



**MINISTRY OF EDUCATION | STATE DEPARTMENT
FOR TECHNICAL, VOCATIONAL EDUCATION &
TRAINING**

**SUPPORT TO TECHNICAL AND VOCATIONAL EDUCATION AND
TRAINING AND ENTREPRENEURSHIP (TVETE) PROJECT –
(GOK/AFDB TVET PHASE III PROJECT)**

OPEN COMPETITIVE BIDDING (INTERNATIONAL) (OCBI)

**LOT 1 - TENDER FOR SUPPLY, INSTALLATION, CALIBRATION,
COMMISSIONING AND TRAINING ON THE USE AND
MAINTENANCE OF BUILDING AND CIVIL ENGINEERING
EQUIPMENT TO SIAYA INSTITUTE OF TECHNOLOGY – SIAYA
COUNTY**

OCBI NO: OCBI/TVETE PHASE III/EQUIP/47/24-25

COUNTRY: KENYA

LOAN NO.: ADF No. 2100150054442

ISSUED ON: JUNE, 2025

**African Development Bank
Standard Bidding Document
Goods
(One-Envelope Bidding Process)

August 2021**

Foreword

This Standard Bidding Document (SBD) for Goods has been prepared by the African Development Bank Group (AfDB). This SBD derives from the Master bidding document for the procurement of Goods, prepared by the participating Multilateral Development Banks and International Financing Institutions.

This SBD has been updated to reflect the African Development Bank's Procurement Framework as amended from time to time. This SBD is applicable to the procurement of Goods funded by AfDB financed projects whose Financing Agreement makes reference to the Procurement Framework.

Preface

This Standard Bidding Document (SBD) for Goods has been prepared for use in contracts financed by the African Development Bank Group (AfDB). This SBD is to be used for the procurement of goods through Open Competitive Bidding (International) (OCBI) or Limited Competitive Bidding (LCB) methods, using one (1) envelope bidding process in projects that are financed in whole, or in part, by the AfDB “the Bank”.

This SBD provides a wide range of Bid Evaluation Criteria or factors other than the quoted prices enabling the Purchaser to specify criteria as appropriate based on the type, nature, value, time for completion, contractual conditions, complexity, risk, and market conditions of Goods and Related Services to be procured and objectives and outcomes to be achieved. Criteria other than ‘Price’ (which may consider Life-Cycle-Cost, when appropriate), may include ‘Quality’ to compare and assess the degree to which Goods and Related services meet or exceed the technical and other requirements, ‘Risk’ and its mitigation measures, and when permitted ‘Sustainability’ to address social, economic and environmental aspects, ‘Innovation’ to assess innovation in the design and/or delivery of Goods and Related Services, etc. Only such criteria as appropriate for each procurement will be specified.

The Bank’s procurement policy supports Borrowers in obtaining optimal value for money, to achieve this objective, selecting the appropriate approach that would be the best ‘fit for purpose’ is critical. Depending upon the nature, type, value, complexity and outcome to be achieved, procurement may adopt price alone as a factor for selection e.g. for very small value and simple procurement, or other relevant factors besides price can be considered to determine the evaluated cost of a bid for large value and complex procurement. The Bank recommends that as far as practical minimum pass-fail, and monetarily quantifiable criteria shall be adopted in the determination of the lowest evaluated bid and for evaluation of the qualification of Bidders to determine their technical capability and financial resources to perform the contract.

This SBD is based on application of only the pass-fail and monetarily quantifiable criteria for procurement of goods. The Bank’s SBD based on a 2-Envelope procedure is also available for use when appropriate as per the guidance provided therein.

The Bank’s Procurement Framework stipulates that bidders may send copies of their communications with the Borrowers to the Bank or write to the Bank directly when, Borrowers do not respond promptly, any questions on any issues regarding the implementation of Bank funded projects, or when the communication is a complaint against the Borrower. In this regard, if a bidder wishes to protest against a decision made by a Borrower or the Bank with regards to the procurement process or wishes to inform the Bank that the Bank’s procurement rules and/or provisions of the bidding documents have not been complied with, an email can be sent to the following address:

Email: procurementcomplaints@afdb.org

To obtain further information on procurement under African Development Bank-funded projects or for question regarding the use of this SBD, contact:

Fiduciary Services & Inspection Department (SNFI)

African Development Bank (www.afdb.org)

Headquarters – Abidjan (Côte d'Ivoire)

5 Avenue Joseph Anoma

01 B.P. 1387, Abidjan 01

Côte d'Ivoire

Tel.: +225 – 27 20 26 39 00

E-mail: procurementpolicy@afdb.org

Standard Bidding Document

Summary

Specific Procurement Notice – Invitation for Bids (IFB)

The template attached is the Specific Procurement Notice for Invitation for Bids, one-envelope Bidding process. This is the template to be used by the Borrower.

SBD for Procurement of Goods (One-Envelope Bidding Process)

Part 1 – Bidding Procedures

Section I - Instructions to Bidders (ITB)

This Section provides information to help Bidders prepare their Bids. It is based on a one-envelope Bidding process. Information is also provided on the submission, opening, and evaluation of Bids and on the award of Contracts. **Section I contains provisions that are to be used without modification.**

Section II - Bid Data Sheet (BDS)

This Section includes provisions that are specific to each procurement and that supplement Section I, Instructions to Bidders.

