before the plant and equipment is ordered or delivered to site, the Contractor shall submit to the Engineer drawings showing the proposed arrangements of the plant together with detailed descriptions of the equipment proposed

Batching

The aggregates and cement shall be proportioned by means of efficient weigh batching machines except when the Engineer has approved the use of volume batching. The machines shall be carefully maintained and cleaned and they shall be provided with simple and convenient means of checking the accuracy of the weighing mechanism, and they shall be checked when required by the Engineer.

For volume batching suitable gauge boxes shall be used.

Mixing Concrete by Machine

Where the concrete is to be mixed in machines, these shall be of the batch mixing or other approved type. The machines shall ensure that all the concreting materials including the water are thoroughly mixed together before any portion of the mixture is discharged. The mixing time shall not be less than thirty seconds per cubic foot (30sec/cft) of concrete, with a minimum of three minutes (3min) mixing time per batch. The machines must be capable of discharging their contents while running.

Mixing Concrete by Hand

Where it is not possible to employ machine mixing and approval has been obtained from the Engineer, concrete shall be mixed by hand as near as practicable to the site where it is to be deposited. Clean mixing bankers or platforms of sufficient area for the proper execution of the work shall be provided. These platforms if constructed of timber shall consist of planks closely jointed so as to avoid the loss of any grout or liquid from the wet concrete. The whole of the aggregate and cement shall be turned over on the banker in a dry state at least twice. The water shall then be added gradually through a rose head, after which the materials shall again be entirely turned over in a wet state at least three times.

Preparation of Surface to Receive Concrete

Foundations which are to receive concrete shall be properly drained and dewatered so that no water runs over or stands on a surface on which concrete is being placed. If required by the Engineer drains provided through or beneath concrete for the temporary conveyance of water shall afterwards be completely sealed to the Engineer's approval.

Before deposition of concrete against rock, the rock surface shall be thoroughly wetted and cleaned by the application of water, or of water and air, under pressure. No concrete shall be deposited until the surface has been cleaned and passed as satisfactory by the Engineer.

Faults or seams in the rock shall be cleaned to a depth satisfactory to the Engineer and if necessary, stemmed with cement mortar of an approved mix.

Before any steel reinforcement is embedded in the concrete any loose mill scale, loose rust and any oil, grease or other deleterious matter shall be removed. Partially set concrete which may adhere to the exposed bars during concreting operations shall likewise be removed.

Authority to Commence Placing of Concrete

The Contractor shall give the Engineer at least 24 hours' notice of his intention to place concrete in a particular section of the Works. Before concrete is placed the Contractor shall apply to the Engineer for approval of the cleanliness, alignment and suitability of surfaces against which the new concrete is to be placed and of the fixing of formwork, reinforcement, embedded parts and the like and he shall obtain written permission from the Engineer to proceed with concreting.

The Contractor shall carefully plan his concreting operation to ensure, where possible, that these operations are completed within the normal working day.

Dimension of Concrete Pours and Programme of Placing

Unless otherwise approved by the Engineer concrete shall be cast in one operation between external faces of concrete and joints shown on the Drawings or between construction joints or both.

The Contractor shall submit and obtain the Engineer's approval to a detailed concreting programme and his proposals for the location of construction joints.

Transport and Deposition of Concrete

Concrete shall be transported and deposited in such manner as to prevent segregation, loss of materials or contamination with foreign matter. The means of transport of concrete shall be subject to the approval of the Engineer. The containers for conveying the concrete shall be thoroughly cleaned immediately after use and sides dampened before work is started or restarted to prevent cement and fine material in the first batch adhering to the sides. Adequate precautions shall be taken to protect the concrete against wetting or drying out through exposure to the weather and to prevent segregation and consolidation of the mix due to prolonged jolting of the concrete. Concrete shall be placed in its final position and fully compacted before the onset of initial set. Wherever possible, concrete shall be deposited vertically in the final position required and shall not be dropped through a greater height than 1.5 m. Where necessary, bins, drop chutes, down pipes or baffles shall be provided to prevent segregation of the material. Drying out of fresh concrete before deposition shall be prevented by the provision where necessary of suitable covers. Loss of slump during transport and deposition of the concrete shall not exceed 25 millimetres.

Concrete shall not be placed in standing or running water unless so specified. Where concrete has to be placed under water, the Contractor shall submit to the Engineer his proposals indicating the methods and equipment to be employed. The concrete shall be deposited by bottom discharging watertight containers or through funnel shaped tremies which are kept continuously full with concrete up to a level above the water and which shall have the discharging bottoms immersed in the concrete in order to reduce to a minimum the contact of the concrete with the water. Special care shall be taken to avoid segregation and additional cement of about 25% must be added.

Distribution and Spreading of Concrete

Concrete shall be placed in layers not exceeding 500 millimetres in depth approximately parallel to the horizontal or inclined construction joint planes. These layers shall be deposited from one face to the other until the full height of the lift is reached. Each layer shall be deposited on the previous one before the latter has taken its initial set and the exposed area of fresh concrete shall be maintained to the practical minimum. In order to

accomplish this timing a new layer may be started before the previous layer is completed.

The face from which placing of concrete is to commence shall be selected so that if an emergency should occur which prevents the layer being completed the vertical construction joint will be formed in a structurally acceptable position.

Concrete shall not be placed during rain sufficiently heavy or prolonged to wash mortar form coarse aggregate on the exposed sloping faces of fresh concrete unless adequate shelter is provided.

Concrete shall not be placed against any surface (including formwork, reinforcement, embedded steelwork, adjacent concrete or rock) which during hot weather is not adequately dampened to prevent excessive absorption of water from the fresh concrete.

Once commenced, concreting shall be carried on as continuous operation between pre-arranged construction, expansion or contraction joints save only if an emergency occurs and interruption is unavoidable. The Contractor shall have readily available suitable prefabricated formwork for stop ends to form emergency vertical construction joints and, in the event of such an interruption occurring, the concrete already placed shall be properly finished up to the stop end and to a horizontal or inclined surface as directed by the Engineer. In water retaining structures the Contractor shall propose methods of making the joint watertight.

Concrete shall be placed carefully so as not to displace the formwork or reinforcement.

Compaction of Concrete

The Contractor shall thoroughly compact all concrete immediately after it has been placed in position. Unless otherwise authorised by the Engineer, compaction shall be accomplished with the aid of immersion vibrators as specified below, together, if necessary, with rods, shovels and the like. Particular care shall be taken to fill all voids and to work the concrete against rock and existing concrete surfaces, round any reinforcement and embedded fixtures and into the corners of the formwork.

If the Contractor does not wish to use immersion vibrators for any portion of

the works, he shall submit his proposals for alternative vibrators or compaction equipment and shall receive the Engineer's approval to the equipment before commencing to concrete the portion concerned.

Vibrators shall be of a type and size adequate for the portion placed. Vibrators shall operate at a frequency of between 7000 and 10000 impulses per minute. The Contractor shall ensure that vibrators are operated at pressures and voltages not less than those recommended by the manufacturer in order to ensure that the compactive effort is not reduced.

A sufficient number of vibrators shall be operated to enable the entire quantity of concrete being placed to be vibrated for the necessary period and in addition stand-by vibrators shall be available for instant use at each concreting place. The length and diameter of the vibrating element of immersion vibrators shall be sufficient to penetrate through the layer of concrete being placed and re-vibrate the upper portion of the underlying layer of concrete.

Only men experienced in the use of vibrators shall be employed on this type of work.

Vibration shall be continued at each point until the concrete ceases to contract, a thin layer of mortar has appeared on the surface and air bubbles have ceased to appear. The period of vibration necessary shall be determined by trial in the presence of the Engineer. Vibration shall then be continued for this period at each point before any further concrete is superimposed.

Immersion vibrators shall be inserted vertically to penetrate into the layer underneath at regular intervals, which shall not exceed the distance from the element over which vibration is visibly effective and, in any case, shall not exceed 700 millimetres. Vibrators shall not be used to move concrete laterally and shall be withdrawn slowly to prevent the formation of voids. Vibrators shall not be applied to reinforcement or other embedded items.

Protection of Concrete

Freshly placed concrete shall be protected from rainfall and from water running over the surface until it is sufficiently hard to resist damage from this cause.

No traffic shall be allowed on any concrete surface until such time as it is hard enough to resist damage by such traffic.

Concrete placed in the Permanent Works shall not be subjected to any structural loading until it has attained at least its nominal strength.

If the Contractor desires to impose structural loads on newly placed concrete, he shall make at least three test cubes and cure them in the same conditions as the concrete they represent. These cubes shall be tested singly at suitable intervals in order to estimate the time at which the nominal strength is reached.

No Partially Set Concrete shall be used

All concrete must be placed and compacted in its final position within thirty minutes (30min) of discharge from the mixer unless otherwise approved. No partially set material shall be used in this work.

Plum Concrete

Plums shall be hard clean natural stones embedded in mass concrete during the placing of the concrete. Unless otherwise shown on the drawings, the plums shall not be larger than one third of the cross section of the concrete and should not be placed closer than 150 mm to each other vertically and 100mm horizontally. The volume of plums shall unless otherwise specified, not exceed forty per cent (40%) of the mass concrete volume and care shall be taken to ensure that the minimum cover over any plums is 100mm.

Concrete Drainage Canal Lining

Earth filling

The Drainage canal shall be properly formed to the required shape, grade and alignment. Earth filling and compaction for the sub-grade on canal base and banks shall be carried out to ensure a firm foundation in accordance with the provisions of this Specification covering Earthworks (embankment to be thoroughly compacted by hand-tamping, rolling or water soaking. New embankments should be in compacted in 150mm layers). The sub- grade shall be wetted several hours before the lining to ensure that the sub-grade is saturated at the commencement of lining.

Concrete works

Concrete works in lining shall be carried out in accordance with the provisions of this Specification covering Concrete Works. Special attention shall be paid to the concrete mix to ensure that it is properly controlled to avoid it creeping downward from the sides.

The thickness of the concrete lining shall be 75mm or as directed by the Engineer. Where a completed section has a thickness less than that specified, it will be removed and replaced. Plastering or other methods of building up the lining thickness will not be allowed.

Concrete canal linings will be placed in-situ and in Panels of 2 - 3 m lengths and be constructed in alternate bays, so that at least 24 hours elapse between the completion of one Panel and the start of lining of an adjacent Panel. This will be in order to maintain uniform spacing for the joints. Screed guides shall be used to maintain the desired grade and thickness of the lining during laying of the concrete. Any other method of constructing the lining will require the approval of the Engineer. In forming the concrete (screeding operation) at least three passes with a wooden plank, or any other method chosen by the contractor and approved by the Engineer, are necessary in order to maintain the shape and the inside of the canal. After completing the required number of passes, the concrete will be immediately floated (smoothening of the surface with a wooden plank) and trowelled to produce the specified finish. Striking off, or removal of any concrete from the consolidated surface by means other than those used in the construction, will

not be permitted.

Curing of concrete shall be carried out in accordance with the provisions of this Specification covering Concrete Works (proper curing by keeping the concrete damp by sprinkling or by covering with wet gunny bags).

Expansion and shrinkage joints

Expansion and shrinkage joints shall be formed at 2 - 3m intervals in the position and manner shown on the Drawings or as directed by the Engineer. Grooves shall be formed on the joints as shown in the drawings. The minimum Width: Depth (W/D) ratio of the sealant material shall be 2:1. The remaining thickness shall be filled with joint filler material as shown in the drawings. The edges of the previously laid concrete shall first be painted with a suitable sealing compound preferably Sika Primer 3 or equivalent to prevent bonding. After the curing period, the grooves shall be filled with the hot sealing compound (Sikaflex-11FC or equivalent) at the rate of about 0.25 litres per square metre over a primer coat.

After the sealant has been applied to the joint, it can be smoothed using a spatula lubricated with diluted washing-up liquid (10:1 dilution).

Concreting in Adverse Weather

No concreting will be allowed to take place in the open during storms or heavy rains. Where strong winds are likely to be experienced additional precautions to ensure protection from driving rain and dust shall also be taken.

The Engineer may withhold approval of commencement of concreting until he is satisfied that full and adequate arrangements have been made.

Concreting at Night or in the Dark

In general, concrete works will not be permitted to be carried out at night.

Where approval has been given to carry out concreting operations at night or in places where daylight is excluded, the Contractor is to provide adequate lighting at all points where mixing, transportation and placing of concrete are in progress.

Concreting in High or Low Ambient Temperature

Where the ambient temperature exceeds thirty-two degrees Celsius (32oC),

the Contractor shall take special measures in the mixing, placing and curing of concrete. The temperature of the concrete when deposited shall not exceed thirty degrees Celsius (30oC). The Contractor shall carry out all necessary special measures to ensure that the maximum concrete temperature after placing shall not exceed fifty degrees Celsius (50oC) or thirty degrees Celsius (30oC) above the concrete temperature at the time of placing, whichever is lower.

During placing suitable means shall be provided to prevent premature stiffening of the concrete placed in contact with hot surfaces.

The Contractor shall not mix and place concrete when the ambient temperature falls below three degrees Celsius (3oC).

Curing and Protection

Concrete shall be protected during the first stage of hardening from the harmful effects of sunshine, drying winds, cold, rain or running water. The Contractor shall pay particular attention to the need to protect concrete immediately after the finishing operation and prior to its final set and shall submit their proposals to achieve this protection for the Engineer's approval. Protection of concrete which has achieved its final set shall consist of one or more of the following:

(a). A layer of sacking, canvas, hessian, straw mats or similar absorbent material or a layer of sand, kept constantly moist by spraying with water as necessary for fourteen (14) days or such periods as may be directed by the Engineer.

(b). After thoroughly wetting, a layer of approved waterproof paper or plastic membrane kept in contact with the concrete for fourteen (14) days or such period as may be directed by the Engineer.

The use of saline water for curing purposes will not be permitted.

Steel Reinforcement

Materials

Unless otherwise directed or otherwise shown on the Drawings, hot rolled high yield reinforcement shall be used throughout the works.

Where required, mild steel reinforcement, medium tensile steel reinforcement and high tensile steel reinforcement shall comply with BS 4449. Cold twisted steel wire for the reinforcement of concrete shall comply with BS 4482.

All reinforcement shall be sourced from an approved manufacturer and, if required by the Engineer, the Contractor shall submit a test certificate of the Rollings. The Contractor shall, when requested by the Engineer, provide sample pieces 1.0 metre long for testing.

Tying wire shall be 1.6 mm diameter soft annealed iron wire.

Before any steel reinforcement is embedded in the concrete any loose mill scale, loose rust and any oil, grease or other deleterious matter shall be removed. Partially set concrete which may adhere to the exposed bars during concreting operations shall likewise be removed.

Fabricating Reinforcement

Bar reinforcements shall be bent to the shapes shown on the Drawings and bending schedules. All bars shall be bent cold, unless otherwise permitted by the Engineer. All hooks, bends, and the like, unless otherwise shown on the Drawings, shall be to BS 8666. The Contractor shall satisfy himself as to the accuracy of any bar bending schedules supplied and shall provide all reinforcement in accordance with the Drawing. Bar reinforcement shall be bundled and each bundle of steel shall be tagged with identifying tags, showing the size and mark of the bar. The bundles shall be stacked clear of the ground in easily accessible positions that do not in any way hinder the progress of work and shall be kept clean.

Fixing Reinforcement

When placed in the work reinforcement shall be free from coatings or dirt, detrimental scale, paint, oil or other foreign substances. When steel has on its surface rust, loose scale and dust which is easily removable, it may be cleaned by a method approved by the Engineer.

All reinforcing bars, ties, links and fabric shall be fixed in the positions shown on the Drawings within the tolerances specified in BS 8666. In no case shall the cover specified on the Drawings be increased by more than 5 millimetres.

Displacement of reinforcement beyond the specified tolerance shall be prevented by supporting the bars sufficiently and securely fixing them together at intersections where necessary.

The ends of all tying wires shall be turned into the body of the concrete and not allowed to project towards the surfaces of the concrete.

Spacers shall be used to maintain the cover to all steel and shall be made of dense cement mortar of one part cement and two parts sand.

Spacers shall be triangular in section and only one acute edge shall bear against the formwork, the flat side shall bear against the steel. Wire cast into the blocks to fix them to the reinforcement shall be 1.6 millimetres diameter soft annealed iron. Spacers shall not be used on the wet face of water retaining or water excluding structures. Chairs, stools, etc. shall be used to maintain clearance between two or more layers of reinforcement.

Nothing shall be allowed to interfere with the specified position of reinforcement. The fixing of reinforcement shall be checked before and during concreting, and particular attention shall be given to the position of top steel in cantilever sections. During concrete placing a competent steel fixer shall be in attendance to adjust and correct the position of any reinforcement which may be displaced.

Splicing and Lapping

All reinforcement shall be provided in full lengths as indicated on the Drawings or bending schedules. Splicing of bars, except were shown on the Drawings, shall not be permitted without the written approval of the Engineer. Splices shall be staggered as far as possible. Bar reinforcement shall not be welded without the Engineer's written permission.

In lapped splices, the bars shall be placed in contact and wired together in such manner as to maintain a clearance between bars of not less than 50 millimetres.

Mesh or bar reinforcement shall overlap sufficiently to maintain a uniform strength and shall be securely fastened at ends and edges. The edge lap shall

not be less than 40 diameters of the mesh reinforcement bar or two mesh widths whichever is greater.

Cover to reinforcement

The concrete cover to reinforcement shall be 50 mm unless otherwise shown on the Drawings.

The Contractor shall provide any necessary concrete pads for ensuring the cover is attained and in no case shall timber packing be used.

Formwork

Definitions

Forms, formwork or shuttering shall mean all temporary moulds forming the concrete to the required shape together with any special lining that may be required to produce the concrete finish specified.

False work or centering shall mean the furnishing, placing and removal of all temporary construction such as framing, props and struts required for the support of forms.

Materials

The formwork may of seasoned, planed, tongued and grooved timber, plywood, block board, tempered hardboard, steel or as specified on the Drawings.

All timber used for formwork shall be sound wood, well-seasoned and free from loose knots, shakes, large checks, warping and other defects. Before use on the work, it shall be properly stacked and protected from injury from any source. Any timber which becomes badly warped or cracked, prior to the placing of concrete shall be rejected. All formwork for outside surfaces before final ground level shall be either tongued and grooved or provided with a suitable lining to produce a smooth surface finish.

Forms

All forms shall be of wood or metal and shall be built grout-tight and of sufficient rigidity to prevent distortion due to the pressure of the concrete and other loads incidental to the construction operations. Forms shall be constructed and maintained so as to prevent warping and the openings of joints due to shrinkage of the timber.

The forms shall be substantial and unyielding and shall be so designed that the finished concrete will conform to the proper dimensions and contours. The design of the forms shall take into account the effect of vibration of concrete as it is placed.

All formwork shall, unless otherwise directed, be provided with 25 millimetres by 25 millimetres angle fillets (chamfers) so as to form splays on internal and external angles.

A grout check formed from 25 millimetres square hardwood timber shall be incorporated in the formwork to provide a clean, level, horizontal joint on exposed concrete surfaces at the top of each lift.

All joints in the formwork shall be either horizontal or vertical. End formwork shall be square across the mass of concrete.

Where concrete is to be deposited to a slope steeper than 20 degrees to the horizontal, top formwork shall be used to enable the concrete to be properly compacted unless the Engineer agrees otherwise.

Openings for the inspection and cleaning of the inside of formwork for walls, piers and columns shall be formed in such a way that they can be closed conveniently before commencing to place concrete.

Form clamps, tie bolts and anchors shall be used to fasten forms. The use of wire ties to hold forms in position during placing of concrete will not be permitted. Tie bolts and clamps shall be positive in action and of sufficient strength and number to prevent spreading or springing of the forms. They shall be of such type that no metal part shall be left within the specified concrete cover. For water retaining sections, methods of fixing the forms which result in holes through the concrete section when the formwork is removed shall not be used and built-in wall ties shall be fitted with water baffles.

All forms for outside surfaces shall be constructed with stiff wales at right angles to the studs and all form clamps shall extend through and fasten such wales.

The shape, strength, rigidity, grout tightness and surface smoothness of forms which are re-used shall be maintained at all times. Any warped, bulged or otherwise damaged timber shall be replaced. Forms which are unsatisfactory shall not be re-used. If the surface finish on the formed concrete deteriorates as a result of deterioration of the faces of the forms, the Engineer shall instruct those forms be resurfaced, or discarded.

All forms shall be treated with approved mould or similar oil or be soaked with water immediately before placing concrete to prevent adherence of concrete. Any materials which adhere to or discolour concrete shall not be used.