Section III - Evaluation and Qualification Criteria

This Section specifies the criteria for evaluation of Bids and qualification of Bidders to perform the contract to determine the successful Bidder or Bidders that are substantially responsive to the bidding document and whose Bid (s) offer the lowest evaluated cost to the Purchaser. Only such criteria will be specified as determined appropriate for each procurement.

Section IV - Bidding Forms

This Section includes the forms for the Bid submission, Price Schedules, Bid Security, and the Manufacturer's Authorization to be completed and submitted by the Bidder as part of its Bid.

Section V - Eligible Countries

This Section contains information regarding eligible countries.

Section VI - Fraud and Corruption

This section includes the fraud and corruption provisions which apply to this Bidding process.

Part 2 – Supply Requirements

Section VII - Schedule of Requirements

This Section includes the List of Goods and Related Services, the Delivery and Completion Schedules, the Technical Specifications and the Drawings that describe the Goods and Related Services to be procured.

Part 3 – Conditions of Contract and Contract Forms

Section VIII - General Conditions of Contract (GCC)

This Section includes the general clauses to be applied in all contracts. **The text of the clauses in this Section shall not be modified.**

Section IX - Special Conditions of Contract (SCC)

This Section consists of Contract Data and Specific Provisions which contains clauses specific to each contract. The contents of this Section modify or supplement, but not over-write, the General Conditions and shall be prepared by the Purchaser.

Section X - Contract Forms

This Section contains the Letter of Acceptance, Contract Agreement and other relevant forms.

Specific Procurement Notice

Invitation for Bids [IFB]

Goods

(One-Envelope Bidding Process)

IFB NUMBER:	OCBI/TVETE PHASE III/EQUIP/47/24-25
PURCHASER:	MINISTRY OF EDUCATION – STATE DEPARTMENT FOR TECHNICAL, VOCATIONAL EDUCATION & TRAINING
PROJECT:	SUPPORT TO TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING AND ENTREPRENEURSHIP (TVETE) PROJECT – (GOK/AFDB TVET PHASE III PROJECT)
CONTRACT TITLE:	LOT 1 - TENDER FOR SUPPLY, INSTALLATION, CALIBRATION, COMMISSIONING AND TRAINING ON THE USE AND MAINTENANCE OF BUILDING AND CIVIL ENGINEERING EQUIPMENT TO SIAYA INSTITUTE OF TECHNOLOGY – SIAYA COUNTY
COUNTRY:	KENYA
LOAN NO.:	ADF No. 2100150054442
PROCUREMENT METHOD:	OPEN COMPETITIVE BIDDING (INTERNATIONAL) (OCBI)
OCBI NO:	OCBI/TVETE PHASE III/EQUIP/47/24-25
ISSUED ON:	JUNE, 2025

1. The Government of the Republic of Kenya has financing from the African Development Fund hereinafter called the Bank toward the cost of the Support to Technical and Vocational Education and Training and Entrepreneurship (TVETE) Project – (GOK/AfDB TVET PHASE III PROJECT), and intends to apply part of the proceeds toward payments under the contract for Lot 1 - Supply, Installation, Calibration, Commissioning and Training on the use and Maintenance of Building & Civil Engineering Training Equipment.
2. For this contract, the Borrower shall process the payments using the Direct Payment disbursement method, as defined in the Bank's Disbursement Guidelines and procedures for Investment Project Financing, except for those payments, which the contract provides to be made through letter of credit.
3. Bidders may Bid for Lots, as applicable and, as further defined in the bidding document. Bidders wishing to offer discounts in case they are awarded more than one Lot as applicable will be allowed to do so, provided those discounts are included in the Letter of Bid.
4. The Ministry of Education - State Department for Vocational and Technical Training now invites sealed Bids from eligible Bidders for Lot 1 - Tender for Supply, Installation, Calibration, Commissioning and Training on the Use and Maintenance of Building and Civil Engineering Equipment to Siaya Institute of Technology – Siaya County
5. Bidding will be conducted through the Open Competitive Bidding (International), (OCBI) method as specified in the Bank's [Procurement Framework²](#) and is open to all eligible bidders as defined in the Procurement Framework.
6. Interested eligible Bidders may obtain further information and inspect the bidding document during office hours 0800 to 1700 hours at the address given below:

Ministry of Education- State Department for Vocational and Technical Training
The Project Coordinator – GoK/AfDB TVETE (GoK/AfDB TVET PHASE III) Project
Teleposta Towers, Kenyatta Avenue, 24th Floor, Room 2412
NAIROBI, KENYA.

Email: procurement.afdb@education.go.ke

7. The bidding document in English may be purchased by interested eligible Bidders upon the submission of a written application to the address below and upon payment of a nonrefundable fee of **Kenya Shillings One Thousand (KES 1,000) or its equivalent in freely convertible currency**, to the Cashier **Ministry of Education- State Department for Vocational and Technical Training, Harambee Avenue, Jogoo House B, 9th Floor Room 925**. Tender documents may also be viewed and downloaded free of charge from the Ministry of Education website <https://www.education.go.ke/>. Those who choose to download the tender

document and intend to submit a bid **MUST** register their details at the office of the Project Coordinator, Teleposta Towers, Kenyatta Avenue, 24th Floor, Room 2412 or through email procurement.afdb@education.go.ke for the purpose of receiving any other information, clarifications and addenda.