All forms shall be set and maintained true to the line designated until the concrete is sufficiently hardened. Forms shall remain in place for periods which shall be as specified in Clause 3.34. When forms appear to be unsatisfactory in any way, either before or during the placing of concrete, the Engineer shall order the work stopped until the defects have been corrected.

All formwork shall be approved by the Engineer before concrete is placed within it. The Contractor shall, if required by the Engineer, provide copies of calculations of the strength and stability of the formwork and false work. Notwithstanding the Engineer's approval of these calculations, the Contractor shall be held responsible for the safety and adequacy of formwork.

False work and Centering

Detailed plans for a false work or centering shall be supplied by the contractor to the Engineer at least 14 days in advance of the time the Contractor begins construction of the false work. Notwithstanding the approval of the Engineer of any designs for false work submitted by the Contractor, the Contractor shall be solely responsible for the strength, safety and adequacy of the false work or centering.

All false work shall be designed and constructed to provide the necessary rigidity and to support the loads from the weight of green concrete and shuttering and incidental construction loads.

False work or centering shall be founded upon a solid footing safe against undermining and protected from softening. False work which cannot be founded on satisfactory footings shall be supported on piling which shall be spaced, driven and removed in a manner approved by the Engineer. The Engineer may require the Contractor to employ screw jacks, or hard wood wedges to take up any settlement in the formwork either before or during the placing of concrete.

False work shall be set to give the finished structure the required grade and camber shown on the Drawings.

Forms for Joints

Where permanent or temporary joints are to be made in horizontal or inclined members, stout stopping off boards shall be securely fixed across the mould

to form a water-tight joint. The form of the permanent joint shall be as shown on the Drawings.

Where reinforcement or water stops pass through the face of a joint the stopping off board shall be drilled so that the bars or water stop can pass through, or the board shall be made in sections with a half round indentation in the joint faces for each bar so that when placed the board is neat and accurate fit and no grout leaks from the concrete through the bar holes, joints or around the water stop.

Release Agents

Only approved chemical release agents, mould creams (emulsions of water in oil) or oils containing a proportion of surfactant not exceeding 2 percent will be permitted. Water soluble emulsions and oils without surfactant shall not be used. Oil based release agents shall be applied at a rate of 7 square metres per litre one day in advance of concreting, preferably by spray or roller. Chemical release agents shall be applied in accordance with the manufacturer's recommendations.

New timber face work shall be given three coats of release agent before use on the work to ensure uniformity of porosity on the surface.

On no account shall the release agent come into contact with the reinforcement.

Removal of Formwork

Formwork shall be carefully removed without shock or disturbance to the concrete. No formwork shall be removed until the concrete has gained sufficient strength to withstand safely any stresses to which it may thereby be subjected.

The minimum periods which shall elapse between completion of placing concrete and removal of forms are given in the following Table 3.2, and apply to ambient temperatures higher than 10oC. At lower temperatures or if cements other than ordinary Portland are involved, the Engineer may instruct longer periods.

Compliance with these requirements shall not relieve the Contractor of his obligation to delay removal of formwork until such removal can be completed without damage to the concrete.

Formwork Striking Time

Position of formwork	Striking Time
Beam sides, walls and columns	1 to 2 day
Slab soffits - props remain undisturbed	4 days
Beam soffits - props remain undisturbed	7 days
Removal of slab props	14 days
Removal of beam props	21 days

Surface Finishes

General

After removal of the formwork no treatment of any kind other than that required for curing the concrete shall be applied to the concrete faces until after inspection by the Engineer. All honeycombed areas, deformed surfaces or other defective surfaces shall then be repaired at the direction of the Engineer. Immediately following the Engineer's inspection of surface finish, all tie bolt cavities shall be filled with sand cement mortar and the surface left smooth, sound, even and uniform in colour.

Should the finishes surface either as-stuck or after repair exhibit a non-uniform colour or texture, the Engineer shall have the right to order that the surface be given a skim coat and then painted.

Formed Surfaces

All joints between Panels shall be vertical and horizontal unless otherwise directed. Suitable joints shall be provided between sheets to maintain accurate alignment in the plane of the sheets.

For warped surfaces, facings shall be built up of laminated splines cut to make a tight surface which shall then be dressed and sanded to the required curvature.

Type F1: This finish is for surfaces against which backfill or further concrete will be placed. Formwork shall consist of sawn boards, sheet metal or any other suitable material which will prevent the loss of grout when the concrete is being placed.

Type F2: This finish is for surfaces which are permanently exposed to view but where the highest standard of finish is not required. Forms to provide a Type F2 finish shall be faced with wrought thicknesses tongued and grooved boards with square edges arranged in a uniform pattern and close jointed or with suitable sheet material. The thickness of boards or sheets shall be such that there shall be no visible deflection under the pressure exerted by the concrete placed against them. Joints between boards or Panels shall be horizontal and vertical unless

otherwise directed. This finish shall be such as to require no general filling of surface pitting, but fins, surface discoloration and other minor defects shall be remedied by methods agreed by the Engineer.

Type F3: This finish is for surfaces which will be in contact with water flowing at high velocity and for surfaces permanently exposed to view where good appearance and alignment are of importance. To achieve this finish, which shall be free of board marks, the formwork shall be faced with plywood complying with BS 1088 or equivalent material in large sheets. The sheets shall be arranged in an approved, uniform pattern. Wherever possible, joints between sheets shall be arranged to coincide with architectural features or changes in direction of the surface. Suitable joints shall be provided between sheets to maintain accurate alignment in the place of the sheets. Unfaced wrought boarding or standard steel Panels will not be permitted for Type F3 finish. The Contractor shall ensure that the surface is protected from rust marks, spillages and stains of all kinds.

Type F4: This finish is similar to that required for type F3 but is used in places where a first-class alignment and a dense surface free from air holes and other defects is required, suitable for the application of decorative finishes, in very high velocity water channels and in other similar circumstances.

Unformed Surfaces

Type U1: This is screed finish for surfaces of roads of foundations, beds, slabs, and structural members to be covered by backfill, subsequent stages of construction, bonded concrete topping or cement mortar beds to receive pavings, and on exposed surfaces of paving where a superior finish is not required. It is also the first stage of Type U2 and U3 finishes. The finishing operations shall consist of levelling and screeding the concrete to produce a uniform, plane or ridged surface, surplus concrete being struck off by a straight edge immediately after compaction.

Type U2: This is a floated finish for exposed surfaces where a hard smooth steel trowelled surface is not required. Floating shall be done only after the concrete has hardened sufficiently, and may be by hand or machine. Care should be taken that the concrete is worked no more than is necessary to produce a uniform surface free from float marks.

Type U3: This is a hard smooth steel trowelled finish for surfaces exposed to water flowing at high velocity. Trowelling shall not commence until the moisture film has disappeared and the concrete has hardened sufficiently to prevent excess laitance from being worked to the surface. The surface shall be trowelled under firm pressure and left free from trowel marks.

Type U4: This finish is similar to Type U3 finish but the permissible tolerances are smaller.

Surface Tolerances

All parts of concrete surfaces shall be in the positions shown on the Drawings within the tolerances set out in Table 3.3 or Table 3.4.

In cases where the Drawings call for tolerances other than those given in Table 3.3 or Table 3.4, the Drawings shall rule.

Where precast units have been set to a specified tolerance, further adjustments shall be made as necessary to provide a satisfactory straight or curved line. When the Engineer has approved the alignment, the Contractor shall fix the units so that there is no possibility of further movement.

Surface Tolerances for Formed Surfaces

Type of Finish	Tolerance in Millimetres (See Note 1)		
	A	B	C
FI	10	10	+25 to -10
F2	5	10	+15 to -15
F3	2	5	+10 to -10
F4	See Note 2	2	+5 to -5

Note 1:

The tolerances, A, B and C given in the table are defined as follows:

A is an abrupt irregularity in the surface due to misaligned formwork or defects in the face of the formwork.

B is a gradual deviation from a plane surface as indicated by a straight edge 3 metres long. In the case of curved surfaces, the straight edge shall be replaced by a correctly shaped template.

C is the amount by which the whole or part of a concrete face is displaced from the correct position shown on the Drawings.

Note 2:

Abrupt irregularities are not permitted in a Type F4 finish. Any residual irregularities which remain after removal of formwork shall be removed by grinding to achieve a transition of 1 in 50 between the surfaces adjacent to the irregularity.

Surface Tolerances for Unformed Surfaces

Type of Finish	Tolerance in Millimetres (See Note 1)		
	D	E	F
U1	-	10	+20 to -10
U2	Nil	10	+20 to -10
U3	Nil	5	+12.5 to -7.5
U4	Nil	2	+6 to -4

Notes:

D is the maximum allowable value of any sudden change of level in the surface.

E is the maximum allowable value of any gradual irregularity of the surface, as indicated by the gap between the surface and a 3 metres long straight edge or correctly shaped template placed on the surface.

F is the maximum allowable value of the difference in level or position between a straight edge or correctly shaped template placed on the surface and the specified level or position of that surface.

Cement Mortar

Cement mortar shall be machine mixed and unless otherwise specified, consist of three (3) parts of sand to one (1) part of Ordinary Portland cement mixed and thoroughly incorporated together. Just enough water will be added to give a workability appropriate to its use. The above proportions are by volume. Mortar shall be used whilst freshly mixed and no softening or re-

tempering will be allowed.

In Situ Concrete Chambers

In situ concrete chambers shall be constructed generally in accordance with Section 3 of this Specification.

Chamber Covers and Slabs

Covers and slabs shall be the type, size and weight shown in the drawings. Care shall be taken to see that slabs are even so that the cover can seat without rocking.

Covers and frames shall be provided as shown on the drawings. The tops of the covers shall be flush at all points with the surrounding surface of paved areas or as directed in unpaved areas. Any slight adjustment of the slab level which may be necessary to accomplish this shall be effected by topping the side walls with concrete.

STONEWORK

Stones

Stone for all purposes shall be the best of its kind, sound and durable, free from flaws and from soft, weathered or decomposed parts. The stone and the quarry from which it is obtained shall be subject to the approval of the Engineer, samples shall be submitted by the Contractor of the stone he proposes to use in the Works and the Engineer's approval shall be obtained before such stone is used or any order is placed. The stone used shall be clean and must be washed if deemed necessary in the opinion of the Engineer.

Stones for face work shall be as far as possible quarry split and not bullnosed or hammer dressed. A moderate amount of dressing to trim off large projections will however be permitted. Exposed faces of stones for masonry shall be free from tool marks except such as are inherent in the nature of any dressing that may be specified. In rock-faced work the roughness on the surface shall not project more than 40 mm for stone less than 0.3 m2 face area and not more than 60 mm for large stones.

Stone Masonry

Masonry shall be built to the lines and levels shown on the Drawings.

For face work the stones shall show a face of not less than 0.025 m2 and not more than 0.1 m2 in area and none shall be less than 100 mm in depth; they shall be laid to give a uniformly random appearance and shall be selected in laying so as to present an even distribution of large and small stones on the face.

For the arises, stones shall be roughly squared, quarry split and of a size to give out bands varying from 300 mm to 500 mm in length and in bands from 150 mm to 250 mm. The alignment of arises shall be set true to the required lines.

The stones shall be set in mortar with their natural bedding plane (if any) as near normal as possible to the face or normal to the line of thrust in the case of load bearing structures. Particular care must be given to obtaining a sound bond both longitudinally and transversely and there shall be at least one

bonder, or length not less than two-thirds of the wall thickness, in each square yard of wall face.

The mortar, unless otherwise specified, shall be machine mixed cement and sand in the proportion of one part to three (1:3) parts generally as described in the specification. Mortar shall completely fill all interstices between the stones.

The face joints in rubble masonry may vary in thickness from 10 mm to 20 mm. They shall be finished as a neat weathered joint with mortar while the work proceeds where the masonry is specified to be "un-pointed". Where pointing is specified, the joints in each day's work shall be raked out to a depth of not less than 25 mm before the mortar has set. Subsequently the joint shall be filled with mortar and finished in accordance with Clause 4.6. The face of the masonry is to be kept wet while the pointing is proceeding. Provision shall be made to clean all exposed faces both as work proceeds and on completion so that they are left in a neat, tidy and clean condition.

Building of masonry will not be allowed in heavy rain without the written consent of the Engineer. Building shall only proceed when suitable precautions to the satisfaction of the Engineer shall be taken against the action of rain on newly placed mortar. If for any reason of urgency, the consent of the Engineer should be desired to a departure from these provisions, the Contractor shall submit to the Engineer for approval their proposals for protecting the materials and work from the weather.

Gabions

Gabions shall be of the types and sizes shown on the Drawings. The cages shall be constructed from mild steel wire complying with BS 1052, "Specification for mild steel wire for general engineering purposes", galvanised in accordance with BS 443, "Specification for testing zinc coatings on steel wire and for quality requirements". The wire shall be 3mm diameter formed into a fabric having a mesh of 75 mm x 100 mm for baskets and 60 mm x 80 mm for mattresses.

Stone filling for gabions shall consist of hard durable rock, free from weathered or decomposed parts. The minimum dimensions of each stone shall not be less than half its maximum dimension. For mattresses the stone shall be 200 mm to 150 mm for baskets the stone shall be 300 mm to 200

mm. The stone shall be obtained from a source approved by the Engineer. No stone shall be smaller than the size of the gabion mesh. In carrying out the filling, selected pieces of stone of elongated shape shall be placed with their flatter and elongated faces in contact with the mesh wherever possible.

The empty gabions shall be placed to line and level as shown on the Drawings or as directed by the Engineer and then stretched so that the gabions regain their shape on being filled. Diaphragms shall be provided at no more than 1m intervals for baskets and not more than 0.6 m intervals for mattresses. A gabion shall not be completely filled until the adjacent basket or mattress has been half filled, unless otherwise directed, in order not to cause displacements from bulging during filling.

For baskets at least two horizontal connection wires shall be tied between front and back of the gabion in each 1m compartment, at a height of 300 mm and 600 mm from the bottom as the stone fill reaches these levels. Additional tie wires shall be provided if necessary and in no case shall the gabion basket bulge by more than 40 mm. Where a continuous line of gabions is required, adjacent gabions shall be securely tied together at the top and bottom of the gabions with tying wire.

The gabions shall be filled to a level just sufficient to require the lid to be forced into place with a bar. The lid and all joints between baskets and between diaphragms and baskets shall each be tied down with a continuous running wire.

Where gabions are to be shaped, the shape shall be formed by folding the mesh internally and tying it with a continuous running wire.

All tying wire shall be galvanised and of same gauge as specified for the cages above.

The surface upon which gabions are to be laid shall be compacted to a minimum dry density of 95% of the maximum dry density (AASHTO T99).

PIPEWORK

General

The Contractor shall construct pipelines to the lines and levels using grades, classes, or designs of pipe, bedding, haunching and surrounding as shown on the Drawings or directed by the Engineer.

Unless otherwise described in the Contract or agreed by the Engineer only one type of pipe shall be used within any individual length.

All materials shall be subject to the approval of the Engineer prior to procurement and delivery. Upon delivery, the Engineer shall inspect the delivered material for compliance with the specifications. In case of non-conformity, the Contractor shall replace the material at his own cost.

The pipes and fittings shall comply in all respects with British Standards and jointing of pipes and fittings shall be carried out in accordance with the manufacturers' instructions and to the approval of the Engineer.

Storage and Protection of Materials

Pipes shall be stacked on a firm base using two timber packers only under the barrel of rigid pipes such as concrete or steel.

Flexible pipes such as uPVC shall be stacked closely side by side on a firm plane base so that the whole length of the barrel is uniformly supported and sockets are clear of the ground. Each succeeding layer shall be placed at right angles to the previous layers. The height of any stack shall be not more than six layers of pipes and in the case of steel, not more than two layers.

Fittings and specials of any type shall be stored in a single layer only.

Pipes and fittings shall at all times be adequately protected from damage during transport, storage and handling. Cracked or chipped pipes shall not be used in the permanent works. Steel and large diameter plastic pipes shall be fitted in the factory with end caps or reinforcement adequate to prevent distortion during transport, storage and handling.

Plastic pipes and fittings shall be protected from direct sunshine and excessive heat. Deformed pipes and fittings shall not be used in the permanent works.

Rubber rings and other pipe jointing material shall be stored under cover from

direct sunshine.

Granular bedding shall be stored on a firm impermeable base so that it does not become contaminated with deleterious matter.

Handling Pipes and Fittings

Before any pipes are delivered to site the Contractor shall submit details to the Engineer of his proposals for handling pipes during transport, in store and during laying.

During transport and in store, pipes shall not rest on narrow traverse supports likely to cause damage to the pie or its coating. Pipes shall not be unloaded from a vehicle by tipping or dropping.

Pipes shall be lifted by flat braided wire slings or band slings except in the case of externally coated pipes and plastic pipes for which band slings having a width of at least 300 mm shall be used. Wire rope sling shall not be used for any pipes. No pipes shall be lifted by means of hooks applied to the ends of the pipe or by means of appliances such as grabs and togs.

In making arrangements for handling pipes, the Contractor shall take into account any recommendations made by the pipe manufacturer.

Where appropriate the requirements of this Clause shall apply to fittings and other components.

Cutting Pipes

The cutting of pipes for making up lengths shall be carried out by a method which leaves a clean square end.

Concrete pipes shall be cut with a concrete saw or by hand. If cut by hand the end of the pipes shall be trimmed even and square and if reinforced, the steel shall be cut flush with the face of the concrete. If instructed by the Engineer the exposed ends of the steel shall be protected with bitumen or a cement grout.

Steel pipes to be cut shall have the line to be cut clearly marked round the pipe. Cutting shall be carried out by cutting disc or by oxy-acetylene and the cut end shall subsequently be ground to the correct profile for the method of jointing in use.

Pipes and Fittings

Concrete Pipes

Concrete pipes shall comply with BS 5911 "Specification for concrete cylindrical pipes, bends, junctions and manholes, un-reinforced or reinforced with steel cages or hoops" save that the crushing test loads for the various diameters of pipe shall be as shown in Table 5.1:

Crushing Test Loads

Nominal Size of Pipe (Mm)	Works Proof Load KN/M Effective Length
300	23 (Class M Equivalent)
450	35 (Class M Equivalent)
600	46 (Class M Equivalent)
800	54 (Class M Equivalent)
900	85 (Class M Equivalent)
1000	73 (Class M Equivalent)
1200	110 (Class M Equivalent)
1500	132 (Class M Equivalent)

Works proof loads shall be 80% of the maximum loads for each size of pipe.

Damaged pipes showing signs of visible cracking either on the inside or outside surface shall not be used.

Steel pipes

Steel pipes and specials for water and sewerage shall comply with BS 534.

Galvanized mild steel pipes and fittings shall comply with BS 1387 Class B or"Medium Grade" and complying with ISO 65. Threading for screwed and socketed joints shall be in accordance with the requirements of BS 21.

Joints shall be made with an approved pipe-jointing compound in accordance with the manufacturer's instructions. Red lead compounds shall not be used. Joints in underground piping shall be coated with bitumen or other approved composition.

All underground sections of pipework to be protected against corrosion by treating with "COLAS primer, and wrapped with fibreglass and coated with two coats of 'COLAS' bituminous tap coats all to manufacturers specification.

The bituminous paint is to be manufactured to ASTM D1187-82.

All fittings for galvanised steel water pipework shall be galvanised heavy weight fittings in accordance with BS 1740, BS 5153 and BS 5154. All fittings

shall be subject to the approval of the Engineer.

Brass or gunmetal fittings shall be subject to the approval of the Engineer.

uPVC pipes

Un-plasticized Polyvinyl Chloride (uPVC) pressure pipe shall have outside diameters complying with ISO 161, laying lengths complying with ISO 264 and wall thicknesses complying with 1SO 4065. The uPVC pipes shall comply with BS 3505 Class C (0.9 bar working pressure). Joints shall be of the spigot and integral socket type. Solvent weld joints are not permitted in buried uPVC pipelines.

Fittings for use with uPVC pressure pipe shall be manufactured from either uPVC or cast iron with socketed joints and shall comply with ISO 727. Cast iron fittings shall be bitumen coated. Aluminium alloy fittings are not permitted.

The metal adaptor fittings shall comply with ISO 4132.

Valves

Gate valves

Gate valves shall conform to BS 5153 for cast iron and BS 5154 for copper alloy "valves for general purposes".

All gate valves shall close in a clockwise direction and the direction of opening and closing shall be cast on the hand wheels or valve casing with the words 'OPEN' and 'CLOSE' respectively. All gate valves shall be capable of being operated manually with a maximum applied torque of 100 Nm for valves with a nominal diameter less than 450mm. The Contractor shall ensure that the gate valves supplied are fitted with appropriate thrust bearing guides and gearing to fulfil these requirements, ensuring that when reduction gearing is employed, the gear ratio shall not exceed 4:1.