8. The Tenderer shall chronologically serialize all pages of the Tender documents submitted.
9. Bids must be delivered to the address below on or before **7 August 2025, 10.00 am Local Time**. Electronic Bidding will **NOT** be permitted. Late Bids will be rejected. Bids will be publicly opened in the presence of the Bidders' designated representatives and anyone who chooses to attend at the address below:

Ministry of Education- State Department for Technical, Vocational Education and Training
Directorate of Vocational, Technical Education
Teleposta Towers, Kenyatta Avenue,
24th Floor, Room 2412
P.O. Box 9583 – 00200 Nairobi
Telephone: +254 020 318581
Tel/Fax: 254 020 2251991
NAIROBI, KENYA

10. Bids shall be valid for a bid period of 120 days after bid opening. All Bids must be accompanied by a bid security of **Kenya Shillings Two Million (KES 2,000,000) or its equivalent in any freely convertible currency**. The bid security shall **be in the form of a bank guarantee** and must be from a reputable commercial bank supervised by the Central bank of Kenya.
11. The address(es) referred to above is (are):

Ministry of Education
Directorate of Technical Education
The Project Coordinator – GoK/AfDB TVETE (GoK/AfDB TVET PHASE III) Project
Teleposta Towers, Kenyatta Avenue, 24th Floor
P.O. Box 9583 – 00200 Nairobi
Telephone: +254 020 318581
Tel/Fax: 254 020 2251991
NAIROBI, KENYA
Email: procurement.afdb@education.go.ke
Website: <https://www.education.go.ke/>

Standard Bidding Document (One-Envelope Bidding Process)

PROCUREMENT OF:

LOT 1 - SUPPLY, INSTALLATION, CALIBRATION, COMMISSIONING AND TRAINING
ON THE USE AND MAINTENANCE OF BUILDING AND CIVIL ENGINEERING
EQUIPMENT TO SIAYA INSTITUTE OF TECHNOLOGY – SIAYA COUNTY

OCBI No: OCBI/TVETE PHASE III/EQUIP/47/24-25

PROJECT: SUPPORT TO TECHNICAL AND VOCATIONAL EDUCATION
AND TRAINING AND ENTREPRENEURSHIP (TVETE) PROJECT –
(GOK/AFDB TVET PHASE III PROJECT)

PURCHASER: MINISTRY OF EDUCATION – STATE DEPARTMENT FOR
TECHNICAL, VOCATIONAL EDUCATION AND TRAINING

COUNTRY: KENYA

ISSUED ON: JUNE, 2025

Standard Bidding Document

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Part 1: Bidding Procedures

Section I - Instructions to Bidders

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Section I. Instructions to Bidders

General

1. Scope of Bid

- 1.1 In connection with the Specific Procurement Notice, Invitation for Bids (IFB), specified **in the Bid Data Sheet (BDS)**, the Purchaser, as **specified in the BDS**, issues this bidding document for the supply of Goods and, if applicable, any Related Services incidental thereto, as specified in Section VII, Schedule of Requirements. The name, identification and number of items, lots or combination of lots (packages) of this IFB are **specified in the BDS**.
- 1.2 Throughout this bidding document:
- (a) the term “in writing” means communicated in written form (e.g. by mail, e-mail, fax, including if **specified in the BDS**, distributed or received through the electronic-procurement system used by the Purchaser) with proof of receipt;
 - (b) if the context so requires, “singular” means “plural” and vice versa; and
 - (c) “Day” means calendar day, unless otherwise specified as “Business Day”. A Business Day is any day that is an official working day of the Borrower. It excludes the Borrower's official public holidays.

2. Source of Funds

- 2.1 The Borrower or Recipient (hereinafter called “Borrower”) **specified in the BDS** has applied for or received financing (hereinafter called “funds”) from the Specific Financing Institution named in the BDS (hereinafter called “the Bank”) in an amount **specified in the BDS**, toward the project named **in the BDS**. The Borrower intends to apply a portion of the funds to eligible payments under the contract for which this bidding document is issued.
- 2.2 Payment by the Bank will be made only at the request of the Borrower and upon approval by the Bank in accordance with the terms and conditions of the Loan (or other financing) Agreement. The Loan (or other financing) Agreement prohibits a withdrawal from the Loan account for the purpose of any payment to persons or entities, or for any import of goods, if such payment or import is prohibited by decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. No party other than the Borrower shall derive any rights from the Loan (or other financing) Agreement or have any claim to the proceeds of the Loan (or other financing).

3. Fraud and Corruption

- 3.1 The Bank requires compliance with the Bank's Integrity Framework comprising the African Development Bank Group's Sanctions Procedures, the Bank's Whistleblowing and Complaints Policy, the Bank's Procurement Policy under the Procurement Framework and any other applicable Policies and Procedures including their updates regarding corrupt and fraudulent practices as set forth in Section VI, Fraud and Corruption.
- 3.2 In further pursuance of this policy, Bidders shall permit and shall cause their agents (where declared or not), subcontractors, sub consultants, service providers, suppliers, and their personnel, to permit the Bank to inspect all accounts, records and other documents relating to any, prequalification process, bid submission, and contract performance (in the case of award), and to have them audited by auditors appointed by the Bank.

4. Eligible Bidders

- 4.1 A Bidder may be a firm that is a private entity, a state-owned enterprise or institution subject to ITB 4.6, or any combination of such entities in the form of a joint venture, consortium, or association (JVCA) hereinafter called JV, under an existing agreement or with the intent to enter into such an agreement supported by a letter of intent. In the case of a joint venture, consortium, or association (JV): a) Unless otherwise **specified in the BDS**, all members shall be jointly and severally liable for the execution of the entire Contract in accordance with the Contract terms; b) The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the Bidding process and, in the event the JV is awarded the Contract, during contract execution; c) The maximum number of members proposed in a JV shall not exceed the number **specified in the BDS**, or the number derived from the percentage specified under ITB 4.1 (d), whichever is smaller unless both are equal, in which case anyone shall apply; and d) Participation by value of the contract as share of each of the JV partner (member) shall not be less than the percentage **specified in the BDS**. In case of any inconsistency between ITB 4.1 c) and ITB 4.1 d) that both cannot be applied simultaneously, the latter shall prevail.
- 4.2 A Bidder shall not have a conflict of interest. Any Bidder found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest for the purpose of this Bidding process, if the Bidder:
- (a) directly or indirectly controls, is controlled by or is under common control with another Bidder; or

- (b) receives or has received any direct or indirect subsidy from another Bidder; or
 - (c) has the same legal representative as another Bidder; or
 - (d) has a relationship with another Bidder, directly or through common third parties, that puts it in a position to influence the Bid of another Bidder, or influence the decisions of the Purchaser regarding this Bidding process; or
 - (e) or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the goods, or works if any, that are the subject of the Bid; or
 - (f) or any of its affiliates has been hired (or is proposed to be hired) by the Purchaser or Borrower for the Contract implementation; or
 - (g) would be providing goods, works, or non-consulting services resulting from or directly related to consulting services for the preparation or implementation of the project **specified in the BDS** ITB 2.1 that it provided or were provided by any affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm; or
 - (h) has a close business or family relationship with a professional staff of the Borrower (or of the project implementing agency, or of a recipient of a part of the loan) who: (i) are directly or indirectly involved in the preparation of the bidding document or specifications of the Contract, and/or the Bid evaluation process of such Contract; or (ii) would be involved in the implementation or supervision of such Contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to the Bank throughout the Bidding process and execution of the Contract.
- 4.3 A firm that is a Bidder (either individually or as a JV member) shall not participate in more than one Bid, except for permitted alternative Bids. This includes participation as a subcontractor. Such participation shall result in the disqualification of all Bids in which the firm is involved. A firm that is not a Bidder or a JV member, may participate as a subcontractor in more than one Bid.
- 4.4 A Bidder and all parties constituting the Bidder including any subcontractors or suppliers shall have the nationality of an eligible country of the Bank in accordance with the Bank's Procurement Policy for the Bank Group Funded Operation described under the Bank's Procurement Framework, and as listed in Section V, Eligible Countries subject to the restrictions pursuant to ITB 4.8. A Bidder shall be deemed to have the nationality of a country if the Bidder is constituted, incorporated or registered in and operates in conformity with the provisions of the laws of that country, as evidenced by its articles of

incorporation (or equivalent documents of constitution or association) and its registration documents, as the case may be. This criterion also shall apply to the determination of the nationality of proposed subcontractors or subconsultants for any part of the Contract including related Services.

- 4.5 A Bidder that has been sanctioned by the Bank, pursuant to the Bank's Integrity Framework and in accordance with its prevailing sanctions policies and procedures as set forth in the Bank's Integrity Framework as described in Section VI paragraph 2.2 d, shall be ineligible to be prequalified for, bid for, or be awarded a Bank-financed contract or benefit from a Bank-financed contract, financially or otherwise, during such period of time as the Bank shall have determined. The list of debarred firms and individuals is available at the electronic address **specified in the BDS.**
- 4.6 Bidders that are state-owned enterprises or institutions in the Purchaser's Country may be eligible to compete and be awarded a Contract(s) only if they can establish, in a manner acceptable to the Bank, that they: (i) are legally and financially autonomous; (ii) operate under commercial law; and (iii) are not under supervision of the Purchaser.
- 4.7 A Bidder shall not be under suspension from Bidding by the Purchaser as the result of the operation of a Bid-Securing Declaration.
- 4.8 Firms and individuals may be ineligible if so indicated in Section V and (a) as a matter of law or official regulations, the Borrower's country prohibits commercial relations with that country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of goods or the contracting of works or services required; or (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's country prohibits any import of goods or contracting of works or services from that country, or any payments to any country, person, or entity in that country.
- 4.9 A Bidder shall provide such documentary evidence of eligibility satisfactory to the Purchaser, as the Purchaser shall reasonably request.
- 4.10 In case a prequalification process has been conducted prior to the bidding process, this bidding is open only to prequalified Bidders.
- 4.11 A firm that is under a sanction of debarment by the Borrower from being awarded a contract is eligible to participate in this procurement, unless the Bank, at the Borrower's request, is satisfied that the debarment;

- (a) relates to fraud or corruption; and
- (b) followed a judicial or administrative proceeding that afforded the firm adequate due process.

5. Eligible Goods and Related Services

- 5.1 All the Goods and Related Services to be supplied under the Contract and financed by the Bank shall have their country of origin in an eligible country of the Bank in accordance with the Bank's Procurement Policy for Bank Group Funded Operations described under the Bank's Procurement Framework, and as listed in Section V, Eligible Countries.
- 5.2 For purposes of this ITB, the term "goods" includes commodities, raw material, machinery, equipment, and industrial plants; and "related services" includes services such as insurance, installation, training, and initial maintenance.
- 5.3 The term "origin" means the country where the goods have been mined, grown, cultivated, produced, manufactured or processed; or, through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its components.
- 5.4 The nationality of the firm that produces, assembles, distributes, or sells the Goods shall not determine their origin.