Isolating gate valves shall permit manual closing off of the raw water supply.

Butterfly valves

Butterfly valves shall conform to BS 5155 "Specification for butterfly valves". The use of butterfly valves as main line valves shall not be permitted.

Check valves

Cheek valves shall conform to BS 5153 for cast iron and BS 5154 for copper alloy "check valves for general purposes".

The valves shall be installed in a horizontal position to avoid malfunctioning of the check.

Float ball valves

Float operated valves shall comply with BS 1212 and BS 1968 and BS 2456 "specifications for float ball valves".

Ball valves shall be the plastic diaphragm type or similar approved with seatings to suit the working pressure of 5 bars with plastic float to BS 2456 and internal overflow.

Painting of valves

All valves shall be painted internally and externally to give the same standard of protection as for steel pipes and fittings. Surface protection shall be all to the approval of the Engineer.

Laying Pipes in Trenches and Headings

Immediately before pipes are placed in any trench, the bottom shall be cleared of all stones and other debris and shall be in a condition acceptable to the Engineer. Prior to placing in the trench, all pipes shall be inspected for damage. Damaged pipes which in the opinion of the Engineer cannot satisfactorily be made good shall not be used in the permanent works. End caps or discs placed on the pipes for protection during transit shall not be removed until immediately before the pipes are jointed.

Pipes shall be laid in straight lines unless otherwise shown on the drawings. No pipe shall deviate from the true line and level by more than 5 mm. Pipes shall be firmly bedded throughout their length to the required alignment and level so that they are concentric at each joint. All pipes shall be suitably wedged, shored or otherwise restrained to prevent movement during testing and backfilling but such restraints shall not be left in place permanently unless instructed or agreed by the Engineer.

Pipes which are to receive a concrete bed and haunch or surround shall be sent on suitable concrete blocks or bricks with a pad of Hessian based damp proof course two millimetres thick interposed between the pipe and the block.

Setting blocks shall not be used with other forms of bedding.

Unless otherwise agreed by the Engineer a close-fitting brush or swap shall be placed in pipelines having nominal diameters of 650 mm or less and shall be drawn forward progressively as pipe laying proceeds by means of a suitable rope which shall be threaded through each pipe as it is laid. Pipelines having nominal diameters greater than 650 mm shall be kept clean by suitable means as pipe laying proceeds. No debris of any kind shall be allowed to remain in the pipeline. Where the pipeline has internal lining, persons entering shall wear rubber boots and equipment trolleys shall have rubber tyred wheels. Pipes and joints shall be kept free of dirt, mud and other deleterious matter at all times. If pipe laying is stopped at any time, a cap shall immediately be placed on the end of the last pipe laid to exclude dirt.

Suitable precautions shall be taken to prevent the floating of pipes due to flooding of trenches. If floating should occur, the whole of the pipe run affected shall be removed and trench prepared again. No pipes shall be re-laid in trenches which have flooded until the trenches and the pipes have been inspected by the Engineer. The Contractor shall be entirely responsible for the sufficiency of all temporary supports and side slopes to the excavations. The excavation shall be carried out in such a way as to maintain the stability of all roads and other adjacent structures or works.

Pipes having integral sockets shall be laid with sockets facing upstream unless otherwise agreed or instructed by the Engineer.

Pipes in headings shall be laid in accordance with the requirements of this clause but pipe lengths shall not exceed 1.5 m unless otherwise agreed by the Engineer.

Pipes Laid on Natural Ground

Filling shall commence with selected fill consisting of easily compacted material from which all stones larger than 25 mm and all lumps of clay larger than 75 mm have been removed. The selected fill shall be deposited equally on each side of the pipe carefully compacted in layers not more than 150 mm thick. Care shall be taken to ensure that no voids are left under the pipe. The filling shall be continued to a level of 300 mm above the crown of the pipe

In the case of steel, ductile iron and plastic pipes, the Contractor shall ensure that no distortion of the pipe takes place during the backfilling operation.

The remainder of the trench shall be filled with excavated material and compacted in 150 mm thick layers by means of a vibrating plate compactor or a mechanical rammer. The trench shall be filled flush with the surrounding ground surface.

Pipes laid on Granular Bedding

Granular bedding material shall be placed and compacted generally on both sides of the pipe up to the horizontal diameter of the pipe. Care shall be taken to ensure that no voids are left under the pipe. Thereafter the selected fill shall be as described in Clause 5.8 above.

Pipes with Concrete Bedding and Surround

The configuration of the concrete bedding, surround or arch shall be as shown on the drawings including the location of reinforcement if any is required. Pipes to be set in concrete shall be supported as set out in Clause 5.7. Small diameter pipes in short lengths shall be supported behind pipe socket. Large diameter pipes and long lengths shall be supported on two packers.

After jointing and testing as set out in the appropriate parts of this section, concrete of the class shown on the drawings shall be carefully placed and compacted under the pipes making sure that no voids are left, and brought up to the configuration shown on the drawings. The Contractor shall ensure that the pipes do not float or are in any way disturbed during concrete placing. The remainder of the backfill shall be placed as set out in Section 2 of this Specification.

Where pipes, which are laid on a bed of granular material, are to be protected by a concrete arch, the laying and jointing shall proceed as set out in the appropriate parts of the Specification and granular material shall be brought up to the horizontal diameters of the pipes.

After testing, concrete shall be placed over the pipes to the configuration shown on the drawings and the remainder of the backfill shall hereafter be placed as set out in Section 2 of this Specification.

Flexible joints shall be formed in concrete beddings, arches or surrounds in

the location shown on the drawings. Such joints shall coincide with the pipe joint in such a way that the end of the socket is flush with one face of the joint and the socket faces into the joint space.

Joints in concrete beddings, arches and surrounds shall be 18 mm wide unless otherwise instructed by the Engineer and shall be filled with a compressible material such as a sheet of cane fibre board or cork board. The material used shall be subject to the approval of the Engineer.

Joints in Pipelines

Concrete pipes

(a). Rigid Joints

When laying rigidly jointed pipelines with pipes having integral sockets, before entering a pipe spigot into its socket, both spigot and socket shall be clean and free from mud, oil, grease or other deleterious matter. A gasket of tarred hemp yarn, cut to length so that it forms a butt joint at the crown of the pipe shall be wrapped round the spigot which shall then be fully entered into the socket and the gasket caulked up hard into the joint. The joint shall then be filled completely with a plastic mortar composed of one part of cement to two parts of sand.

The pipes shall not be pressure tested or disturbed in any way for at least 48 hours after jointing.

Rigidly jointed sleeves used to join two spigots shall be jointed in the same manner as integral sockets.

If the drawings require ogee jointed pipes to be laid with a mortar joint, the joint shall be made at the time of laying. Mortar as described above shall be applied to the lower semi-circumference of the socket and to the upper semi circumference of the spigot and the pipe shall be drawn hard into the socket. Excess mortar squeezed out of the joint shall be removed from both the inside and outside of the joint.

(b). Flexible Joints

Flexible joints between pipes having integral socket may be formed by a shaped rubber gasket fitted within the socket or by a rubber ring of circular cross section (O-ring) placed on the pipe spigot. The type of flexible joint to

be used shall be subject to the approval of the Engineer and shall be made strictly in accordance with the manufacturer's recommendations.

(c). uPVC pipes

Flexible jointed uPVC pipes shall be jointed in accordance with the manufacturer's instructions.

Solvent welded joints shall be made strictly in accordance with the manufacturer's instructions using solvent supplied by him for exposed pipes.

(d). Steel pipes

These shall be caulked in thread seal for rigid joints. Flexible joints incorporating rubber O-rings shall be made in accordance with the manufacturer's instructions. Joints incorporating bolted or screwed glands or couplings shall be made in accordance with the manufacturer's instructions.

Components of flexible joints from different manufacturers shall not be used together.

Connections to Existing Pipelines

Where a connection is to be made to an existing water pipe other than that at a chamber, a pipe saddle of the correct size shall be used for this purpose. The hole in the pipe shall be cut precisely to fit the saddle.

Saddles for uPVC pipes shall be made of the same material as the pipes and shall be fixed with a solvent in accordance with the manufacturer's instructions.

Pipes Through Structures

Where a pipeline passes into or out of a structure, including a manhole cover or similar chamber, two flexible joints shall be formed. The flexible joint shall consist of a 500 mm long pipe section connected along the main pipe, with the nearest end 500 mm from the face of the structure. One joint will be made on the incoming pipe and another joint on the outgoing pipe.

When the structure is less than one pipe length wide, the above requirement shall not apply and a sleeve shall be formed through the structure so that there is a clear space at least 75 mm wide all-round the pipe. Adequate means shall be provided to prevent soil from entering this gap.

Pipelines within Concrete Structures

Sections of pipelines which are to be cast into concrete may be installed in advance of the remaining parts of the pipeline subject to the agreement of the Engineer. Such sections shall be placed accurately into position and fixed so that they cannot move during placing of concrete around them.

Pipes under Roads

All pipes at the crossing of driveways and roads shall be surrounded with concrete for the entire length of crossing before trench backfilling.

Concrete surround shall be approved by the Engineer on satisfactory compliance with protection of pipes as detailed in Section 5.9.

Cleaning

The insides of all pipes, valves, tanks and fittings shall be clean, smooth, and free form blister, loose scale and dirt when erected. All lines shall be cleaned after all installation work.

When pipes are installed, all ends shall be suitably plugged until final fixing of fixtures can be carried out. Pieces of cloth or stone will not be permitted.

Pressure Testing of Pipelines

As the installation of the pipework proceeds, the various sections shall be tested before they are built in, concealed, or finally connected. The Contractor shall advise the Engineer in writing at least three days in advance of the carrying out of such tests, and such tests shall, if considered necessary by the Engineer, be carried out in his presence.

All tests shall be at the expense of the Contractor and it shall be the responsibility of the Contractor to make all necessary records of the tests and results and submit these to the Engineer in the final form agreed

All pipe systems shall be tested hydraulically for a period of one hour to not less than one and a half times the design working pressure. Testing shall comply with BS 8010 for standard field testing of pipelines.

If preferred, the Contractor may test the pipelines in sections. Any such section found to be satisfactory need not be the subject of a further test when the system has been completed, unless specifically requested by the Engineer.

During the test, each branch and joint shall be examined carefully for leaks and any defects observed shall be made good by the Contractor and the section re-tested.

Painting of Exposed Pipes and Fittings

All metal surfaces within chambers shall be mechanically wire brushed to remove all loose scale, grease etc. Within two hours of cleaning a primer shall be applied, followed after two hours by a first coat of heavy consistency bitumen paint all to the approval of the Engineer. A second coat of the heavy consistency paint shall be applied after 24 hours. The final coating thickness shall not be less than 250 microns.

Preparation and application of the coating system shall be strictly in accordance with the Manufacturer's instructions.

This clause shall not be applied to chemically or thermally bonded coatings on steel pipes.

Maker Posts

Precast concrete marker posts shall be set in concrete and fixed near valves, fire hydrants, washouts, changes in direction of the mains and where directed by the Engineer. The posts shall be detailed as directed by the Engineer.

Water Tanks

Pressed Steel Tanks

The pressed steel tank shall comply with the BS 1564. The material thickness of the tank Panels shall be 5 mm. The assembly of the tank shall be done in accordance with the manufacturer’s recommendations. The tank shall be provided with a cover which shall have a square manhole of at least 460 mm that give access to the interior of the tank. The tank cover shall be fitted with a suitable vent that is fitted with a suitable screen as recommended by the manufacturer to prevent the entry of insects and small animals.

A tank shall be fitted with external ladder, the length of which would be as shown on the drawings or as determined on site.

Each Panel shall be clearly and indelibly marked to indicate its position in the tank.

Plastic Water Tank

Plastic based water tanks shall be tested in accordance with the requirements of BS 6920. For a tank to be acceptable it must give satisfactory results in tests designed to determine that there is:

1. No test imparted to the water.
2. No change in the appearance of the water.
3. No growth of micro-organisms in the water, in contact with the materials or on the surface of the material.
4. No release of substances into the water that may be of concern to public health.
5. No release of metals into the water.

General

Except where otherwise specified, structural steel shall be Grade 43, complying with BS 7668, "Specification for weldable structural steels".

All structural rolled steel members shall comply in dimension, weight and tolerance with that shown on the drawings and with BS 4, "Structural steel sections" and BS EN 10056, 10067 and 10210.

Bolts, nuts and fastenings

Bolts, studs, nuts and washers etc, shall be of mild steel unless otherwise specified. The dimensions and tolerances of nuts and bolts shall comply with BS 4190, "Specification for ISO metric black hexagon bolts, screws and nuts" or where specified to BS 3692, "Specification for ISO metric precision hexagon bolts, screws and nuts" and the threads shall be to BS 3643, "ISO metric screw threads". The heads of the bolts shall be forged out of the solid bar and the ends shall be cleanly cut with standard threads and the nuts must fit the bolts accurately and tightly. Washers of the shape and type indicated on the drawings shall comply with BS 4320, "Specification for metal washers for engineering purposes".

Where nuts, bolts and washers are required to be galvanized, the galvanizing shall be to BS 3382, "Specification for electroplated coatings on threaded components".

Electrodes

Electrodes used in welding mild steel shall comply with the requirements of BS 639, "Specification for covered carbon and carbon manganese steel electrodes for manual metal-arc welding".

Contractor's Shop Drawings

Where the Contractor is required to undertake the detailed design of the steelwork components, he shall provide the Engineer with copies of detailed shop drawings for approval at least fourteen (14) days before commencing fabrication. The Contractor shall be responsible for the detailed design of all connections and these shall be fully detailed on the shop drawings together with all dimensions, clearances, welding details and procedures, machining, marking, etc. The Contractor shall not commence fabrication until he has received the Engineer's written approval of the shop drawings. Approval of such drawings shall in no way relieve the Contractor of his responsibility for accuracy or the correct operation of the component.

Fabrication and Erection of Steelwork

The standard of workmanship and engineering practices to be adopted for fabrication and erection shall conform to BS 449, "Specification for the use of structural steel in building" and BS 5531, "Code of practice for safety in erecting structural frames".

The Contractor shall supply samples of materials and standards of workmanship as required by the Engineer. All samples approved by the Engineer shall be retained and shall be considered as setting the standard for all subsequent work.

Inspection of work will be carried out by the Engineer and the Contractor shall give sufficient notice of the date when fabricated steelwork is ready for inspection. The Contractor shall provide particulars of places and dates of manufacture of all materials for the Permanent Works and the names of the manufactures. Copies in duplicate of all orders for materials shall be sent to the Engineer at the time of placing such orders.

The Contractor shall ensure that all foundation bolts and supports including built-in bolts, etc upon which the steelwork is to be erected are in the correct position and that the steelwork fits correctly in required positions without

forcing or straining in any way. Any check by the Engineer of the Contractor's measurements shall not relieve him of his responsibility for obtaining this fit unless any errors in position are clearly not attributable to him.

No permanent bolting or site welding shall be done until proper alignment has been obtained. The Contractor may use temporary jigs, anchors or supports during erection, but must allow for thermal movement to take place freely at all times.

If the Contractor wishes to drill holes in or fix attachments to the steelwork to carry temporary work such as shuttering, he shall obtain the Engineer's approval of the positions and details of all such holes or attachments and shall close such holes and remove the attachments to the satisfaction of the Engineer.

On completion of erection of any part of the steelwork on which the Contractor wishes to add further works, such as roofing, he shall first obtain the Engineer's approval of the steelwork and remedy any defects required by the Engineer. Any approval given shall in no way relieve the contractor of his responsibility for ensuring the subsequent correct positioning and behaviour of the steel work of other parts of the structure.

Welding

All shop welds shall be carried out by qualified welders who shall be under competent supervision. All welding is to be carried out in accordance with BS 5135, "Specification for arc welding of carbon and carbon manganese steels". The Contractor's proposals for welding shall be submitted to the Engineer for approval before any work is undertaken.

The Engineer may call for a test of a welder's capabilities in accordance with BS 4872, "Specification for approval testing of welders when welding procedure is not required".

In the case of site welds, the welding procedure for making each type of joint shall be approved by the Engineer before the work is commenced and the Contractor shall make such trial welds as the Engineer may require to demonstrate the soundness of the proposed method and the competence of his workmen.

Where site welding is used all welded joints shall be subject to inspection by

the Engineer. Any welds that are in the opinion of the Engineer defective shall be cut out and the welds remade to the satisfaction of the Engineer. The cost of such corrective measures including any resultant delays, shall be borne by the Contractor.

Painting General

The Contractor shall submit to the Engineer for his approval details of the types and manufacturers of paints he is proposing to use, together with the manufacturer's recommendations concerning preparation of surfaces, primers and undercoats, application methods, safety precautions and drying times for each type of paint. All paints used in the Works must be supplied ready-mixed in unbroken, sealed containers, which clearly show the type, colour and manufacturer of the paint and carry detailed "instructions for use".

All metal surfaces on which paint is to be applied shall be blast cleaned as laid down in BS 7079, "Preparation of steel substrates before application of paints and related products", or other mechanical means and fully prepared in accordance with the manufacturer's recommendations. Applications of paint coatings on external work shall not be carried out or continued in mist, rain or excessively damp conditions. The Contractor shall take all necessary precautions to prevent dust and dirt coming into contact with freshly applied paint before it has dried.

Paints shall be applied either by brushing or spraying in accordance with the manufacturer's instructions. The thinning of paints shall not be permitted without the approval of the Engineer. Unless otherwise recommended by the manufacturer, the minimum interval between the application of a first coat of paint and the second shall be twenty-four hours (24hrs). Special care shall be taken to ensure complete coverage of all corners, arises and openings without causing an excessive build-up of paint and avoiding runs.

Steelwork to be painted shall be clean and free from all rust, grease, oil and mill scale.

The Contractor Shall provide all the relevant employees, visitors and any other persons who shall be exposed to the painting works, with personal protective equipment for the entire duration of their exposure to the paint works.

No separate payment will be made for the dust abatement measures and the costs thereof shall be deemed to be included in the respective unit rates and the Contract Sum

Painting Steelwork Immersed in Water

Steelwork subject to immersion in water shall be blast cleaned or thoroughly mechanically cleaned by an approved alternative process and immediately coated before leaving the factory with zinc phosphate or similar compatible metallic inhibitive primer with a minimum dry film thickness of 50 microns. Following drying of the primer, the steelwork shall be coated with one coat of non-toxic, non-tainting, high build bituminous paint to BS 3416, "Specification for bitumen-based coating for cold application, suitable for use in contact with potable water", having a minimum dry film thickness of 100 microns.

After erection, damaged areas of steelwork shall be mechanically cleaned and touched up with primer and bituminous paint to fully restore the factory applied coating system and thickness.

Finally, two overall finish coats of bituminous paint with a minimum dry film thickness per coat of 100 microns giving an overall minimum dry film thickness of the complete coating system of 350 microns.

Painting other steelwork

Where steelwork, which is not galvanized and not subject to immersion in water is required to be painted, it shall be thoroughly cleaned and painted prior to leaving the factory with:

1. one coat of zinc phosphate or similar compatible metallic inhibitive primer with a minimum dry film thickness of 50 microns.
2. one coat of red lead primer with a minimum dry film thickness of 50 microns.
3. two coats of micaceous iron oxide undercoat paint with a minimum dry film thickness per coat of 50 microns.

After erection, damaged areas of steelwork shall be mechanically cleaned and touched up with primer and under coat to fully restore the factory applied coating system and thickness.

Finally, one overall finish coat of enamel gloss micaceous iron oxide paint with

a minimum dry film thickness of 50 microns giving an overall minimum dry film thickness for the complete coating system of 250 microns.

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

General

Environmental Responsibility

The Contractor will be required to include in his site staff an Environmental Specialist in his team to co-ordinate all aspects of the environment during project implementation. This will include following the construction to monitor, review and verify the implementation of the project's Environmental and Social Management Plan (ESMP).

During construction, the Environmental Specialist will be responsible but not limited to the following tasks:

- Update environmental aspects (not covered in the ESIA / ESMP);
- Report to the Engineer on environmental issues that were included in the ESMP and the emerging ones during construction;
- Audit environmental and safety aspects at the work sites;
- Participate in the definition of the no working-areas and the location of campsite, borrow pits, quarries and other areas;
- Recommend solutions for specific environmental problems;
- Liaise with Community Liaison Groups with regard to compliance of the social clauses of the Contract, in terms of local labour force and HIV/AIDS campaign;
- Oversee strategies for sensitising Contractor' staff on health and safety problems;
- Attend consultations held at key stages of the project with the community and interested parties;
- Liaise with the respective Environmental Authorities on the level of compliance with the ESMP achieved by the Contractor on a regular basis for the duration of the contract;
- Control and supervise the implementation of the ESMP;
- Prepare quarterly environmental and social progress or "audits" reports on the status of implementation of measures and management of work sites.