Contents of the Bidding Document

6. Sections of Bidding Document

- 6.1 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 - Bidding Data Sheet (BDS)
- Section III - Evaluation and Qualification Criteria
- Section IV - Bidding Forms
- Section V - Eligible Countries
- Section VI - Fraud and Corruption

PART 2 Supply Requirements

- Section VII - Schedule of Requirements

PART 3 Contract

- Section VIII - General Conditions of Contract (GCC)
- Section IX - Special Conditions of Contract (SCC)
- Section X - Contract Forms

- 6.2 The Specific Procurement Notice, Invitation for Bids (IFB), issued by the Purchaser is not part of this bidding document.
- 6.3 Unless obtained directly from the Purchaser, the Purchaser is not responsible for the completeness of the document, responses to requests for clarification, the Minutes of the pre-Bid meeting (if any), or Addenda to the bidding document in accordance with ITB 8. In case of any contradiction, documents obtained directly from the Purchaser shall prevail.
- 6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding document and to furnish with its Bid all information or documentation as is required by the bidding document.

7. Clarification of Bidding Document

- 7.1 A Bidder requiring any clarification of the bidding document shall contact the Purchaser in writing at the Purchaser's address **specified in the BDS**. The Purchaser will respond in writing to any request for clarification, provided that such request is received prior to the deadline for submission of Bids within a period **specified in the BDS**. The Purchaser shall forward copies of its response 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. If so **specified in the BDS**, the Purchaser shall also promptly publish its response at the web page identified **in the BDS**. Should the clarification result in changes to the essential elements of the bidding document, the Purchaser shall amend the bidding document following the procedure under ITB 8 and ITB 22.2.

8. Amendment of Bidding Document

- 8.1 At any time prior to the deadline for submission of Bids, the Purchaser may amend the bidding document by issuing addenda.
- 8.2 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 Purchaser in accordance with ITB 6.3. The Purchaser

shall also promptly publish the addendum on the Purchaser's web page in accordance with ITB 7.1.

- 8.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their Bids, the Purchaser may, at its discretion, extend the deadline for the submission of Bids, pursuant to ITB 22.2.

Preparation of Bids

9. Cost of Bidding

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

10. Language of Bid

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

11. Documents Comprising the Bid

- 11.1 The Bid shall comprise the following including all forms specified under Section IV, duly completed by the Bidder:
- (a) **Letter of Bid** prepared in accordance with ITB 12;
 - (b) **Price Schedules**: completed in accordance with ITB 12 and ITB 14;
 - (c) **Bid Security** or **Bid-Securing Declaration**, in accordance with ITB 19.1;
 - (d) **Technical Bid-Base Bid**;
 - (e) **Commercial Terms and Conditions**
 - (f) **Alternative Technical Bid**: if permissible, in accordance with ITB 13;
 - (g) **Authorization**: written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 20.3;
 - (h) **Qualifications**: documentary evidence in accordance with ITB 17 establishing the Bidder's qualifications to perform the Contract if its Bid is accepted;

- (i) **Bidder's Eligibility:** documentary evidence in accordance with ITB 17 establishing the Bidder's eligibility to bid;
 - (j) **Eligibility of Goods and Related Services:** documentary evidence in accordance with ITB 16, establishing the eligibility of the Goods and Related Services to be supplied by the Bidder;
 - (k) **Conformity:** documentary evidence in accordance with ITB 16 and ITB 31, and in support of above sub-paragraphs (d) and (e) of ITB 11.1 as necessary to establish that the Goods and Related Services, and Terms and Conditions of the Bid conform to requirements and provisions of the bidding document;
 - (l) **Manufacture's Authorization** in accordance with ITB 17.2 (a); and
 - (m) any other document required **in the BDS**.
- 11.2 In addition to the requirements under ITB 11.1, Bids submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful Bid shall be signed by all members and submitted with the Bid, together with a copy of the proposed Agreement.
- 11.3 The Bidder shall furnish in the Letter of Bid information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Bid.

12. Letter of Bid and Price Schedules

- 12.1. The Letter of Bid and Price Schedules shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITB 20.3. All blank spaces shall be filled in with the information requested.

13. Alternative Bids

- 13.1. Unless otherwise **specified in the BDS**, alternative Bids shall not be considered.

14. Bid Prices and Discounts

- 14.1 The prices and discounts quoted by the Bidder in the Letter of Bid and in the Price Schedules shall conform to the requirements specified below.
- 14.2 All lots (contracts) and items must be listed and priced separately in the Price Schedules.
- 14.3 The price to be quoted in the Letter of Bid in accordance with ITB 12.1 shall be the total price of the Bid, excluding any discounts offered.

- 14.4 The Bidder shall quote any discounts and indicate the methodology for their application in the Letter of Bid, in accordance with ITB 12.1, ITB 14.6 and 14.7.
- 14.5 Prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account, unless otherwise **specified in the BDS**. A Bid submitted with an adjustable price basis shall be treated as nonresponsive and shall be rejected, pursuant to ITB 30. However, if in accordance with **the BDS**, prices quoted by the Bidder shall be subject to adjustment during the performance of the Contract, a Bid submitted with a fixed price quotation shall not be rejected, but the price adjustment shall be treated as zero.
- 14.6 In accordance with ITB 1.1, Bids are being invited for individual items, individual lots (contracts) or for any combination of lots (packages) as specified in **BDS**. Unless otherwise **specified in the BDS**, prices quoted shall correspond to 100% of the quantity for each individual item (of bids invited for individual items), 100 % of the items specified for each lot and to 100% of the quantities specified for each item of a lot (of bids invited for individual lots and combination of lots). Bidders wishing to offer discounts for the award of more than one individual item (of bids invited for individual items), for award of more than one lot (of bids invited for individual lots or combination of lots) shall specify in their Bid the price reductions, as applicable, to each item, to each individual lot, and to the combination of lots (package), as applicable or alternatively, to individual Contracts within the package provided in all cases how discounts will be applied to individual items is made clear. Discounts shall be submitted in accordance with ITB 14.4 and 14.6 with due regards to consequences of unclear or ambiguous discounts as per ITB 14.7 provided the Bids for all lots (contracts) are opened at the same time.
- 14.7 Discounts offered shall be clear and without any vagueness or ambiguity as no clarification shall be requested or permitted on this account after Bid submission. The Purchaser's decision on discounts will be based on the contents of the Bid itself, without recourse to any extrinsic evidence. If in the Purchaser's opinion, which will be final, a discount offered in the bid: (i) is seriously unclear, ambiguous or vaguely presented to such extent that it cannot be either interpreted or applied with reasonable accuracy, the Bid shall be rejected; (ii) has a minor discrepancy or unclarity which could be interpreted reasonably, the Purchaser in this case may decide to apply the discount as it deems reasonable and appropriate resulting in the lowest evaluated cost to the Purchaser. If the Bidder does not accept the Purchaser's decision based on any of the above, the Bid shall be rejected.
- 14.8 The terms EXW, CIP, and other similar terms shall be governed by the rules prescribed in the current edition of Incoterms, published by the International Chamber of Commerce, as **specified in the BDS**.

14.9 Prices shall be quoted as specified in each Price Schedule included in Section IV, Bidding Forms as mentioned under (a), (b), (c) and (d) below. For a specific item of Goods only one Price Schedule shall be used as per applicable classification of that item i.e. whether the item is manufactured and offered within the Purchaser's country or to be imported pursuant to the award of contract or previously imported. No changes in the offered Price Schedule or classification shall be permitted after bid opening. Failure to follow these instructions may result in rejection of bids. The disaggregation of price components is required solely for the purpose of facilitating the comparison of Bids by the Purchaser. This shall not in any way limit the Purchaser's right to contract on any of the terms offered e.g. instead of taking delivery at the final destination, the delivery may be taken at ex-works or at the destination. Similarly, if bids have been invited on CIP destination price in addition to other terms e.g. FOB or FCA, etc. then at the Purchaser's option, the award may be made on such other terms instead of CIP Price although comparison and evaluation of bids shall still be based on CIP final destination prices. In quoting prices, the Bidder shall be free to use transportation through carriers registered in any eligible country, in accordance with Bank's Procurement Framework and as listed in Section V, Eligible Countries. Similarly, the Bidder may obtain insurance services from any eligible country in accordance with Bank Procurement Framework and as listed in Section V, Eligible Countries. BDS indicates if the "Final Destination" (project site) is different from the "Destination" and their addresses. Prices shall be entered in Price Schedules accordingly and in the following manner:

- (a) For Goods manufactured in the Purchaser's Country:
 - (i) the price of the Goods quoted EXW (ex-works, ex-factory, ex warehouse, ex showroom, or off-the-shelf, as applicable), including all customs duties and sales and other taxes already paid or payable on the components and raw material used in the manufacture or assembly of the Goods;
 - (ii) any Purchaser's Country sales tax and other taxes which will be payable on the Goods if the Contract is awarded to the Bidder; and
 - (iii) the price for inland transportation, insurance, and other local services required to convey the Goods to their final destination (Project Site) **specified in the BDS.**
- (b) For Goods manufactured outside the Purchaser's Country, to be imported:
 - (i) the price of the Goods, quoted CIP named place of destination, in the Purchaser's Country, as **specified in the BDS.** If "final destination" is the same as "destination" then CIP price under columns 6 and 7 of the Price Schedule form applicable for

Goods to be imported shall be quoted for named place of final destination;

- (ii) the price for inland transportation, insurance, and other local services required to convey the Goods from the named place of destination to their final destination (Project Site) **specified in the BDS**. If named place of “final destination” is the same as “destination” then cost under (b) (ii) shall not be indicated under column 8 of the Price Schedule form applicable for Goods to be imported and will state “Not Applicable”. But instead, CIP final destination price quoted as per (b) (i) above shall include such costs;
- (c) For Goods manufactured outside the Purchaser’s Country, already imported:
 - (i) the price of the Goods, including the original import value of the Goods; plus any mark-up (or rebate); plus any other related local cost, and custom duties and other import taxes already paid or to be paid on the Goods already imported;
 - (ii) the custom duties and other import taxes already paid (need to be supported with documentary evidence) or to be paid on the Goods already imported;
 - (iii) the price of the Goods, obtained as the difference between (i) and (ii) above;
 - (iv) any Purchaser’s Country sales and other taxes which will be payable on the Goods if the Contract is awarded to the Bidder; and
 - (v) the price for inland transportation, insurance, and other local services required to convey the Goods to their final destination (Project Site) **specified in the BDS**.
- (d) For Related Services, other than inland transportation and other services required to convey the Goods to their final destination, whenever such Related Services are specified in the Schedule of Requirements, the price of each item comprising the Related Services (inclusive of any applicable taxes).