Updated Environmental Management Plan

An updated Environmental Management Plan will be required to be prepared to identify emerging and sequence environmental activities that are needed in order to complete a required construction process.

The Environmental Management Plan would identify reference documentation, the approval required to complete that activity and the verification documentation to be produced as evidence of satisfactory completion. The Environmental Management Plan would also identify where "hold points" would be required. These are where continuation of subsequent activity is prohibited unless a former activity has been signed-off. The ESMP would be broken down into various activities as listed in ESIA Report will be undertaken.

Method Statements

Method statements would be completed on behalf of the Main Contractor or Sub Contractor by the Environmental Specialist, in consultation with on-site Engineering staff. The method statements would include a review of the environmental risks and commitments, as identified in the ESMP and risk assessment, so that appropriate control measures are developed and included within the construction process.

Method statements would be reviewed by the Consultants Environmental Manager. Where necessary, all method statements would be submitted to the enforcement agencies (EMA and District Assembly.) as appropriate. Method statements would contain as a minimum:

- Location of the activity and access/egress arrangements.
- Work to be undertaken and methods of construction.
- Plant and materials to be used.
- Labour and supervision requirements.
- Health, safety and environmental considerations.
- Any permit or consent requirements.

Control of Construction Processes

Training, Awareness and Competence

The raising of environmental awareness is viewed as a crucial element in the appreciation and implementation of the Construction Environmental

Management Plan (CEMP). As a consequence, all of the Contractor' staff will undergo environmental awareness training, initially by way of the pre-start induction process. A project specific training plan that identifies the competency requirements for all personnel allocated with environmental responsibilities will be produced and contained within the CEMP. Training for all personnel identified in the training plan will be completed before commencement of the associated construction activities. Line managers and supervisors would ensure that all personnel engaged in activities that may have an impact on the environment are competent to carry out their duties or, where necessary, arrange for suitable training to be undertaken.

Supervision of Construction Activities

All construction and installation activities including those carried out by subcontractors and suppliers would be supervised, or regularly checked through the completion of site inspections by the Contractors Environmental Specialist, to ensure that requirements identified in risk assessments or method statements have been implemented. The frequency and extent of this supervision will vary according to the degree of competence displayed by the workforce and the level of risk to the environment.

Inspection of Other Operational Impacts

Appointed environmental representatives would carry out weekly inspections of their respective construction areas, to verify that housekeeping or supporting controls are being implemented effectively. These inspections would utilise the site environmental standards as the minimum standards that should be achieved, with necessary actions being recorded and raised at weekly progress meetings. Subsequent inspections would commence with a review of all outstanding actions from previous reports to verify that they have been completed.

Inspections by the Environmental Team

Environmental deliverables required by the Construction Environmental Management Plan (CEMP) will be subject to regular independent inspections by either the Environmental Manager or the relevant environmental specialists. These inspections will be used to confirm that:

- Construction works are progressing in accordance with the agreed

method statements';

- Agreed protection or mitigation measures are in place, prior to or during the implementation of construction activities;
- Construction works have been completed in accordance with the design and;
- Commitments made during the statutory process.

Environmental Inspection and Reporting

The Contractors Environmental Manager would carry out an assessment of the Project's environmental performance, based upon the reports from the environmental management representatives during the period, reports from the environmental specialists and from his own site inspections. This would be carried out at a frequency at no greater than monthly intervals but could be held more regularly depending on the nature of the construction activity. An assessment of the performance over the month would be made and quantified. A monthly report detailing performance for the period would be provided to the Engineer and would include a summary of environmental inspections completed, audits undertaken, complaints and incidents.

Environmental Monitoring

Monitoring of noise, vibration, dust and water quality would be carried out in accordance with the specialist environmental procedures and environmental commitments made.

Control of non-conformance

Non-conforming products or processes would initiate a Non-Conformance Report, which would identify the nature of the problem, the proposed corrective action, action taken to prevent recurrence of the problem and verification that the agreed actions have been carried out.

Communication and Co-ordination

Internal project communications would be via two processes:

- Weekly team meetings;
- A monthly Project Environmental Review;

Weekly Team Meetings

Weekly meetings chaired by the Client's Environmental Manager will be held

by each of the construction teams to review performance and co-ordinate short-term planning of forthcoming activities. Environmental management representatives would use these meetings to report on the findings of their inspections together with any systematic or recurring issues. Actions from these meetings would be recorded via minutes and reviewed by the Contract Manager.

Monthly Project Environmental Review

Environmental issues will be primarily discussed at a monthly Project Environmental Review, chaired by the Contract Manager and attended by the Contractors Environmental Manager, the Clients Environmental Manager, relevant sub-contractors environmental representatives and, when necessary, environment specialists and representatives from statutory consultees. The Project Environmental Review will:

- Consider past performance from inspections, audit reports and monitoring data.
- Plan actions required to mitigate forthcoming risks.
- Disseminate best practice.

Environmental due diligence during construction

During the construction phase, environmental due diligence will be incorporated into the Project implementation mainly to:

- Control the residual risk of accidental environmental damage;
- Prevent the negative environmental impacts during construction.

The contractor will be required to include environmental considerations in the monthly progress reports and indicate progress in the implementation of mitigation measures as outlined in the ESMP.

The Construction risks to be monitored will include, but not be limited to the following issues:

- Handling of hazardous materials as part of construction activities;
- Movement of machinery;
- Management of borrow areas;
- Sedimentation of watercourses
- Collection and disposal of wastes;

- Management of pollution incidents.

CONSTRUCTION TOLERANCES

General

The following are the tolerances within which the works are to be executed or as directed by the Engineer:

Earthworks

Top level of Embankments after compaction	+100/ -0 mm
Sides of Embankments over a 10 m length	+100/ -0 mm
Channel or Excavation cutting	+20/ -20 mm
Channel Water Way Area	- 0
Horizontal Alignment of Channels:	
Maximum	300 mm
Over 20 m length	100 mm
Formation Level for Structures	+0/-ve filled with concrete
Formation Level for Gabions	+0/ -100 mm

Concrete Structures

The following tolerances shall apply to all wrought formed and fair or fine unformed finishes.

Tolerance from Specified Position

Maximum departure of plan position of structure 150 mm

Tolerance from Specified Dimension

Maximum departure in thickness, cross-sectional dimension or position of columns, beams, walls, footings and the like +25/ -10 mm

Surface Tolerance on Straightness or Departure from Specified Curve

General Surfaces

Maximum deviation in horizontal or vertical direction

- gradual over a 10m length 25 mm
- abrupt 10 mm.

Surfaces in Contact with Flowing Water

Maximum deviation in direction of flow or normal to flow

- gradual over a 10m length 15 mm
- abrupt 5 mm

Reinforcement

Maximum departure in required spacing 15 mm

Minimum lap length shall be:

- In the case of mild steel reinforcing 40 times bar diameter
- in the case of high yield steel reinforcing 50 times bar diameter

Stonework

Pitching and Masonry over a 2 m length	+100/ -25 mm
Face of gabion basket	+ 75/ -25 mm
Thickness of tipped rock or filter layer	+100/ - 0 mm

Specification

PARTICULAR SPECIFICATIONS	
A.	**PRICING ITEMS OF PRELIMINARIES** Prices SHALL BE INSERTED against items of "preliminaries" in the tenderer's priced Bills of Quantities. The contractor is advised to read and understand all preliminary items.
B.	**DESCRIPTION OF THE WORKS** The contract works include: (a). Excavation works (b). Construction substructure and superstructure including reinforcement and walling (c). Rainwater harvesting and disposal (d). Finishes (e). Goods display tables and shelves **Note:** All the above works should be as per the attached drawings and Bills of quantities. **LOCATION OF THE SITE** The site is situated in Kanunu Ward, Igembe South Sub County in Tharak Nithi County
C.	**FLOOR AREAS** To be done as per description in bill of quantities and technical drawings
D.	**MEASUREMENTS** In the event of any discrepancies arising between the Bills of Quantities and the actual works, the site measurements shall generally take precedence. However, such discrepancies between any contract documents shall immediately be referred to the PROJECT MANAGER in accordance with the Conditions of Contract. The discrepancies shall then be treated as a variation and be dealt with in accordance with the said Conditions
E.	**LOCATION OF SITE** IS AS INDICATED ELSEWHERE

F.	**SIGNING OF THE TENDER DOCUMENTS** The authorized person shall append his / her signature and / or company 's rubberstamp on each and every page of tender document in which entries have been made
G.	**DEMOLITIONS AND ALTERATIONS** The Contractor is to allow for all temporary protection required during the works including ordinary and special dust screens, hoardings, barriers, warning signs, etc as directed by the Project Manager and as necessary for the adequate propping and protection of existing property, finishes, workmen employed on the site, employer's agents and the public. Any damage or loss incurred due to the insufficiency of such protection must be made good by the Contractor. All protective devices are to be removed on completion of the works and any necessary making good consequent upon this is to be executed to the satisfaction of the Project Manager The works shall be propped, strutted and supported as necessary before any alteration or demolition work commences. Prices shall include for all cleaning and preparatory work to structure and finishes and for making good to all finishes on completion whether or not specifically described. Unless described as set aside for re-use all arising debris and surplus materials shall be carefully removed from building and cart away from site. The Contractor shall be entirely responsible for any breakage or damage which may occur to materials required for re-use during their removal unless it is certified by the Project Manager that such damage or breakage was inevitable as a result of the condition of the item concerned
H.	**CLEARING AWAY** The Contractor shall remove all temporary works, rubbish, debris and surplus materials from the site as they accumulate and upon completion of the works, remove and clear away all plant, equipment, rubbish, unused materials and stains and leave in a clean and tidy state to the reasonable satisfaction of the Project Manager.

	The whole of the works shall be delivered up clean, complete and in perfect condition in every respect to the satisfaction of the Project Manager
I.	**CLAIMS** It shall be a condition of this contract that upon it becoming reasonably apparent to the Contractor that he has incurred losses and / or expenses due to any of the contract conditions, or by any other reason whatsoever, he shall present such a claim or intent to claim notice to the PROJECT MANAGER within the contract period. No claim shall be entertained upon the expiry of the said contact period.
J.	**PAYMENTS** The tenderer's attention is drawn to the General Conditions of Contract and the Particular Conditions of Contract
K.	**PREVENTION OF ACCIDENT, DAMAGE OR LOSS** The Contractor is notified that these works are to be carried out on a restricted site where the client is going on with other normal activities. The Contractor is thus instructed to take reasonable care in the execution of the works as to prevent accidents, damage or loss and disruption of activities being carried out by the Client. The Contractor shall allow in his rates any expense he deemed necessary by taking such care within the site
L.	**WORKING CONDITIONS** The Contractor shall allow in his rates for any interference that he may encounter in the course of the works for the Client may in some cases ask the Contractor not to proceed with the works until some activities within the site are completed, as the facility will be operating as usual during the course of the contract.
M.	**SIGNBOARD** Allow for providing, erecting, maintaining throughout the course of the Contract and afterwards clearing away a signboard as designed, specified and approved by the Project Manager.
N.	**LABOUR CAMPS** The Contractor shall be allowed to house labour on site

O.	**MATERIALS FROM DEMOLITIONS** Any materials arising from demolitions and not re-used shall become the property of the Client
P.	**PRICING RATES** The tenderer shall include for all costs in executing the whole of the works, including transport, replacing damaged items, fixing, all to comply with the said Conditions of Contract.
Q.	**SECURITY** The Contractor shall allow for providing adequate security for the works and the workers in the course of execution of this contract. No claim will be entertained from the Contractor for not maintaining adequate security for both the works and workers.
R.	**URGENCY OF THE WORKS** The Contractor is notified that these **"works are urgent"** and should be completed within the period stated in these Particular Preliminaries The Contractor shall allow in his rates for any costs he/ she deems that he/she may incur by having to complete these works within the stipulated contract period.
S.	**PAYMENT FOR MATERIALS ON SITE** All materials for incorporation in the works must be stored on site before payment is effected, unless specifically exempted by the Project Manager. This is to include materials of the Contractor, nominated sub-Contractors and nominated suppliers.
T.	**EXISTING SERVICES** Prior to the commencement of any work, the Contractor is to ascertain from the relevant authority the exact position, depth and level of all existing services in the area and he/she shall make whatever provisions may be required by the authorities concerned for the support, maintenance and protection of such services**.**

U.	**CONTRACT COMPLETION PERIOD** The contract completion period in accordance with clause 31 of the Conditions of Contract must be adhered to. The **'PROJECT MANAGER'** shall strictly monitor the Contractors progress in relation to the progress chart and should it be found necessary the **'PROJECT MANAGER'** shall inform the Contractor in writing that his actual performance on site is not satisfactory. In all such cases the Contractor shall accelerate his rate of performance production and progress by all means such as additional labour, plant, etc. and working overtime all at his cost.
V.	**PERFORMANCE BOND** A guarantee of 10 % of the contract sum will be required in accordance. No payment on account for the works executed will be made to the contractor until he has submitted the Performance guarantee to the Project Manager duly signed, sealed and stamped from an approved Bank**.**
W.	**DELIVERY OF TENDER** Tenders and all documents in connection therewith, as specified above must be delivered in the addressed envelope which should be properly sealed and deposited at the offices as specified in the letter accompanying these documents or as indicated in the advertisement. Tenders will be opened at the time specified in the letter accompanying these Tender Documents or as indicated in the advertisement. Tenders delivered/received later than the above time will not be opened.
X.	**VALUE ADDED TAX** The Contractor's attention is drawn to the Legal Notice in the Finance Act part 3 Section 21(b) operative from 1st September, 1993 which requires payment of VAT on all contracts. The Contractor should therefore include allowance in his rates and prices for prices for VAT and any other Government taxes currently in force

ITEM	**DESCRIPTION**

A. PRICING ITEMS OF PRELIMINARIES AND PREAMBLES

Prices will be inserted against items of Preliminaries in the Contractor's priced Bills of Quantities and Specification.

The Contractor shall be deemed to have included in his prices or rates for the various items in the Bills of Quantities or Specification for all costs involved in complying with all the requirements for the proper execution of the whole of the works in the Contract.

B. ABBREVIATIONS

Throughout these Bills, units of measurement and terms are abbreviated and shall be all the requirements for the proper execution of the whole of the works in the Contract.

Ha	Shall mean hectares
C.M.	Shall mean cubic metre
S.M.	Shall mean square metre
L.M.	Shall mean linear metre
MM	Shall mean Millimetre
Kg.	Shall mean Kilogramme
No.	Shall mean Number
Prs.	Shall mean Pairs
B.S.	Shall mean the British Standard Specification Published by the British Standards Institution, 2 Park Street, London W.I., England.
Ditto	Shall mean the whole of the preceding description except as qualified in the description in which it occurs.
m.s.	Shall mean measured separately.

C. EXCEPTION TO THE STANDARD METHOD OF MEASUREMENT

Attendance

Clause B19(a) of the Standard Method of Measurement is deleted and the following clause is substituted: -

	Attendance on nominated Sub-Contractors shall be given as an item in each case shall be deemed to include: allowing use of standing scaffolding, mess rooms, sanitary accommodation and welfare facilities; provision of special scaffolding where necessary; providing space for office accommodation and for storage of plant and materials; providing light and water for their work: clearing away rubbish; unloading checking and hoisting: providing electric power and removing and replacing duct covers, pipe casings and the like necessary for the execution and testing of Sub- Contractors' work and being responsible for the accuracy of the same. *Fix Only: -* "Fix Only" shall mean take delivery at nearest railway station (Unless otherwise stated), pay all demurrage charges, load and transport to site where necessary, unload, store, unpack, assemble as necessary, distribute to position, hoist and fix only.
D.	**EMPLOYER** As defined in the conditions of contract
E.	**PROJECT MANAGER** The term "P.M." wherever used in these Bills of Quantities shall be deemed to imply the Project Manager as defined in of the Conditions of Contract or such person or persons as may be duly authorized to represent him on behalf of the Government.
F.	**ARCHITECT** The term "Architect" shall be deemed to mean "The P.M." as defined above
G.	**QUANTITY SURVEYOR** The term "Quantity Surveyor" shall be deemed to mean "The P.M." as defined above
H.	**ELECTRICAL ENGINEER** The term "Electrical Engineer" shall be deemed to mean "The P.M." as defined

	above
I.	**MECHANICAL ENGINEER** The term "Mechanical Engineer" shall be deemed to mean "The P.M." as defined
J.	**STRUCTURAL ENGINEER** The term "Structural Engineer" shall be deemed to mean "The P.M." as defined above. Particulars of insertions to be made in the Appendix to the Contract Agreement will be found in the Particular Preliminaries part of these Bills of Quantities
K.	**BOND.** The Contractor shall find and submit on the Form of Tender as given in the instructions to bid and SPN
L.	**PLANT, TOOLS AND VEHICLES** Allow for providing all scaffolding, plant, tools and vehicles required for the works except in so far as may be stated otherwise herein and except for such items specifically and only required for the use of nominated Sub-Contractors as described herein. No timber used for scaffolding, formwork or temporary works of any kind shall be used afterwards in the permanent work.
M.	**TRANSPORT.** Allow for transport of workmen, materials, etc., to and from the site at such hours and by such routes as may be permitted by the competent authorities.
N.	**MATERIALS AND WORKMANSHIP** All materials and workmanship used in the execution of the work shall be of the best quality and description unless otherwise stated. The Contractor shall order all materials to be obtained from overseas immediately after the Contract is signed and shall also ensure they are onsite when required for use in the works. The Bills of Quantities shall not be used for the purpose of ordering materials