15. Currencies of Bid and Payment

15.1 The currency(ies) of the Bid and the currency(ies) of payments shall be the same. The Bidder shall quote in the currency of the Purchaser’s Country the portion of the Bid price that corresponds to expenditures incurred in the currency of the Purchaser’s Country, unless otherwise **specified in the BDS**.

15.2 The Bidder may express the Bid price in any currency. If the Bidder wishes to be paid in a combination of amounts in different currencies, it may

quote its price accordingly but shall use no more than three foreign currencies in addition to the currency of the Purchaser's Country.

16. **Documents Establishing the Eligibility and Conformity of the Goods and Related Services**

- 16.1 To establish the eligibility of the Goods and Related Services in accordance with ITB 5, Bidders shall complete the country of origin declarations in the Price Schedule Forms, included in Section IV, Bidding Forms.
- 16.2 To establish the conformity of the Goods and Related Services to the bidding document, the Bidder shall furnish as part of its Bid the documentary evidence that the Goods conform to the technical specifications and standards specified in Section VII, Schedule of Requirements.
- 16.3 The documentary evidence may be in the form of literature, drawings or data, and shall consist of a detailed item by item description of the essential technical and performance characteristics of the Goods and Related Services, demonstrating substantial responsiveness of the Goods and Related Services to the technical specification, and if applicable, a statement of deviations and exceptions to the provisions of the Section VII, Schedule of Requirements.
- 16.4 The Bidder shall also furnish a list giving full particulars, including available sources and current prices of spare parts, special tools, etc., necessary for the proper and continuing functioning of the Goods during the period **specified in the BDS** following commencement of the use of the goods by the Purchaser.
- 16.5 Standards for workmanship, process, material, and equipment, as well as references to brand names or catalogue numbers specified by the Purchaser in the Schedule of Requirements, are intended to be descriptive only and not restrictive. The Bidder may offer other standards of quality, brand names, and/or catalogue numbers, provided that it demonstrates, to the Purchaser's satisfaction, that the substitutions ensure substantial equivalence or are superior to those specified in the Section VII, Schedule of Requirements.

17. **Documents Establishing the Eligibility and Qualifications of the Bidder**

- 17.1 To establish Bidder's eligibility in accordance with ITB 4, Bidders shall complete the Letter of Bid, included in Section IV, Bidding Forms.
- 17.2 The documentary evidence of the Bidder's qualifications to perform the Contract if its Bid is accepted shall establish to the Purchaser's satisfaction:
- (a) that, if required **in the BDS**, a Bidder that does not manufacture or produce the Goods it offers to supply shall submit the Manufacturer's

Authorization using the form included in Section IV, Bidding Forms to demonstrate that it has been duly authorized by the manufacturer or producer of the Goods to supply these Goods in the Purchaser's Country;

- (b) that, if required **in the BDS**, in case of a Bidder not doing business within the Purchaser's Country, the Bidder is or will be (if awarded the Contract) represented by an Agent in the country equipped and able to carry out the Supplier's maintenance, repair and spare parts-stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications; and
- (c) that the Bidder meets each of the qualification criterion specified in Section III, Evaluation and Qualification Criteria.

18. Period of Validity of Bids

- 18.1. Bids shall remain valid for the Bid Validity period **specified in the BDS**. The Bid Validity period starts from the date fixed for the Bid submission deadline (as prescribed by the Purchaser in accordance with ITB 22.1). A Bid valid for a shorter period shall be rejected by the Purchaser as nonresponsive.
- 18.2. In exceptional circumstances, prior to the expiration of the Bid validity period, the Purchaser 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, it shall also be extended for a corresponding 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.
- 18.3. If the award is delayed by a period exceeding fifty-six (56) days beyond the expiry of the initial Bid validity period, the Contract price shall be determined as follows:
 - (a) in the case of fixed price contracts, the Contract price shall be the Bid price adjusted by the factor **specified in the BDS** to reflect any increase in the cost of inputs over the period starting from the date immediately after expiry of 56 days until the date of award;
 - (b) in the case of adjustable price contracts, no adjustment shall be made;
 - (c) in any case, Bid evaluation shall be based on the Bid price without taking into consideration the applicable correction from those indicated above.

19. Bid Security

19.1. The Bidder shall furnish as part of its Bid, either a Bid-Securing Declaration or a Bid Security amount, as **specified in the BDS**, in original form and, in the case of a Bid Security amount, in the amount and currency **specified in the BDS**.

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

19.3. If a Bid Security amount 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 non-bank financial institution (such as an insurance, bonding or surety company);
- (b) an irrevocable letter of credit;
- (c) a cashier's or certified check; or
- (d) another security **specified in the BDS**,

from a reputable source, and an eligible country. If an unconditional guarantee is issued by a non-bank financial institution located outside the Purchaser's Country, the issuing non-bank financial institution shall have a correspondent financial institution located in the Purchaser's Country to make it enforceable unless the Purchaser has agreed in writing, prior to Bid submission, that a correspondent financial institution is not required. 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 Purchaser prior to Bid submission. The Bid Security shall be valid for twenty-eight (28) days beyond the original validity period of the Bid, or beyond any period of extension if requested under ITB 18.2.