O.	**SIGN FOR MATERIALS SUPPLIED.** The Contractor will be required to sign a receipt for all articles and materials supplied by the **PROJECT MANAGER** at the time of taking deliver thereof, as having received them in good order and condition, and will thereafter be responsible for any loss or damage and for replacements of any such loss or damage with articles and/or materials which will be supplied by the **PROJECT MANAGER** at the current market prices including Customs Duty and V.A.T., all at the Contractor's own cost and expense, to the satisfaction of the **PROJECT MANAGER**
P.	**STORAGE OF MATERIALS** The Contractor shall provide at his own risk and cost were directed on the site weather proof lock-up sheds and make good damaged or disturbed surfaces upon completion to the satisfaction of the **PROJECT MANAGER** Nominated Sub-Contractors are to be made liable for the cost of any storage accommodation provided especially for their use.
Q.	**SAMPLES** The Contractor shall furnish at his own cost any samples of materials or workmanship including concrete test cubes required for the works that may be called for by the **PROJECT MANAGER** for his approval until such samples are approved by the PROJECT MANAGER and the **PROJECT MANAGER,** may reject any materials or workmanship not in his opinion to be up to approved samples. The **PROJECT MANAGER** shall arrange for the testing of such materials as he may at his discretion deem desirable, but the testing shall be made at the expense of the Contractor and not at the expense of the **PROJECT MANAGER**. The Contractor shall pay for the testing in accordance with the current scale of testing charges laid down by the Ministry of Roads, Housing and Public Works The procedure for submitting samples of materials for testing and the method of marking for identification shall be as laid down by the **PROJECT MANAGER** The Contractor shall allow in his tender for such samples and tests except those

	in connection with nominated sub- contractors' work.
R.	**GOVERNMENT ACTS REGARDING WORK PEOPLE ETC.** Allow for complying with all Government Acts, Orders and Regulations in connection with the employment of Labour and other matters related to the execution of the works. In particular the Contractor's attention is drawn to the provisions of the Factory Act 1950 and his tender must include for all costs arising or resulting from compliance with any Act, Order or Regulation relating to Insurances, pensions and holidays for workpeople or so the safety, health and welfare of the workpeople. The Contractor must make himself fully acquainted with current Acts and Regulations, including Police Regulations regarding the movement, housing, security and control of labour, labour camps, passes for transport, etc. It is most important that the Contractor, before tendering, shall obtain from the relevant Authority the fullest information regarding all such regulations and/or restrictions which may affect the organisation of the works, supply and control of labour, etc., and allow accordingly in his tender. No claim in respect of want of knowledge in this connection will be entertained.
S.	**SECURITY OF WORKS ETC.** The Contractor shall be entirely responsible for the security of all the works stores, materials, plant, personnel, etc., both his own and sub- contractors' and must provide all necessary watching, lighting and other precautions as necessary to ensure security against theft, loss or damage and the protection of the public.
T.	**PUBLIC AND PRIVATE ROADS.** Maintain as required throughout the execution of the works and make good any damage to public or private roads arising from or consequent upon the execution of the works to the satisfaction of the local and other competent authority and the **PROJECT MANAGER**
U.	**EXISTING PROPERTY.** The Contractor shall take every precaution to avoid damage to all existing

	property including roads, cables, drains and other services and he will be held responsible for and shall make good all such damage arising from the execution of this contract at his own expense to the satisfaction of the **PROJECT MANAGER**
V.	**VISIT SITE AND EXAMINE DRAWINGS.** The Contractor is recommended to examine the drawings and visit the site the location of which is described in the Particular Preliminaries hereof. He shall be deemed to have acquainted himself therewith as to its nature, position, means of access or any other matter which, may affect his tender. No claim arising from his failure to comply with this recommendation will be considered.
W.	**ACCESS TO SITE AND TEMPORARY ROADS.** Means of access to the Site shall be agreed with the **PROJECT MANAGER** prior to commencement of the work and Contractor must allow for building any necessary temporary access roads for the transport of the materials, plant and workmen as may be required for the complete execution of the works including the provision of temporary culverts, crossings, bridges, or any other means of gaining access to the Site. Upon completion of the works, the Contractor shall remove such temporary access roads; temporary culverts, bridges, etc., and make good and reinstate all works and surfaces disturbed to the satisfaction of the **PROJECT MANAGER** The Contractor should also allow for relocating existing fence (approx. 30 metres long).
X.	**AREA TO BE OCCUPIED BY THE CONTRACTOR** The area of the site which may be occupied by the Contractor for use of storage and for the purpose of erecting workshops, etc., shall be defined on site by the **PROJECT MANAGER.**
Y.	**OFFICE ETC. FOR THE PROJECT MANAGER** The Contractor shall provide, erect and maintain where directed on site and afterwards dismantle the site office of the standard type, complete with furniture. He shall also provide a strong metal trunk complete with strong hasp and staple fastening and two keys. He shall provide, erect and maintain a lock-

	up type water or bucket closet for the sole use of the **PROJECT MANAGER** including making temporary connections to the drain where applicable to the satisfaction of Government and Medical Officer of Health and shall provide services of cleaner and pay all conservancy charges and keep both office and closet in a clean and sanitary condition from commencement to the completion of the works and dismantle and make good disturbed surfaces. The office and closet shall be completed before the Contractor is permitted to commence the works. The Contractor shall make available on the Site as and when required by the **"PROJECT MANAGER"** a modern and accurate level together with leveling staff, ranging rods and 50 metre metallic or linen tape
Z.	**WATER AND ELECTRICITY SUPPLY FOR THE WORKS** The Contractor shall provide at his own risk and cost all necessary water, electric light and power required for use in the works. The Contractor must make his own arrangements for connection to the nearest suitable water main and for metering the water used. He must also provide temporary tanks and meters as required at his own cost and clear away when no longer required and make good on completion to the entire satisfaction of the **PROJECT MANAGER.** The Contractor shall pay all charges in connection herewith. No guarantee is given or implied that sufficient water will be available from mains and the Contractor must make his own arrangements for augmenting this supply at his own cost. Nominated Sub--contractors are to be made liable for the cost of any water or electric current used and for any installation provided especially for their own use.
AA.	**SANITATION OF THE WORKS** The Sanitation of the works shall be arranged and maintained by the Contractor to the satisfaction of the Government and/or Local Authorities, Labour Department and the **PROJECT MANAGER.**
BB.	**SUPERVISION AND WORKING HOURS** The works shall be executed under the direction and to the entire satisfaction in all respects of the **PROJECT MANAGER** who shall at all times during normal working hours have access to the works and to the yards and workshops of the

	Contractor and sub-Contractors or other places where work is being prepared for the contract.
CC.	**PROVISIONAL SUMS** The term "Provisional Sum" wherever used in these Bills of Quantities shall have the meaning stated in Section A item A7(i) of the Standard Method of Measurement. Such sums are net and no addition shall be made to them for profit.
DD.	**PRIME COST (OR P.C.) SUMS.** The term "Prime Cost Sum" or "P.C. Sum" wherever used in these Bills of Quantities shall have the meaning stated in Section A item A7 (ii) of the Standard Method of Measurement. Persons or firms nominated by the **PROJECT MANAGER** to execute work or to provide and fix materials or goods are described herein as Nominated Sub-Contractors. Persons or firms so nominated to supply goods or materials are described herein as Nominated Suppliers.
EE.	**PROGRESS CHART.** The Contractor shall provide within two weeks of Possession of Site and in agreement with the **PROJECT MANAGER** a Progress Chart for the whole of the works including the works of Nominated Sub-Contractors; one copy to be handed to the PROJECT MANAGER and a further copy to be retained on Site. Progress to be recorded and chart to be amended as necessary as the work proceeds**.**
FF.	**ADJUSTMENT OF P.C. SUMS.** In the final account all P.C. Sums shall be deducted and the amount properly expended upon the **PROJECT MANAGER'S** order in respect of each of them added to the Contract sum. The Contractor shall produce to the **PROJECT MANAGER** such quotations, invoices or bills, properly receipted, as may be necessary to show the actual details of the sums paid by the Contractor. Items of profit upon P.C. Sums shall be adjusted in the final account pro-rata to the amount paid. Items of "attendance

GG.	**ADJUSTMENT OF P.C. SUMS. Ctd…….** Should the Contractor be permitted to tender and his tender be accepted of any work for which a P.C. Sum is included in these Bill of Quantities profit and attendance will be allowed at the same rate as it would be if the work were executed by a Nominated Sub-Contractor.
HH.	**ADJUSTMENT OF PROVISIONAL SUMS** In the final account all Provisional Sums shall be deducted and the value of the work properly executed in respect of them upon the **PROJECT MANAGER's** order added to the Contract Sum. Such work shall be valued as described for Variations, but should any part of the work be executed by a Nominated Sub-Contractor, the value of such work or articles for the work to be supplied by a Nominated Supplier, the value of such work or articles shall be treated as a P.C. Sum and profit and attendance comparable to that contained in the priced Bills of Quantities for similar items added.
II.	**NOMINATED SUB-CONTRACTORS** When any work is ordered by the **PROJECT MANAGER** to be executed by nominated sub-contractors, the Contractor shall enter into sub- contracts and shall thereafter be responsible for such sub-contractors in every respect. Unless otherwise described the Contractor is to provide for such Sub-Contractors any or all of the facilities described in these Preliminaries. The Contractor should price for these with the nominated Sub-contract Contractor's work concerned in the P.C. Sums under the description "add for Attendance".
JJ.	**DIRECT CONTRACTS** Notwithstanding the foregoing conditions, the Government reserves the right to place a "Direct Contract" for any goods or services required in the works which are covered by a P.C. Sum in the Bills of Quantities and to pay for the same direct. In any such instances, profit relative to the P.C. Sum the priced Bills of Quantities will be adjusted as described for P.C. Sums and allowed.
KK.	**ATTENDANCE UPON OTHER TRADESMEN, ETC.** The Contractor shall allow for the attendance of trade upon trade and shall

	afford any tradesmen or other persons employed for the execution of any work not included in this Contract every facility for carrying out their work and also for use of his ordinary scaffolding. The Contractor, however, shall not be required to erect any special scaffolding for them. The Contractor shall perform such cutting away for and making good after the work of such tradesmen or persons as may be ordered by the PROJECT MANAGER and the work will be measured and paid for to the extent executed at rates provided in these Bills.
LL.	**INSURANCE** The Contractor shall insure as required in the Conditions of Contract. No payment on account of the work executed will be made to the Contractor until he has satisfied the **PROJECT MANAGER** either by production of an Insurance Policy or and Insurance Certificate that the provision of the foregoing Insurance Clauses have been complied with in all respects. Thereafter the **PROJECT MANAGER** shall from time to time ascertain that premiums are duly paid up by the Contractor who shall if called upon to do so, produce the receipted premium renewals for the **PROJECT MANAGER's** inspection.
MM.	**PROVISIONAL WORK** All work described as "Provisional" in these Bills of Quantities is subject to remeasurement in order to ascertain the actual quantity executed for which payment will be made. All "Provisional" and other work liable to adjustment under this Contract shall left uncovered for a reasonable time to allow all measurements needed for such adjustment to be taken by the **PROJECT MANAGER** Immediately the work is ready for measuring, the Contractor shall give notice to the **PROJECT MANAGER.** If the Contractor makes default in these respects he shall if the **PROJECT MANAGER** so directs uncover the work to enable all measurements to be taken and afterwards reinstate at his own expense
NN.	**ALTERATIONS TO BILLS, PRICING, ETC.** Any unauthorised alteration or qualification made to the text of the Bills of Quantities may cause the Tender to be disqualified and will in any case be ignored. The Contractor shall be deemed to have made allowance in his prices

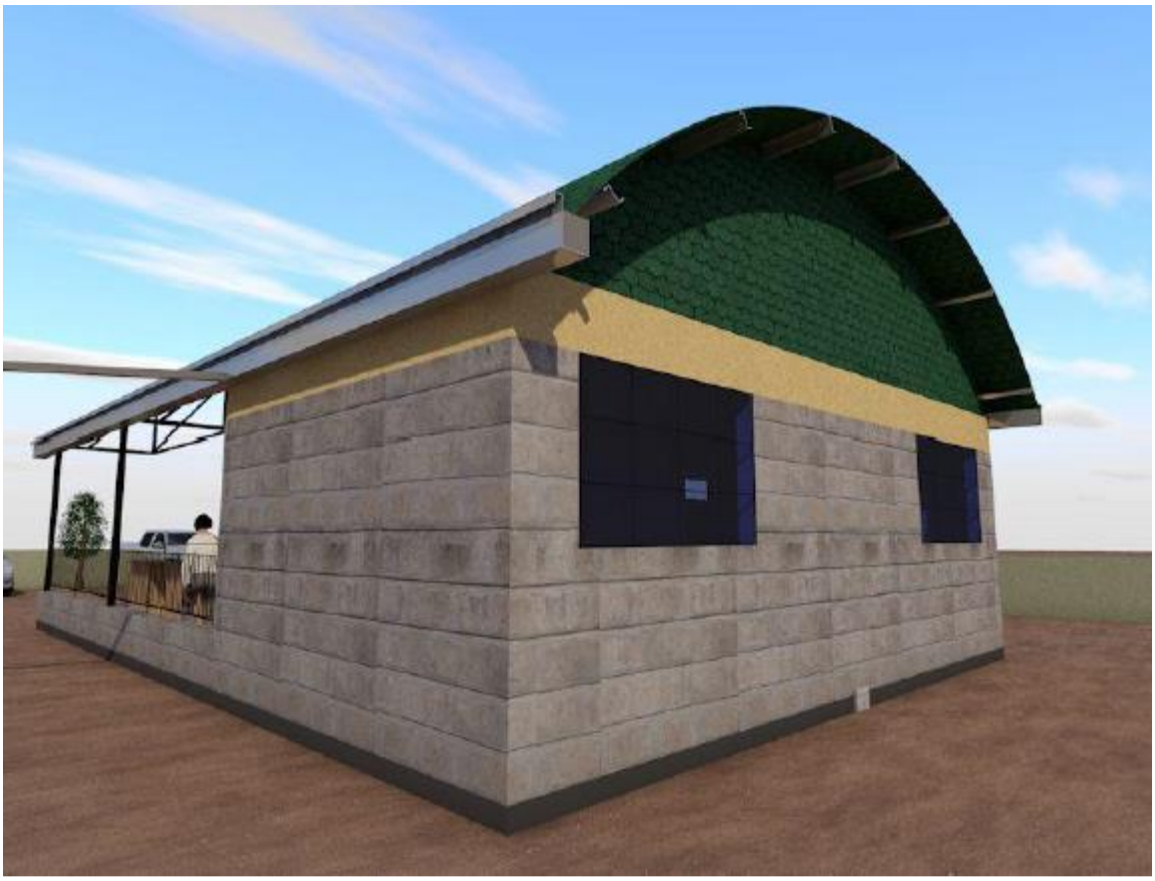
	generally to cover any items against which no price has been inserted in the priced Bills of Quantities. All items of measured work shall be priced in detail and the Tenders containing Lump Sums to cover trades or groups of work must be broken down to show the price of each item before they will be accepted.
OO.	**BLASTING OPERATIONS** Blasting will only be allowed with the express permission of the **PROJECT MANAGER** in writing. All blasting operations shall be carried out at the Contractor's sole risk and cost in accordance with any Government regulations in force for the time being, and any special regulations laid down by the **PROJECT MANAGER** governing the use and storage of explosives.
PP.	**MATERIALS ARISING FROM EXCAVATIONS** Materials of any kind obtained from the excavations shall be the property of the Government. Unless the **PROJECT MANAGER** directs otherwise such materials shall be dealt with as provided in the Contract. Such materials shall only be used in the works, in substitution of materials which the Contractor would otherwise have had to supply with the written permission of the **PROJECT MANAGER** Should such permission be given, the Contractor shall make due allowance for the value of the materials so used at a price to be agreed.
QQ.	**PROTECTION OF THE WORKS.** Provide protection of the whole of the works contained in the Bills of Quantities, including casing, casing up, covering or such other means as may be necessary to avoid damage to the satisfaction of the **PROJECT MANAGER** and remove such protection when no longer required and make good any damage which may nevertheless have been done at completion free of cost to the Government.
RR.	**REMOVAL OF RUBBISH ETC.** Removal of rubbish and debris from the buildings and site as it accumulates and at the completion of the works and remove all plant, scaffolding and unused materials at completion

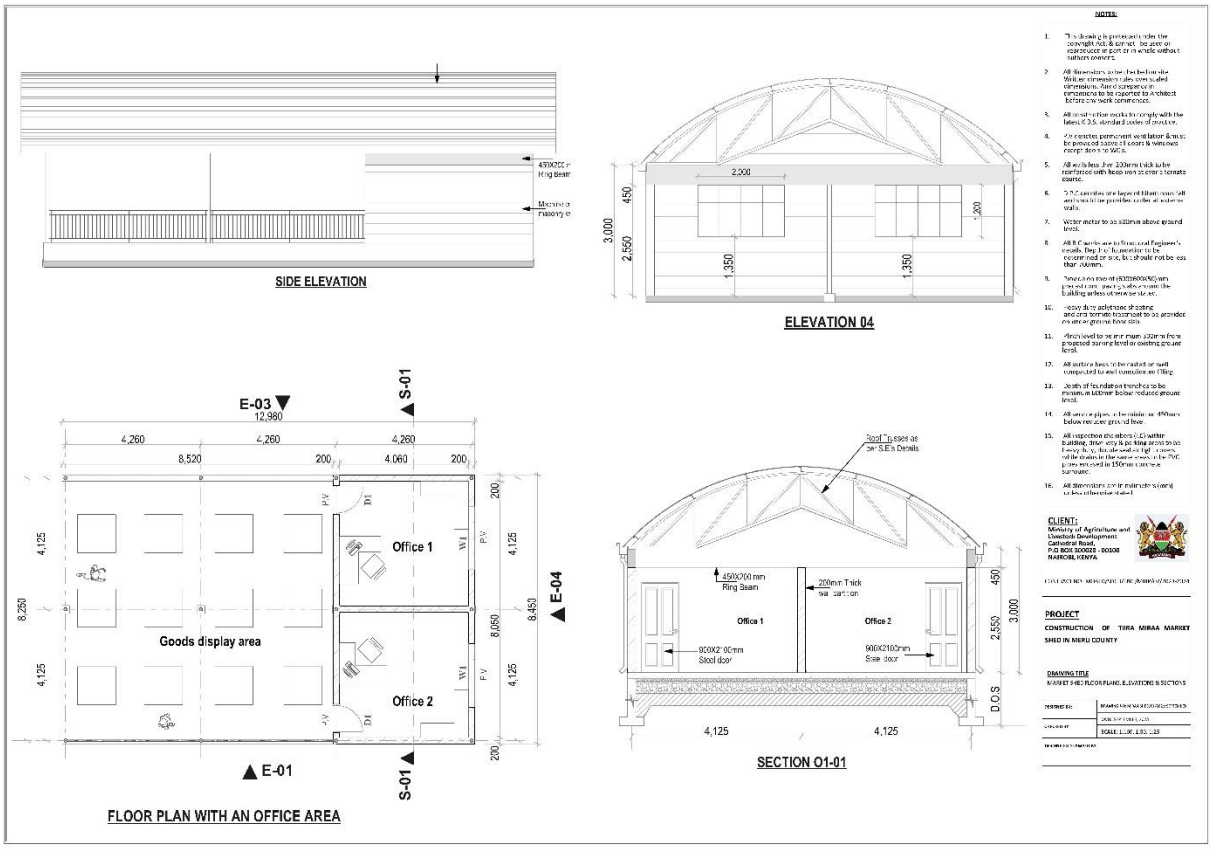
SS.	**WORKS TO BE DELIVERED UP CLEAN** Clean and flush all gutters, rainwater and waste pipes, manholes and drains, wash (except where such treatment might cause damage) and clean all floors, sanitary fittings, glass inside and outside and any other parts of the works and remove all marks, blemishes, stains and defects from joinery, fittings and decorated surfaces generally, polish door furniture and bright parts of metalwork and leave the whole of the buildings watertight, clean, perfect and fit for occupation to the approval of the **PROJECT MANAGER**
TT.	**GENERAL SPECIFICATION.** For the full description of materials and workmanship, method of execution of the work and notes for pricing, the Contractor is referred to the Ministry of Roads, Public Works and Housing General Specification dated 1976 or any subsequent revision thereof which is issued as a separate document, and which shall be allowed in all respects unless it conflicts with the General Preliminaries, Trade Preambles or other items in these Bills of Quantities.
UU.	**HOARDING** The Contractor shall enclose all the site under construction with a hoarding 2400 mm high consisting of iron sheets gauge 30 on 100 x 50 mm 2nd grade treated sawn cypress timber posts firmly secured at 1800 mm centres with two 75 x 50 mm 2nd grade treated sawn cypress timber rails. The Contractor is in addition required to take all precautions necessary for the safe custody of the works, materials, plant, public and Employer's property on the site.
VV.	**CONTRACTOR'S SUPERINTENDENCE/SITE AGENT** The Contractor shall constantly keep on the works a literate English-speaking Agent or Representative, competent and experienced in the kind of work involved who shall give his whole experience in the kind of work involved and shall give his whole time to the superintendence of the works. Such Agent or Representative shall receive on behalf of the Contractor all directions and instructions from the Project Manager and such directions shall be deemed to have been given to the Contractor in accordance with the Conditions of

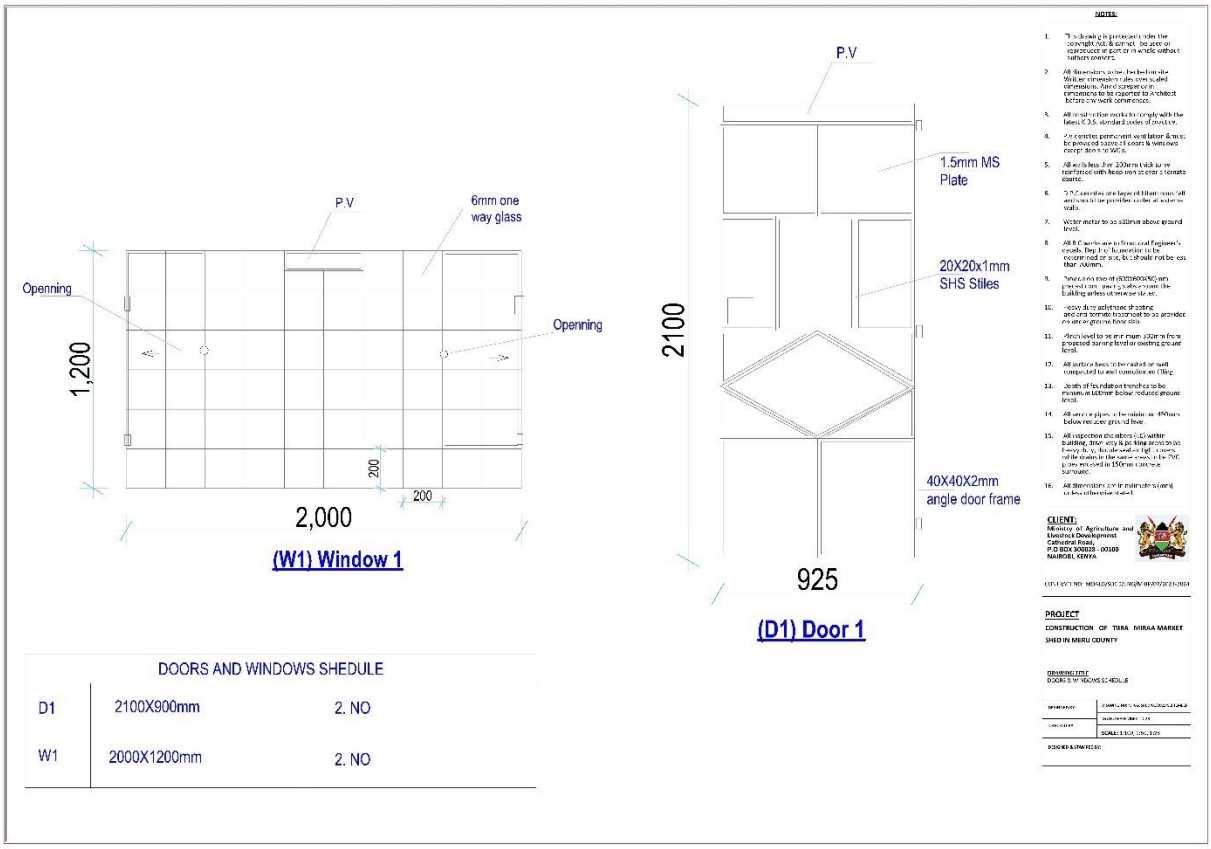
	Contract

Drawings

All the necessary drawings are as provided




SIDE ELEVATION
ELEVATION 04
FLOOR PLAN WITH AN OFFICE AREA
Office 1
Office 2
Goods display area
SECTION O1-01
NOTES:
CLIENT:
PROJECT
CONSTRUCTION OF TIRA MIRAA MARKET SHED IN MERU COUNTY
DRAWING TITLE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P.V
1.5mm MS Plate
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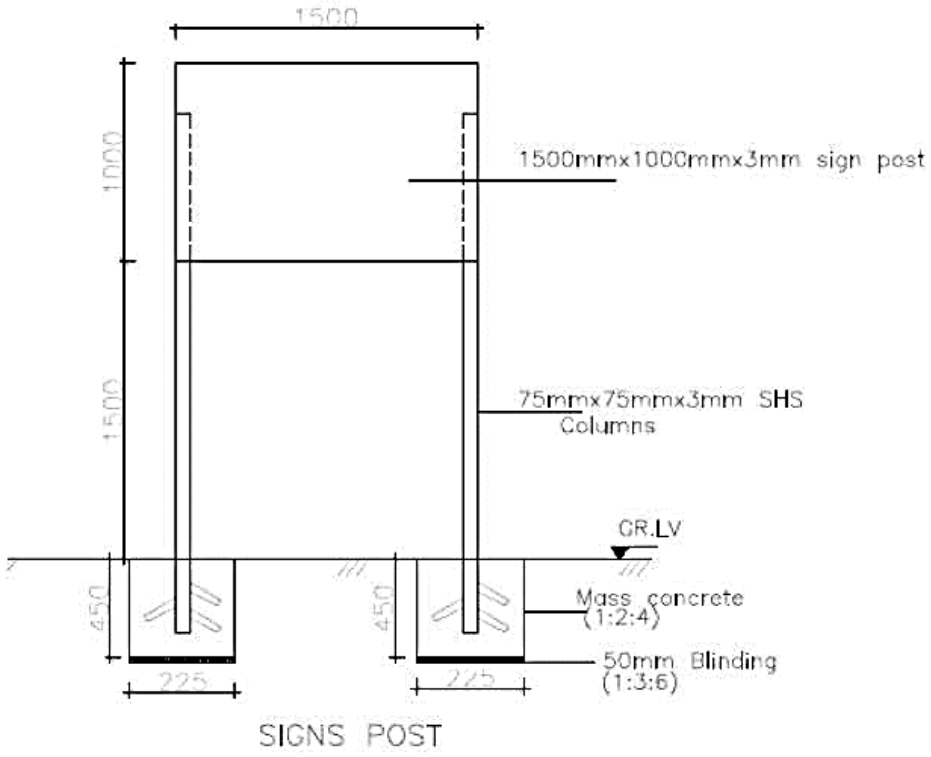
2100
40X40X2mm angle door frame
925
(D1) Door 1
DOORS AND WINDOWS SHEDULE
D1 2100X900mm 2. NO
W1 2000X1200mm 2. NO
NOTES:
CLIENT:
Ministry of Agriculture and Livestock Development
Cathedral Road,
P.O BOX 300028 - 00100
NAIROBI, KENYA
PROJECT
CONSTRUCTION OF TIBIA MIRAA MARKET SHED IN MERU COUNTY
DRAWING TITLE
DOORS & WINDOWS SCHEDULE

SIGN BOARD DRAWING



Supplementary Information

3.0 PART 3 - CONDITIONS OF CONTRACT AND CONTRACT FORMS

3.1 Section VI. General Conditions (GC)

These **General Conditions** (**GC**), read in conjunction with the **Particular Conditions** (**PC**) and other documents listed therein, should be a complete document expressing fairly the rights and obligations of both parties.

Table of Clauses

Section VII. General Conditions

[Name of Employer] ……..
[Name of Contract] ……..

3.1.1 General Provisions

3.1.1.1 Definitions

In the Conditions of Contract ("these Conditions"), which include **Particular Conditions**, and these **General Conditions**, the following words and expressions shall have the meanings stated. Words indicating persons or parties include corporations and other legal entities, except where the context requires otherwise.

The Contract

"Contract" means the Contract Agreement, the Letter of Acceptance, the Letter of Bid, these Conditions, the Specification, the Schedules, and the further documents (if any) which are listed in the Contract Agreement or in the Letter of Acceptance.

"Contract Agreement" means the contract agreement referred to in **GC** Clause 1.6 [Contract Agreement].

"Letter of Acceptance" means the letter of formal acceptance, signed by the Employer, of the Letter of Bid, including any annexed memoranda comprising agreements between and signed by both Parties. If there is no such letter of acceptance, the expression "Letter of Acceptance" means the Contract Agreement and the date of issuing or receiving the Letter of Acceptance means the date of signing the Contract Agreement.

"Letter of Bid" means the document entitled letter of bid, which was completed by the Contractor and includes the signed offer to the Employer for the Works.

"Specification" means the document entitled specification, as included in the Contract, and any additions and modifications to the specification in accordance with the Contract. Such document specifies the Works.

"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.

"Schedules" means the document(s) entitled schedules, completed by the Contractor and submitted with the Letter of Bid, as included in the Contract. Such document may include the Bill of Quantities, data, lists, and schedules of rates and/or prices.

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.

"Bid" means the Letter of Bid and all other documents which the Contractor submitted with the Letter of Bid, as included in the Contract.

PC means **Particular Conditions**

Parties and Persons

"Party" means the Employer or the Contractor, as the context requires.

"Employer" means the person named as employer in the **Particular Conditions** and the legal successors in title to this person.

"Contractor" means the person(s) named as contractor in the Letter of Bid accepted by the Employer and the legal successors in title to this person(s).

"Project Manager" is the person named in the **PC** (or any other competent person appointed by the Employer and notified to the Contractor, to act in replacement of the Project Manager) who is responsible for supervising the execution of the Works and administering the Contract.

"Subcontractor" means any person named in the Contract as a subcontractor, or any person appointed as a subcontractor, for a part of the Works; and the legal successors in title to each of these persons.

"Bank" means the financing institution (if any) named in the **PC**.

"Borrower" means the person (if any) named as the borrower in the **PC**.

The **"Adjudicator"** is the person appointed jointly by the Employer and the Contractor to resolve disputes in the first instance, as provided for in **GC** Clause 1.32.

Dates, Tests, Periods and Completion

"Base Date" means the date 28 days prior to the latest date for submission of the Bid.

"Commencement Date" means the date notified under the **PC**.

"Completion Date" means the date for completion of the Works, or a Section (as the case may be) as certified by the Project Manager, in accordance with **GC** Clause 7.1.1, and as stipulated in the **PC**.

"Test on Completion" means the tests (if any) which are specified in the Contract and which are carried out in accordance with the Specification for the purpose of issuing the "Certificate of Completion of the Works".

"Taking-Over Certificate" or **"Certificate of Completion of the Works"** means a certificate issued under **GC** Clause 7.1 [Completion].

"day" means a calendar day and "year" means 365 days.

"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.

Money and Payments

"Initial 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.

"Contract Price" means the price defined in **GC** Clause 4.1 [Contract Price], and includes adjustments in accordance with the Contract.

"Compensation Events" are those defined in **GC** Clause 4.7 [Compensation Events] hereunder.

Works and Goods

"Contractor's Equipment" means all apparatus, machinery, vehicles and other things required for the execution and completion of the Works and the remedying of any defects. However, Contractor's Equipment excludes Temporary Works, Employer's Equipment (if any), Plant, Materials and any other things intended to form or forming part of the Permanent Works.

"Goods" means Contractor's Equipment, Materials, Plant and Temporary Works, or any of them as appropriate.

"Materials" means things of all kinds (other than Plant) intended to form or forming part of the Permanent Works, including the supply-only materials (if any) to be supplied by the Contractor under the Contract.

"Permanent Works" means the permanent works to be executed by the Contractor under the Contract.

"Plant" means the apparatus, machinery and other equipment intended to form or forming part of the Permanent Works, including vehicles purchased for the Employer and relating to the construction or operation of the Works.

"Section" means a part of the Works specified in the **PC** as a Section (if any).

"Temporary Works" means all temporary works of every kind (other than Contractor's Equipment) required on Site for the execution and completion of the Permanent Works and the remedying of any defects.

"Works" mean the Permanent Works and the Temporary Works, or either of

them as appropriate, and as described in the **PC**.

Other Definitions

"Contractor's Documents" means the calculations, computer programs and other software, drawings, manuals, models and other documents of a technical nature (if any) supplied by the Contractor under the Contract.

"Country" means the country in which the Site (or most of it) is located.

"Force Majeure" is defined in **GC** Clause 6.1 [Force Majeure].

"Laws" means all national (or state) legislation, statutes, ordinances and other laws, and regulations and by-laws of any legally constituted public authority.

"Performance Security" means the security (or securities, if any) under **GC** Clause 4.15 [Securities].

"Site" means the places where the Permanent Works are to be executed including storage and working areas and to which Plant and Materials are to be delivered, and any other places as may be specified in the **PC** as forming part of the Site.

"Unforeseeable" or **"Unforeseen"** means not reasonably foreseeable by an experienced Contractor by the Base Date.

"Variation" means any change to the Works, which is instructed or approved as a variation under **GC** Clause 4.3 [Variations].

3.1.1.2 Interpretation

Interpretation In the Contract, except where the context requires otherwise:

(a). words indicating one gender include all genders;

(b). words indicating the singular also include the plural and words indicating the plural also include the singular;

(c). provisions including the word "agree", "agreed" or "agreement" require the agreement to be recorded in writing;

(d). "written" or "in writing" means hand-written, type-written, printed or electronically made, and resulting in a permanent record;

(e). the word "tender" is synonymous with "bid" and "tenderer" with "bidder" and the words "tender documents" with "bidding documents".

The marginal words and other headings shall not be taken into consideration in the interpretation of these Conditions.

If sectional completion is specified in the **PC**, references in the **GC** to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).

3.1.1.3 Communications

Wherever these Conditions provide for the giving or issuing of approvals, certificates, consents, determinations, notices, requests and discharges, these communications shall be:

(a). in writing and delivered by hand (against receipt), sent by mail or courier, or transmitted using any of the agreed systems of electronic transmission as stated in the PC; and

(b). delivered, sent or transmitted to the address for the recipient's communications as stated in the PC. However:

(i.) if the recipient gives notice of another address, communications shall thereafter be delivered accordingly; and

(ii.) if the recipient has not stated otherwise when requesting an approval or consent, it may be sent to the address from which the request was issued

Approvals, certificates, consents and determinations shall not be unreasonably withheld or delayed. When a certificate is issued to a Party, the certifier shall send a copy to the other Party.

When a notice is issued to a Party, by the other Party or the Project Manager, a copy shall be sent to the Project Manager or the other Party, as the case may be.

3.1.1.4 Law and Language

The Contract shall be governed by the law of the country or other jurisdiction

stated in the **PC**.

The ruling language of the Contract shall be that stated in the **PC**.

The language for communications shall be that stated in the **PC**. If no language is stated there, the language for communications shall be the ruling language of the Contract.

Supporting documents and printed literature that are part of the Contract may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified, in which case, for purposes of interpretation of the Contract, this translation shall govern.

The Contractor shall bear all costs of translation to the governing language and all risks of the accuracy of such translation, for documents provided by the Contractor.

3.1.1.5 Priority of Documents

The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence:

(a). the Contract Agreement (if any),
(b). the Letter of Acceptance,
(c). the Bid,
(d). the Particular Conditions
(e). these General Conditions,
(f). the Specification,
(g). the Drawings, and
(h). the Schedules and any other documents forming part of the Contract.

If an ambiguity or discrepancy is found in the documents, the Project Manager shall issue any necessary clarification or instruction.

3.1.1.6 Contract Agreement

The Parties shall enter into a Contract Agreement within 28 days after the Contractor receives the Letter of Acceptance, unless the **Particular Conditions** establish otherwise. The Contract Agreement shall be based upon the relevant

form provided in Section IX, Contract Forms. The costs of stamp duties and similar charges (if any) imposed by law in connection with entry into the Contract Agreement shall be borne by the Employer.

3.1.1.7 Assignment

Neither Party shall assign the whole or any part of the Contract or any benefit or interest in or under the Contract. However, either Party:

(a). may assign the whole or any part with the prior agreement of the other Party, at the sole discretion of such other Party, and

(b). may, as security in favour of a bank or financial institution, assign its right to any moneys due, or to become due, under the Contract.

3.1.1.8 Care and Supply of Documents

The Specification and Drawings shall be in the custody and care of the Employer. Unless otherwise stated in the Contract, two copies of the Contract and of each subsequent Drawing shall be supplied to the Contractor, who may make or request further copies at the cost of the Contractor.

Each of the Contractor's Documents shall be in the custody and care of the Contractor, unless and until taken over by the Employer. Unless otherwise stated in the Contract, the Contractor shall supply to the Project Manager six copies of each of the Contractor's Documents.

The Contractor shall keep, on the Site, a copy of the Contract, publications named in the Specification, the Contractor's Documents (if any), the Drawings and Variations and other communications given under the Contract. The Employer's Personnel shall have the right of access to all these documents at all reasonable times.

If a Party becomes aware of an error or defect in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect.

3.1.1.9 Confidential Details

The Contractor's and the Employer's Personnel shall disclose all such confidential and other information as may be reasonably required in order to verify the Contractor's compliance with the Contract and allow its proper implementation.

Each of them shall treat the details of the Contract as private and confidential, except to the extent necessary to carry out their respective obligations under the Contract or to comply with applicable Laws. Each of them shall not publish or disclose any particulars of the Works prepared by the other Party without the previous agreement of the other Party. However, the Contractor shall be permitted to disclose any publicly available information, or information otherwise required to establish his qualifications to compete for other projects.

Notwithstanding the above, the Contractor may furnish to its Subcontractor(s) such documents, data and other information it receives from the Employer to the extent required for the Subcontractor(s) to perform its work under the Contract, in which event the Contractor shall obtain from such Subcontractor(s) an undertaking of confidentiality similar to that imposed on the Contractor under this Clause.

3.1.1.10 Compliance with Laws

The Contractor shall, in performing the Contract, comply with applicable Laws.

Unless otherwise stated in the **Particular Conditions**:

(a). the Employer shall acquire and pay for all permits, approvals and/or licenses from all local, state or national government authorities or public service undertakings in the Employer's Country, which (i) such authorities or undertakings require the Employer to obtain in the Employer's name, and (ii) are necessary for the execution of the Contract, including those required for the performance by both the Contractor and the Employer of their respective obligations under the Contract;

(b). the Contractor shall acquire and pay for all permits, approvals and/or licenses from all local, state or national government authorities or public service undertakings in the Employer's Country, which such authorities or undertakings require the Contractor to obtain in its name and which are necessary for the performance of the Contract, including, without limitation, visas for the Contractor's and Subcontractor's personnel and entry permits for all imported Contractor's Equipment. The

Contractor shall acquire all other permits, approvals and/or licenses that are not the responsibility of the Employer under **GC** Clause 1.10.2(a) hereof and that are necessary for the performance of the Contract. The Contractor shall indemnify and hold harmless the Employer from and against any and all liabilities, damages, claims, fines, penalties and expenses of whatever nature arising or resulting from the violation of such laws by the Employer or its personnel, including the Subcontractors and their personnel, but without prejudice to **GC** Clause 1.10.1 hereof.

3.1.1.11 Joint and Several Liability

If the Contractor is a joint venture, consortium, or association (JVCA) of two or more persons, all such persons shall be jointly and severally bound to the Employer for the fulfilment of the provisions of the Contract, unless otherwise specified in the **PC**, and shall designate one of such persons to act as a leader with authority to bind the JVCA. The composition or the constitution of the JVCA shall not be altered without the prior consent of the Employer.

3.1.1.12 Inspections and Audit

The Contractor shall permit the persons appointed to inspect the Site and/or the Contractor's accounts and records relating to the performance of the Contract and to have such accounts and records audited by the Office of Auditor General.

The Contractor shall maintain all documents and records related to the Contract for a period of three (3) years after completion of the Works. The Contractor shall provide any documents necessary for the investigation of allegations of fraud, collusion, coercion, obstruction or corruption and require its employees or agents with knowledge of the Contract to respond to questions from the Client.

3.1.1.13 Project Manager's Decisions

Except where otherwise specifically stated, the Project Manager shall decide contractual matters between the Employer and the Contractor in the role representing the Employer.

3.1.1.14 Delegation

The Project Manager may delegate any of his duties and responsibilities and may cancel any delegation after notifying the Contractor.

3.1.1.15 Subcontracting

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.

3.1.1.16 Personnel and Equipment

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.

If the Project Manager asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.

3.1.1.17 Other Contractors

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 **PC**. 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.

3.1.1.18 Employer's and Contractor's Risks

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.

3.1.1.19 Employer's Risks

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.

From the Completion Date until the Defects Liability Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is an Employer's risk except loss or damage due to

(a). a Defect which existed on the Completion Date,

(b). an event occurring before the Completion Date, which was not itself an Employer's risk, or

(c). the activities of the Contractor on the Site after the Completion Date.

3.1.1.20 Contractor's Risks

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.

3.1.1.21 Insurance

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 **PC** 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.

Policies and certificates for insurance shall be delivered by the Contractor to the Project Manager for the Project Manager's approval before the Commencement 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.

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.

Alterations to the terms of insurance shall not be made without the approval of the Project Manager.

Both parties shall comply with any conditions of the insurance policies.

3.1.1.22 Site Investigation Reports

The Contractor, in preparing the Bid, shall rely on any Site Investigation Reports referred to in the **PC**, supplemented by any information available to the Bidder.

3.1.1.23 Contractors to Construct the Works

The Contractor shall construct and install the Works in accordance with the Specifications and Drawings.

3.1.1.24 The Works to Be Completed by the Intended Completion Date

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.

3.1.1.25 Approval by the Project Manager

The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Project Manager, who is to approve them if they comply with the Specifications and Drawings.

The Contractor shall be responsible for design of Temporary Works.

The Project Manager's approval shall not alter the Contractor's responsibility for design of the Temporary Works.

The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.

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.

3.1.1.26 Safety

The Contractor shall be responsible for the safety of all activities on the Site.

3.1.1.27 Discoveries

Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Project Manager of such discoveries and carry out the Project Manager's instructions for dealing with them.

3.1.1.28 Possession of the Site

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 **PC,** the Employer shall be deemed to have delayed the start of the relevant activities, and this shall be a Compensation Event.

3.1.1.29 Access to the Site

The Contractor shall allow the Project Manager and any person authorized by the Project Manager access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.

3.1.1.30 Instructions

The Contractor shall carry out all instructions of the Project Manager which

comply with the applicable laws where the Site is located.

3.1.1.31 Appointment of the Adjudicator

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 **PC**, to appoint the Adjudicator within 14 days of receipt of such request.

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 **PC** at the request of either party, within 14 days of receipt of such request.

3.1.1.32 Procedure for Disputes

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.

The Adjudicator shall give a decision in writing within 28 days of receipt of a notification of a dispute.

The Adjudicator shall be paid by the hour at the rate specified in the **PC,** together with reimbursable expenses of the types specified in the **PC**, 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. If neither party refers the dispute to arbitration within the above 28 days, the Adjudicator's decision shall be final and binding.

The arbitration shall be conducted in accordance with the arbitration procedures published by the institution named and, in the place, specified in the **PC.**

3.1.2 Time Control

3.1.2.1 Programme

Within the time stated in the **PC**, after the date of the Letter of Acceptance, the Contractor shall submit to the Project Manager for approval a Programme 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 Programme shall be consistent with those in the Activity Schedule.

An update of the Programme 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.

The Contractor shall submit to the Project Manager for approval an updated Programme at intervals no longer than the period stated in the **PC.** If the Contractor does not submit an updated Programme within this period, the Project Manager may withhold the amount stated in the **PC** from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Programme has been submitted. In the case of a lump sum contract, the Contractor shall provide an updated Activity Schedule within 14 days of being instructed to by the Project Manager.

The Project Manager's approval of the Programme shall not alter the Contractor's obligations. The Contractor may revise the Programme and submit it to the Project Manager again at any time. A revised Programme shall show the effect of Variations and Compensation Events.

3.1.2.2 Extension of the Intended Completion Date

The Project Manager shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work, which would cause the Contractor to incur additional cost.

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.

3.1.2.3 Acceleration

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.

If the Contractor's priced proposals for acceleration are accepted by the Employer, they are incorporated in the Contract Price and treated as a Variation.

3.1.2.4 Delays Ordered by the Project Manager

The Project Manager may instruct the Contractor to delay the start or progress of any activity within the Works.

3.1.2.5 Management Meetings

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.

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.

3.1.2.6 Early Warning

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.

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.

3.1.3 Quality Control

3.1.3.1 Identifying Defects

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.

3.1.3.2 Tests

If the Project Manager instructs the Contractor to carry out a test not specified in the Specification 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.

3.1.3.3 Correction of Defects

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 **PC.** The Defects Liability Period shall be extended for as long as Defects remain to be corrected.

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.

3.1.3.4 Uncorrected Defects

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.

3.1.4 Cost Control

3.1.4.1 Contract Price

In the case of an admeasurement contract, 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.

In the case of a lump sum contract, 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.

3.1.4.2 Changes in the Contract Price

In the case of an admeasurement contract:

(a). 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.

(b). 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.

(c). 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.

In the case of a lump sum contract, the Activity Schedule shall be amended by the Contractor to accommodate changes of Programme 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.

3.1.4.3 Variations

All Variations shall be included in updated Programs, and, in the case of a lump sum contract, also in the Activity Schedule, produced by the Contractor.

The Contractor shall provide the Project Manager with a quotation for carrying out the Variation when requested to do so by the Project Manager. The Project Manager shall assess the quotation, which shall be given within seven (7) days of the request or within any longer period stated by the Project Manager and before the Variation is ordered.

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.

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.

The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning.

In the case of an admeasurement contract, 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 **GC** Clause 4.2.1 or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work.

3.1.4.4 Cash Flow Forecasts

When the Program, or, in the case of a lump sum contract, the Activity Schedule, 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.

3.1.4.5 Payment Certificates

The Contractor shall submit to the Project Manager monthly statements of the estimated value of the work executed less the cumulative amount certified previously.

The Project Manager shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.

The value of work executed shall be determined by the Project Manager.

The value of work executed shall comprise:

(a). In the case of an admeasurement contract, the value of the quantities of work in the Bill of Quantities that have been completed; or

(b). In the case of a lump sum contract, the value of work executed shall comprise the value of completed activities in the Activity Schedule.

The value of work executed shall include the valuation of Variations and Compensation Events.

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.

3.1.4.6 Payments

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.

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.

Unless otherwise stated, all payments and deductions shall be paid or charged in the proportions of currencies comprising the Contract Price.

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.

3.1.4.7 Compensation Events

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 **GC** Clause 1.29.

(b). The Employer modifies the Schedule of Other Contractors in a way that affects the work of the Contractor under the Contract.

(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.

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.

As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it shall be assessed by the Project Manager, and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Project Manager shall adjust the Contract Price based on the Project Manager's own forecast. The Project Manager shall assume that the Contractor shall react competently and promptly to the event.

The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor's not having given early warning or not having cooperated with the Project Manager.

3.1.4.8 Tax

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 **GC** Clause 4.10.

3.1.4.9 Currencies

Where payments are made in currencies other than the currency of the Employer's country specified in the **PC,** the exchange rates used for calculating the amounts to be paid shall be the exchange rates stated in the Contractor's Bid.

3.1.4.10 Price Adjustment

Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the **PC.** 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 indicated below applies to each Contract currency:

$$\mathbf{P_c = A_c + B_c\, Imc/Ioc}$$

where:

$\mathbf{P_c}$ is the adjustment factor for the portion of the Contract Price payable in a specific currency "**c**."

$\mathbf{A_c}$ and $\mathbf{B_c}$ are coefficients[7] specified in the **PC,** representing the nonadjustable and adjustable portions, respectively, of the Contract Price payable in that specific currency "**c**;" and

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**."

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.

3.1.4.11 Retention

The Employer shall retain from each payment due to the Contractor the

[7] *The sum of the two coefficients Ac and Bc 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 is added to the Contract Price.*

proportion stated in the **PC** until Completion of the whole of the Works.

Upon the issue of a Certificate of Completion of the Works by the Project Manager, in accordance with **GC** Clause 7.1.1, 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.

3.1.4.12 Liquidated Damages

The Contractor shall pay liquidated damages to the Employer at the rate per day stated in the **PC** 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 **PC.** The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's liabilities.

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 **GC** Clause 4.6.1.

3.1.4.13 Bonus

The Contractor shall be paid a Bonus calculated at the rate per calendar day stated in the **PC** 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.

3.1.4.14 Securities

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 **PC,** 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 Completion Certificate in the case of a Performance Bond.

3.1.4.15 Dayworks

If applicable, the Dayworks rates in the Contractor's Bid shall be used for small additional amounts of work only when the Project Manager has given written instructions in advance for additional work to be paid for in that way.

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.

The Contractor shall be paid for Dayworks subject to obtaining signed Dayworks forms.

3.1.4.16 Cost of Repairs

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.

3.1.5 Staff and Labour

3.1.5.1 Forced Labour

The Contractor shall not employ forced labour, which 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 labour, such as indentured labour, bonded labour or similar labour-contracting arrangements.

3.1.5.2 Child Labour

The Contractor shall not employ children in a manner that is economically exploitative, or is likely to be hazardous, or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development. Where the relevant labour laws have provisions for employment of minors, the Contractor shall follow those laws applicable to the Contractor.

Children below the age of 18 years shall not be employed in dangerous work.

3.1.5.3 Workers' Organizations

In countries where the relevant labour laws recognize workers' rights to form and to join workers' organisations of their choosing without interference and to bargain collectively, the Contractor shall comply with such laws. Where the relevant labour laws substantially restrict workers' organisations, the Contractor shall enable alternative means for Contractor's Personnel to express their grievances and protect their rights regarding working conditions and terms of employment. In either case described above, and where the relevant labour laws are silent, the Contractor shall not discourage Contractor's Personnel from forming or joining workers' organisations of their choosing or from bargaining collectively, and shall not discriminate or retaliate against the Contractor's Personnel who participate, or seek to participate, in such organisations and bargain collectively. The Contractor shall engage with such workers representatives. Worker organisations are expected to fairly represent the workers in the workforce.

3.1.5.4 Non-Discrimination and Equal Opportunity

The Contractor shall not make employment decisions on the basis of personal characteristics unrelated to inherent job requirements. The Contractor shall base the employment relationship on the principle of equal opportunity and fair treatment, and shall not discriminate with respect to aspects of the employment relationship, including recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, promotion, termination of employment or retirement, and discipline. In countries where the relevant labour laws provide for non-discrimination in employment, the Contractor shall comply with such laws. When the relevant labour laws are silent on non-discrimination in employment, the Contractor shall meet this Clause's requirements. Special measures of protection or assistance to remedy past discrimination or selection for a particular job based on inherent requirements of the job shall not be deemed discrimination.

3.1.6 Force Majeure

3.1.6.1 Definition of Force Majeure

In this Clause, "Force Majeure" means an exceptional event or circumstance:

(a) which is beyond a Party's control,

(b) which such Party could not reasonably have provided against before entering into the Contract,

(c) which, having arisen, such Party could not reasonably have avoided or overcome, and

(d) which is not substantially attributable to the other Party.

Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied:

(i) war, hostilities (whether war be declared or not), invasion, act of foreign enemies,

(ii) rebellion, terrorism, sabotage by persons other than the Contractor's Personnel, revolution, insurrection, military or usurped power, or civil war,

(iii) riot, commotion, disorder, strike or lockout by persons other than the Contractor's Personnel,

(iv) munitions of war, explosive materials, ionising radiation or contamination by radio-activity, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio- activity, and

(v) natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity.

3.1.6.2 Notice of Force Majeure

If a Party is or will be prevented from performing its substantial obligations under the Contract by Force Majeure, then it shall give notice to the other Party of the event or circumstances constituting the Force Majeure and shall specify the obligations, the performance of which is or will be prevented. The notice shall be given within 14 days after the Party became aware, or should have become aware, of the relevant event or circumstance constituting Force Majeure.

The Party shall, having given notice, be excused performance of its obligations for so long as such Force Majeure prevents it from performing them.

Notwithstanding any other provision of this Clause, Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Contract

3.1.6.3 Duty to Minimise Delay

Each Party shall at all times use all reasonable endeavours to minimise any delay in the performance of the Contract as a result of Force Majeure.

A Party shall give notice to the other Party when it ceases to be affected by the Force Majeure.

3.1.6.4 Consequences of Force Majeure

If the Contractor is prevented from performing its substantial obligations under the Contract by Force Majeure of which notice has been given under **GC** Clause 6.2 [Notice of Force Majeure], and suffers delay and/or incurs Cost by reason of such Force Majeure, the Contractor shall be entitled subject to **GC** Clause 1.32.1 [Procedure for Disputes] to:

(a) an extension of time for any such delay, if completion is or will be delayed, under **GC** Clause 2.2 [Extension of the Intended Completion Date], and

(b) if the event or circumstance is of the kind described in sub-paragraphs (i) to (iv) of **GC** Clause 6.1 [Definition of Force Majeure] and, in the case of **GC** Clause 6.1.1(d)(ii) to (iv), occurs in the Country, payment of any such Cost, including the costs of rectifying or replacing the Works and/or Goods damaged or destructed by Force Majeure, to the extent they are not indemnified through the insurance policy referred to in **GC** Clause 1.21 [Insurance].

After receiving this notice, the Project Manager shall proceed in accordance with **GC** Clause 1.13 [Project Manager's Decisions] to agree or determine these matters.

3.1.6.5 Force Majeure Affecting Subcontractor

If any Subcontractor is entitled under any contract or agreement relating to the Works to relief from force majeure on terms additional to or broader than those specified in this Clause, such additional or broader force majeure events or circumstances shall not excuse the Contractor's non-performance or entitle him to relief under this Clause.

3.1.6.6 Optional Termination, Payment and Release

If the execution of substantially all the Works in progress is prevented for a continuous period of 84 days by reason of Force Majeure of which notice has been given under **GC** Clause 6.2 [Notice of Force Majeure], or for multiple periods which total more than 140 days due to the same notified Force Majeure, then either Party may give to the other Party a notice of termination of the Contract. In this event, the termination shall take effect 7 days after the notice is given, and the Contractor shall proceed in accordance with **GC** Clause 7.5.5.

Upon such termination, the Project Manager shall determine the value of the work done and issue a Payment Certificate which shall include:

(a) the amounts payable for any work carried out for which a price is stated in the Contract;

(b) the Cost of Plant and Materials ordered for the Works which have been delivered to the Contractor, or of which the Contractor is liable to accept delivery: this Plant and Materials shall become the property of (and be at the risk of) the Employer when paid for by the Employer, and the Contractor shall place the same at the Employer's disposal;

(c) other Costs or liabilities which in the circumstances were reasonably and necessarily incurred by the Contractor in the expectation of completing the Works;

(d) the Cost of removal of Temporary Works and Contractor's Equipment from the Site and the return of these items to the Contractor's works in his country (or to any other destination at no greater cost); and

(e) the Cost of repatriation of the Contractor's staff and labour

employed wholly in connection with the Works at the date of termination.

3.1.6.7 Release from Performance

Notwithstanding any other provision of this Clause, if any event or circumstance outside the control of the Parties (including, but not limited to, Force Majeure) arises which makes it impossible or unlawful for either or both Parties to fulfill its or their contractual obligations or which, under the law governing the Contract, entitles the Parties to be released from further performance of the Contract, then upon notice by either Party to the other Party of such event or circumstance:

(a) the Parties shall be discharged from further performance, without prejudice to the rights of either Party in respect of any previous breach of the Contract, and

(b) the sum payable by the Employer to the Contractor shall be the same as would have been payable under **GC** Clause 6.6 [Optional Termination, Payment and Release] if the Contract had been terminated under **GC** Clause 6.6.

3.1.7 Finishing the Contract

3.1.7.1 Completion

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.

3.1.7.2 Taking Over

The Employer shall take over the Site and the Works within seven days of the Project Manager's issuing a certificate of Completion.

3.1.7.3 Final Account

The Contractor shall supply the Project Manager with a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within 56 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.

3.1.7.4 Operating and Maintenance Manuals

If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the **PC.**

If the Contractor does not supply the Drawings and/or manuals by the dates stated in the **PC** pursuant to **GC** Clause 7.4.1**,** or they do not receive the Project Manager's approval, the Project Manager shall withhold the amount stated in the **PC** from payments due to the Contractor.

3.1.7.5 Termination

The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.

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 Programme 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 **PC**; or

(h) if the Contractor, as determined by the Employer, based on reasonable evidence, has engaged in corrupt or fraudulent practices in competing for or in executing the Contract, pursuant to **GC** Clause 7.6 [Fraud and Corruption].

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 **GC** Clause 7.5.2 above, the Project Manager shall decide whether the breach is fundamental or not.

Notwithstanding the above, the Employer may terminate the Contract for convenience.

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.

3.1.8 Fraud and Corruption

If the Employer determines that the Contractor has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices, in competing for or in executing the Contract, then the Employer may, after giving 14 days' notice to the Contractor, terminate the Contractor's employment under the Contract and expel him from the Site, and the provisions of **GC** Clause 7.5 [Termination] shall apply as if such expulsion had been made under **GC** Clause 7.5.2.

Should any employee of the Contractor be determined to have engaged in corrupt, fraudulent, coercive or obstructive practice during the execution of the work then that employee shall be removed in accordance with **GC** Clause 1.16.2.

It is the Government of Kenya policy to require bidders, suppliers, and contractors, and their agents (whether declared or not), subcontractors, sub-consultants,

service providers or suppliers, and any personnel thereof, observe the highest standard of ethics during the procurement and execution of contracts[8]. In pursuance of this policy, the Government of Kenya:

(a). defines, for the purposes of this provision, the terms set forth below as follows:

(i) "Corrupt Practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party[9];

(ii) "Fraudulent Practice" is any act or omission, including a misrepresentation that knowingly or recklessly misleads, or attempts to mislead, a party[10] to obtain financial or other benefit or to avoid an obligation;

(iii) "Collusive Practice" is an arrangement between two or more parties[11], designed to achieve an improper purpose, including to influence improperly the actions of another party; and

(iv) "Coercive Practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party[12];

(v) "Obstructive practice" is

(v.1) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede

[8] *In this context, any action to influence the procurement process or contract execution for undue advantage is improper.*

[9] *For the purpose of this sub-paragraph, "another party" refers to a public official acting in relation to the procurement process or contract execution. In this context, "public official" includes persons taking or reviewing procurement decisions.*

10 For the purpose of this sub-paragraph, "party" refers to a public official; the terms "benefit" and "obligation" relate to the procurement process or contract execution; and the "act or omission" is intended to in fluence the procurement process or contract execution

11 For the purpose of this sub-paragraph, "parties" refers to participants in the procurement process (including public officials) attempting either themselves, or through another person or entity not participating in the procurement or selection process, to simulate competition or to establish bid prices at artificial, non-competitive levels, or are privy to each other's bid prices or other conditions.

12 For the purpose of this sub-paragraph, "party" refers to a participant in the procurement process or contract execution

a investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or

(v.2) acts intended to materially impede the exercise of the inspection and audit rights

(b). will reject a proposal for award if it determines that the bidder recommended for award or any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/or their employees, has, directly or indirectly engaged in Corrupt, Fraudulent, Collusive, Coercive or Obstructive Practices in competing for the contract in question.

3.1.8.1 Payment upon Termination

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 indicated in the **PC**. 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.

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.

3.1.8.2 Property

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.

3.1.8.3 Release from Performance

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.

3.2 Section VII. Particular Conditions

1. General Provisions	
GC 1.1.2.2	The Employer is: **Principal Secretary, State Department for Crop Development, Ministry of Agriculture and Livestock, Development**
GC 1.1 .2.4	The Project Manager is: **Project Engineer MIRP, Kilimo House, 5th Floor**
GC 1.1.2.6	The Client is: **Ministry of Agriculture and Livestock Development, State Department for Crop Development**
GC 1.1.2.7	The specific financing institution is: **GOK**
GC 1.1.3.2	The Commencement Date shall be: ***not later than 14 days after site handing over***
GC 1.1.3.3	The Completion Date for the whole of the Works shall be: four (4) months after commencement of works.
GC 1.1.5.6	If Sections are to be used: **N/A**
GC 1.1.5.8	**Description of the works** The contract works include: (a). Excavation Works (b). Construction of substructure and superstructure (c). Construction of Shed Structure (d). Roof Construction and Rain Water Disposal (e). Construction of Rain Water Goods (f). Construction of Goods Display Tables & Shelves (g). Construction of Bio-Digester (h). Construction of Ablution Block **Note:** All the above works should be as per the attached drawings

	and Bills of quantities.
GC 1.1.6.6	**LOCATION OF THE SITE** The site is situated in Kanunu Ward, Igembe South Sub County in Meru County
GC 1.2.3	Sectional Completions **shall not be** applicable.
GC 1.2.4(i)	The following documents also form part of the Contract: a) the Letter of Acceptance b) the Bid c) All Addenda, if any d) the Particular Conditions e) the General Conditions f) the Specification g) the Drawings; and h) the completed Schedules,
GC 1.3.1(a)	The Electronic Transmission System is: **None**
GC 1.3.1(b)	The Employer's address for the purpose of communications is: Principal Secretary State Department for Crop Development Kilimo House, Cathedral Road P.O. Box 300028 - 00100 Nairobi, Kenya Tel: + 254-20-2718870/9 Fax: +254-20-2711149 E-mail: psagriculture@kilimo.go.ke The Contractor's address for the purpose of communications is: **[state full address, telephone, fax and e-mail]**
GC 1.4.1	The governing law is that of: **Republic of Kenya** The ruling language is: **English** The language for communications is: **English**

GC 1.6.1	The Parties **shall** enter into contract within 28 days after the Contractor receives the Letter of Acceptance.
GC 1.10.2(a)	Permits, approvals and/or licenses, or public service undertakings to be acquired by the Employer: **as in the specifications**
GC 1.10.2(b)	Permits, approvals and/or licenses, or public service undertakings to be acquired by the Contractor: **as in the specifications**
GC 1.11.1	The individuals or firms in a joint venture, consortium or association **shall be** jointly and severally liable.
GC 1.17.1	Schedule of Other Contractors: **None**
GC 1.21.1	The minimum insurance amounts and deductibles shall be: (a) for loss or damage to the Works, Plant and Materials: **KES 100,000.00** (b) for loss or damage to Equipment: **KES 50,000.00** (c) for loss or damage to property (except the Works, Plant, Materials, and Equipment) in connection with Contract: **KES 50,000.00** (d) for personal injury or death: (i) of the Contractor's employees: **KES 50,000.00** (ii) of other people: **KES 100,000.00**
GC 1.22.1	Site Investigation Reports shall include: **design report, drawings and any other investigation as may be required by the engineer**
GC 1.28.1	The Site Possession Date(s) shall be ***not later than 14 days after contract signing***
GC 1.31.1 & 1.31.2	Appointing Authority for the Adjudicator: **Chartered Institute of Arbitrators, Kenya** **P.O. Box 50163 - 00200** **Nairobi, Kenya** Email Address: info@ciarbkenya.org

GC 1.32.3	Hourly rate and types of reimbursable expenses to be paid to the Adjudicator: as per as body's policy
GC 1.32.4	Institution whose arbitration procedures shall be used: **Chartered Institute of Arbitrators, Kenya** The place of arbitration shall be: **Nairobi, Kenya**
2. Time Control	
GC 2.1.1	The Contractor shall submit for approval a Programme for the Works within 7 days from the date of the Letter of Acceptance.
GC 2.1.3	The period between Programme updates is 30 days. The amount to be withheld for late submission of an updated Programme is: **10% of amount due in next certificate**
3. Quality Control	
GC 3.3.1	The Contract Period 18 months and Defects Liability Period of 90 days.
4. Cost Control	
GC 4.9.1	The currency of the Employer's country is: ***Kenya Shillings***
GC 4.10.1	The Contract **"shall not"** be subject to price adjustment, in accordance with GC Clause 4.10.1, and the following information regarding coefficients
GC 4.11.1	The proportion of payments retained is: 10%
GC 4.12.1	The Liquidated Damages for the whole of the Works are 0.05 of the final Contract Price, per day. The maximum amount of Liquidated
GC 4.13.1	The Bonus for the whole of the Works is 0% of the final Contract Price, per day. The maximum amount of Bonus for the whole of the Works is

	0% of the final Contract Price.
GC 4.14.1	The Advance Payment shall be: 10% of the contract sum and shall be paid to the Contractor no later than: 60 days
GC 4.15.1	The Performance Security amount is: 10% of contract sum in the form of: **(a) Bank Guarantee** [A **Bank Guarantee** shall be unconditional (on demand) (see Section IX, Contract Forms).
5. Finishing the Contract	
GC 7.4.1	The date by which operating and maintenance manuals are required shall be: **date of completion of works** The date by which "as built" drawings are required shall be: **date of completion of works**
GC 7.4.2	The amount to be withheld for failing to produce "as built" drawings and/or operating and maintenance manuals by the date required in GC Clause 7.7.1 shall be: **KES 100,000.00**
GC 7.5.2 (g)	The maximum number of days is: 30 days
GC 7.7.1	The percentage to apply to the value of the work not completed, representing the Employer's additional cost for completing the Works, shall be: 100% of work not done

3.3 Section VIII. Contract Forms

This Section contains Contract Forms which, once completed, will constitute part of the Contract. The forms for Contract Agreement, Performance Security and Advance Payment Security, when required, shall only be completed by the successful Bidder, after contract award

Table of Forms

3.3.1 FORM No 1: NOTIFICATION OF INTENTION TO AWARD

This Notification of Intention to Award shall be sent to each Tenderer that submitted a Tender. Send this Notification to the Tenderer's Authorized Representative named in the Tender Information Form on the format below.

FORMAT

1. For the attention of Tenderer's Authorized Representative
   - *i)* Name: *[insert Authorized Representative's name]*
   - *ii)* Address: *[insert Authorized Representative's Address]*
   - *iii)* Telephone: *[insert Authorized Representative's telephone/fax numbers]*
   - *iv)* Email Address: *[insert Authorized Representative's email address]*

   [IMPORTANT: insert the date that this Notification is transmitted to Tenderers. The Notification must be sent to all Tenderers simultaneously. This means on the same date and as close to the same time as possible.]

2. Date of transmission: [*email*] on [*date*] (local time)

   This Notification is sent by (*Name and designation*) _____

3. Notification of Intention to Award

   - *i)* Procuring Entity: *[insert the name of the Procuring Entity]*
   - *ii)* Project: *[insert name of project]*
   - *iii)* Contract title: *[insert the name of the contract]*
   - *iv)* Country: *[insert country where ITT is issued]*
   - *v)* ITT No: *[insert ITT reference number from Procurement Plan]*

   This Notification of Intention to Award (Notification) notifies you of our decision to award the above contract. The transmission of this Notification begins the Standstill Period. During the Standstill Period, you may:

4. Request a debriefing in relation to the evaluation of your tender

   Submit a Procurement-related Complaint in relation to the decision to award the contract.

   a) The successful tenderer
      - i) Name of successful Tender _____
      - ii) Address of the successful Tender _____
      - iii) Contract price of the successful Tender Kenya Shillings _____

   b) Other Tenderers

Names of all Tenderers that submitted a Tender. If the Tender's price was evaluated include the evaluated price as well as the Tender price as read out. For Tenders not evaluated, give one main reason the Tender was unsuccessful.

SNo	Name of Tender	Tender Price as read out	Tender's evaluated price (Note a)	One Reason Why not Evaluated
1				
2				
3				
4				
5				

(Note a) State NE if not evaluated

5. How to request a debriefing

a) DEADLINE: The deadline to request a debriefing expires at midnight on [*insert date*] (*local time*).

b) You may request a debriefing in relation to the results of the evaluation of your Tender. If you decide to request a debriefing your written request must be made within three (5) Business Days of receipt of this Notification of Intention to Award.

c) Provide the contract name, reference number, name of the Tenderer, contact details; and address the request for debriefing as follows:

i) Attention: [*insert full name of person, if applicable*]

ii) Title/position: [*insert title/position*]

ii) Agency: [*insert name of Procuring Entity*]

iii) Email address: [*insert email address*]

d) If your request for a debriefing is received within the 3 Days deadline, we will provide the debriefing within five (3) Business Days of receipt of your request. If we are unable to provide the debriefing within this period, the Standstill Period shall be extended by five (3) Days after the date that the debriefing is provided. If this happens, we will notify you and confirm the date that the extended Standstill Period will end.

e) The debriefing may be in writing, by phone, 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.

f) If the deadline to request a debriefing has expired, you may still request a debriefing. In this case, we will provide the debriefing as soon as practicable, and normally no later than fifteen (15) Days from the date of publication of the Contract Award Notice.

6. How to make a complaint

a) Period: Procurement-related Complaint challenging the decision to award shall be submitted by midnight, [*insert date*] (local time).

b) Provide the contract name, reference number, name of the Tenderer, contact details; and address the Procurement-related Complaint as follows:

i) Attention: [*insert full name of person, if applicable*]
ii) Title/position: [*insert title/position*]
iii) Agency: [*insert name of Procuring Entity*]
iv) Email address: [*insert email address*]

c) At this point in the procurement process, you may submit a Procurement-related Complaint challenging the decision to award the contract. You do not need to have requested, or received, a debriefing before making this complaint. Your complaint must be submitted within the Standstill Period and received by us before the Standstill Period ends.

d) Further information: For more information refer to the Public Procurement and Disposals Act 2015 and its Regulations available from the Website info@ppra.go.ke or complaints@ppra.go.ke.

You should read these documents before preparing and submitting your complaint.

e) There are four essential requirements:

i) You must be an 'interested party'. In this case, that means a Tenderer who submitted a Tender in this tendering process, and is the recipient of a Notification of Intention to Award.
ii) The complaint can only challenge the decision to award the contract.
iii) You must submit the complaint within the period stated above.
iv) You must include, in your complaint, all of the information required to support your complaint.

7. Standstill Period

i) DEADLINE: The Standstill Period is due to end at midnight on [*insert date*] (local time).
ii) The Standstill Period lasts ten (14) Days after the date of transmission of this Notification of Intention to Award.
iii) The Standstill Period may be extended as stated in paragraph Section 5 (d) above.

If you have any questions regarding this Notification please do not hesitate to contact us. On behalf of the Procuring Entity:

Signature:_____ Name:_____ Title/position:_____
_____ Telephone:__ Email: _____

3.3.2 FORM NO. 2 - REQUEST FOR REVIEW

3.3.2.1 FORM FOR REVIEW (r.203(1))

PUBLIC PROCUREMENT ADMINISTRATIVE REVIEW BOARD

APPLICATION NO……OF……20……..

BETWEEN

……APPLICANT

AND

……RESPONDENT (Procuring Entity)

Request for review of the decision of the…… (Name of the Procuring Entity of ……dated the…day of ……20…….in the matter of Tender No……..…of ……..20….. for **.....**(Tender description).

REQUEST FOR REVIEW

I/We……,the above named Applicant(s), of address: Physical address…….P. O. Box No……. Tel. No……..Email ……, hereby request the Public Procurement Administrative Review Board to review the whole/part of the above mentioned decision on the following grounds , namely:

1.

2.

By this memorandum, the Applicant requests the Board for an order/orders that:

1.

2.

SIGNED ……(Applicant) Dated on…….day of ……/…20……

FOR OFFICIAL USE ONLY Lodged with the Secretary Public Procurement Administrative Review Board on……day of ……20……

SIGNED

Board Secretary

3.3.3 FORM NO 3: LETTER OF AWARD

[letterhead paper of the Procuring Entity] [date]

To: *[name and address of the Contractor]*

This is to notify you that your Tender dated *[date]* for execution of the *[name of the Contract and identification number, as given in the Contract Data]* for the Accepted Contract Amount *[amount in numbers and words] [name of currency]*, as corrected and modified in accordance with the Instructions to Tenderers, is hereby accepted by …… (*name of Procuring Entity)*.

You are requested to furnish the Performance Security within 30 days in accordance with the Conditions of Contract, using, for that purpose, one of the Performance Security Forms included in Section VIII, Contract Forms, of the Tender Document.

Authorized Signature:.....

Name and Title of Signatory:.....

Name of Procuring Entity.....

Attachment: *Contract Agreement*.....

3.3.4 FORM NO 4: CONTRACT AGREEMENT

THIS AGREEMENT made the_____day of_____, 20_____, between _____of _____ (hereinafter "the Procuring Entity"), of the one part, and_____of_____(hereinafte

WHEREAS the Procuring Entity desires that the Works known as_____should be

The Procuring Entity 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 Tender
   c) the addenda Nos_____(if any)
   d) the Special Conditions of Contract
   e) the General Conditions of Contract;
   f) the Specifications
   g) the Drawings; and
   h) the completed Schedules and any other documents forming part of the contract.

3. In consideration of the payments to be made by the Procuring Entity to the Contractor as specified in this Agreement, the Contractor hereby covenants with the Procuring Entity to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4. The Procuring Entity 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 Kenya on the day, month and year specified above.

Signed and sealed by_____(for the Procuring Entity)

Signed and sealed by_____(for the Contractor).

3.3.5 FORM NO. 5 - PERFORMANCE SECURITY

3.3.5.1 [Option 1 - Unconditional Demand Bank Guarantee]

[Guarantor letterhead]

Beneficiary:_____*[insert name and Address of* Procuring Entity*]* **Date:**_____*[Insert date of issue]*

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

1. We have been informed that_____ _____(hereinafter called "the Contractor") has entered into Contract No._____dated_____with (*name* _____(hereinafter called "the Contract").

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

3. At the request of the Contractor, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of_____(*in* 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.

4. 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 the office indicated above on or before that date.

5. 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."

[Name of Authorized Official, signature(s) and seals/stamps].

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

[1] *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 of the Contract or a freely convertible currency acceptable to the Beneficiary.*

[2] *Insert the date twenty-eight days after the expected completion date as described in GC Clause 11.9. The Procuring Entity should note that in the event of an extension of this date for completion of the Contract, the Procuring Entity 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.

3.3.6 FORM No. 6 - PERFORMANCE SECURITY

3.3.6.1 [Option 2– Performance Bond]

[Note: Procuring Entities are advised to use Performance Security – Unconditional Demand Bank Guarantee instead of Performance Bond due to difficulties involved in calling Bond holder to action]

[Guarantor letterhead or SWIFT identifier code]

Beneficiary:_____*[insert name and Address of* Procuring Entity*]* **Date:**_____*[Insert date of issue]***.**

3.3.7 **PERFORMANCE BOND No.:**_____

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

1. By this Bond_____as Principal (hereinafter called "the Contractor") and_____] as Surety (hereinafter called "the Surety"), are held and firmly bound unto_____] as payable, the Contractor and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

2. WHEREAS the Contractor has entered into a written Agreement with the Procuring Entity dated the _____day of_____, 20 , for_____in accordance with the documents, plans, specifications, and amendments thereto, which to the extent herein provided for, are by reference made part hereof and are hereinafter referred to as the Contract.

3. NOW, THEREFORE, the Condition of this Obligation is such that, if the Contractor shall promptly and faithfully perform the said Contract (including any amendments thereto), then this obligation shall be null and void; otherwise, it shall remain in full force and effect. Whenever the Contractor shall be, and declared by the Procuring Entity to be, in default under the Contract, the Procuring Entity having performed the Procuring Entity's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:
   1) complete the Contract in accordance with its terms and conditions; or
   2) obtain a tender or tenders from qualified tenderers for submission to the Procuring Entity for completing the Contract in accordance with its terms and conditions, and upon determination by the Procuring Entity and the Surety of the lowest responsive Tenderers, arrange for a Contract between such Tenderer, and Procuring Entity and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the Balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "Balance of the Contract

Price," as used in this paragraph, shall mean the total amount payable by Procuring Entity to Contractor under the Contract, less the amount properly paid by Procuring Entity to Contractor; or

3) pay the Procuring Entity the amount required by Procuring Entity to complete the Contract in accordance with its terms and conditions up to a total not exceeding the amount of this Bond.

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

5. Any suit under this Bond must be instituted before the expiration of one year from the date of the issuing of the Taking-Over Certificate. No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Procuring Entity named herein or the heirs, executors, administrators, successors, and assigns of the Procuring Entity.

6. In testimony whereof, the Contractor has hereunto set his hand and affixed his seal, and the Surety has caused these presents to be sealed with his corporate seal duly attested by the signature of his legal representative, this day_____of_____20____.

SIGNED ON_____on behalf of By_in the

capacity of In the presence of

SIGNED ON_____on behalf of By_____in

the capacity of In the presence of

3.3.8 FORM NO. 7 - ADVANCE PAYMENT SECURITY

[Demand Bank Guarantee]

[Guarantor letterhead]

Beneficiary: _____ *[Insert name and Address of* Procuring Entity *]*
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]*

1. We have been informed that _____ (hereinafter called "the Contractor") has entered into Contract No. _____ *dated* _____

2. Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum _____ (*in words*) is to be made against an advance payment guarantee.

3. At the request of the Contractor, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ (*in word*
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.

4. 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 Contractor on its account number at _____.

5. The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Contractor 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 _____ day of _____, 2 ,[2] whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

6. 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.

[Name of Authorized Official, signature(s) and seals/stamps]

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

[1] *The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency of the advance payment as specified in the Contract.*

[2] *Insert the expected expiration date of the Time for Completion. The Procuring Entity should note that in the event of an extension of the time for completion of the Contract, the Procuring Entity 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.*

3.3.9 FORM NO. 8 - RETENTION MONEY SECURITY

3.3.9.1 [Demand Bank Guarantee]

[Guarantor letterhead]

Beneficiary: _____*[Insert name and Address of* Procuring Entity*]*

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]*

1. 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 Contractor") has entered into Contract No. _____*[insert reference number of the contract]* dated_____with the Beneficiary, for the execution of_____*[insert name of contract and brief description of* Works*]* (hereinafter called "the Contract").

2. Furthermore, we understand that, according to the conditions of the Contract, the Beneficiary retains moneys up to the limit set forth in the Contract ("the Retention Money"), and that when the Taking-Over Certificate has been issued under the Contract and the first half of the Retention Money has been certified for payment, and payment of *[*insert the second half of the Retention Money] is to be made against a Retention Money guarantee.

3. At the request of the Contractor, 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*_____*])*[1] 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 Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or show grounds for your demand or the sum specified therein.

4. 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 second half of the Retention Money as referred to above has been credited to the Contractor on its account number_____at_____*[insert name and address of Applicant's bank]*.

5. 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 the office indicated above on or before that date.

6. 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.

[Name of Authorized Official, signature(s) and seals/stamps]

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

[1] *The Guarantor shall insert an amount representing the amount of the second half of the Retention Money.*
[2] *Insert a date that is twenty-eight days after the expiry of retention period after the actual completion date of the contract. The Procuring Entity should note that in the event of an extension of this date for completion of the Contract, the Procuring Entity 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.*

3.3.10 FORM NO. 9 BENEFICIAL OWNERSHIP DISCLOSURE FORM

3.3.10.1 (Amended and issued pursuant to PPRA CIRCULAR No. 02/2022)

INSTRUCTIONS TO TENDERERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE FORM

This Beneficial Ownership Disclosure Form ("Form") is to be completed by the successful tenderer pursuant to Regulation 13 (2A) and 13 (6) of the Companies (Beneficial Ownership Information) Regulations, 2020. In case of joint venture, the tenderer must submit a separate Form for each member. The beneficial ownership information to be submitted in this Form shall be current as of the date of its submission.

For the purposes of this Form, a Beneficial Owner of a Tenderer is any natural person who ultimately owns or controls the legal person (tenderer) or arrangements or a natural person on whose behalf a transaction is conducted, and includes those persons who exercise ultimate effective control over a

Tender Reference No.:_____[*insert identification no*]

Name of the Tender Title/Description:_____*[insert name of the assignment]* to:_____*[insert complete name of Procuring Entity]*

In response to the requirement in your notification of award dated *[insert date of notification of award]* to furnish additional information on beneficial ownership: *[select one option as applicable and delete the options that are not applicable]*

I) We here by provide the following beneficial ownership information.

Details of beneficial ownership

	Details of all Beneficial Owners		**% of shares a person holds in the company Directly or indirectly**	**% of voting rights a person holds in the company**	**Whether a person directly or indirectly holds a right to appoint or remove a member of the board of directors of the company or an equivalent governing body of the Tenderer** (Yes / No)	**Whether a person directly or indirectly exercises significant influence or control over the Company (tenderer) (Yes / No)**
1.	Full Name		Directly---------- % of shares Indirectly---------- % of shares	Directly……. % of voting rights Indirectly---------- % of voting rights	1. Having the right to appoint a majority of the board of the directors or an equivalent governing body of the Tenderer: Yes -----No---- 2. Is this right held directly or indirectly?: Direct…… Indirect……..	1. Exercises significant influence or control over the Company body of the Company (tenderer**)** Yes -----No----- 2. Is this influence or control exercised directly or indirectly? Direct…….. Indirect……
	National identity card number or Passport number					
	Personal Identification Number (where applicable)					
	Nationality					
	Date of birth *[dd/mm/yyyy]*					
	Postal address					
	Residential address					
	Telephone number					
	Email address					
	Occupation or profession					
2.	Full Name		Directly---------- % of shares Indirectly---------- % of shares	Directly……. % of voting rights Indirectly---------- % of voting rights	1. Having the right to appoint a majority of the board of the directors or an equivalent governing body of the Tenderer: Yes -----No---- 2. Is this right held directly or indirectly?:	1. Exercises significant influence or control over the Company body of the Company (tenderer**)** Yes -----No----- 2. Is this
	National identity card number or Passport number					
	Personal Identification Number (where applicable)					

	Details of all Beneficial Owners		**% of shares a person holds in the company Directly or indirectly**	**% of voting rights a person holds in the company**	**Whether a person directly or indirectly holds a right to appoint or remove a member of the board of directors of the company or an equivalent governing body of the Tenderer** (Yes / No)	**Whether a person directly or indirectly exercises significant influence or control over the Company (tenderer) (Yes / No)**
	Nationality(ies)				Direct……	influence or control exercised directly or indirectly?
	Date of birth *[dd/mm/yyyy]*				Indirect……	Direct……
	Postal address					Indirect……
	Residential address					
	Telephone number					
	Email address					
	Occupation or profession					
3.						
e.t.c						

II) Am fully aware that beneficial ownership information above shall be reported to the Public Procurement Regulatory Authority together with other details in relation to contract awards and shall be maintained in the Government Portal, published and made publicly available pursuant to Regulation 13(5) of the Companies (Beneficial Ownership Information) Regulations, 2020.(Notwithstanding this paragraph Personally Identifiable Information in line with the Data Protection Act shall not be published or made public). *Note that Personally Identifiable Information (PII) is defined as any information that can be used to distinguish one person from another and can be used to deanonymize previously anonymous data. This information includes National identity card number or Passport number, Personal Identification Number, Date of birth, Residential address, email address and Telephone number.*

III) In determining who meets the threshold of who a beneficial owner is, the Tenderer must consider a natural person who in relation to the company:

(a) holds at least ten percent of the issued shares in the company either directly or indirectly;

(b) exercises at least ten percent of the voting rights in the company either directly or indirectly;

(c) holds a right, directly or indirectly, to appoint or remove a director of the company; or

(d) exercises significant influence or control, directly or indirectly, over the company.

IV) What is stated to herein above is true to the best of my knowledge, information and belief.

Name of the Tenderer: .....[insert complete name of the Tenderer]*_____

*Name of the person duly authorized to sign the Tender on behalf of the Tenderer: ** [insert complete name of person duly authorized to sign the Tender]*

Designation of the person signing the Tender: ..... [insert complete title of the person signing the Tender]

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

Date this ..... [insert date of signing] day of..... [Insert month], [insert year]

Bidder Official Stamp