19.4. If a Bid Security in amount or Bid-Securing Declaration is specified pursuant to ITB 19.1, any Bid not accompanied by a substantially responsive Bid Security in amount or Bid-Securing Declaration, whichever is required shall be rejected by the Purchaser as non-responsive.

19.5. 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 signing the Contract and furnishing the Performance Security pursuant to ITB 46.

19.6. 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.

19.7. The Bid Security amount may be forfeited:

- (a) if a Bidder withdraws its Bid during the period of Bid validity specified by the Bidder in the Letter of Bid, or any extension thereto provided by the Bidder; or
- (b) if the successful Bidder fails to:
 - (i) sign the Contract in accordance with ITB 45; or
 - (ii) furnish a Performance Security in accordance with ITB 46.

19.8. The Bid Security amount or Bid- Securing Declaration of a JV must be in the name of the JV that submits the Bid. If the JV has not been legally constituted into a legally enforceable JV at the time of Bidding, the Bid Security amount or Bid-Securing Declaration shall be in the names of all future members as named in the letter of intent referred to in ITB 4.1 and ITB 11.2.

19.9. If a Bid Securing Declaration is required **in the BDS**, pursuant to ITB 19.1, and

- (a) if a Bidder withdraws its Bid during the period of Bid validity specified by the Bidder on the Letter of Bid or any extension thereto provided by the Bidder; or
- (b) if the successful Bidder fails to: sign the Contract in accordance with ITB 45; or furnish a performance security in accordance with ITB 46;

the Borrower may execute the Bid-Securing Declaration, as provided for **in the BDS**, and declare the Bidder ineligible to be awarded a contract by the Purchaser for a period of time as stated **in the BDS**.

20. **Format and Signing of Bid**

20.1 The Bidder shall prepare one original of the documents comprising the Bid as described in ITB 11 and clearly mark it "ORIGINAL." Alternative Bids, if permitted in accordance with ITB 13, shall be clearly marked "ALTERNATIVE." 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.

20.2 Bidders shall mark as "CONFIDENTIAL" information in their Bids which is confidential to their business. This may include proprietary information, trade secrets, or commercial or financially sensitive information.

20.3 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 or

amendments have been made shall be signed or initialed by the person signing the Bid.

20.4 In case the Bidder is a JV, the Bid shall be signed by an authorized representative of the JV on behalf of the JV, and so as to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives.

20.5 Any inter-lineation, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Bid.

Submission and Opening of Bids

21. Sealing and Marking of Bids

21.1. The Bidder shall deliver the Bid in a single, sealed envelope (one-envelope Bidding process). Within the single envelope the Bidder shall place the following separate, sealed envelopes:

- (a) in an envelope marked "ORIGINAL", all documents comprising the Bid, as described in ITB 11; and
- (b) in an envelope marked "COPIES", all required copies of the Bid; and,
- (c) if alternative Bids are permitted in accordance with ITB 13, and if relevant:
 - i. in an envelope marked "ORIGINAL -ALTERNATIVE", the alternative Bid; and
 - ii. in the envelope marked "COPIES – ALTERNATIVE BID" all required copies of the alternative Bid.

21.2. The inner and outer envelopes, shall:

- (a) bear the name and address of the Bidder;
- (b) be addressed to the Purchaser in accordance with ITB 22.1;
- (c) bear the specific identification of this Bidding process indicated in ITB 1.1; and
- (d) bear a warning not to open before the time and date for Bid opening.

21.3 If all envelopes are not sealed and marked as required, the Purchaser will assume no responsibility for the misplacement or premature opening of the Bid.

22. Deadline for Submission of Bids

22.1. Bids must be received by the Purchaser at the address and no later than the date and time **specified in the BDS**. When so **specified in the BDS**,

Bidders shall have the option of submitting their Bids electronically. Bidders submitting Bids electronically shall follow the electronic Bid submission procedures **specified in the BDS**.

22.2. The Purchaser 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 Purchaser and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

23. Late Bids

23.1. The Purchaser shall not consider any Bid that arrives after the deadline for submission of Bids, in accordance with ITB 22. Any Bid received by the Purchaser after the deadline for submission of Bids shall be declared late, rejected, and returned unopened to the Bidder.

24. Withdrawal, Substitution, and Modification of Bids

24.1. 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 (the power of attorney) in accordance with ITB 20.3, (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 21 (except that withdrawal notices do not require copies), and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL," "SUBSTITUTION," or "MODIFICATION;" and
- (b) received by the Purchaser prior to the deadline prescribed for submission of Bids, in accordance with ITB 22.

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

24.3. No Bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of Bids and the expiration of the period of Bid validity specified by the Bidder on the Letter of Bid or any extension thereof.

25. Bid Opening

25.1. Except as in the cases specified in ITB 23 and ITB 24.2, the Purchaser shall, at the Bid opening, publicly open and read out all Bids received by the deadline at the date, time and place **specified in the BDS** in the presence of Bidders' designated representatives and anyone who chooses to attend Any specific electronic Bid opening procedures required if

electronic bidding is permitted in accordance with ITB 22.1, shall be as **specified in the BDS.**

- 25.2. 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. If the withdrawal envelope does not contain a copy of the "power of attorney" confirming the signature as a person duly authorized to sign on behalf of the Bidder, the corresponding Bid will be opened. 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.
- 25.3. 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.
- 25.4. Next, 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.
- 25.5. Next, all remaining envelopes shall be opened one at a time, reading out: the name of the Bidder and whether there is a modification; the total Bid Prices, per item, and/or per lot (contract) as applicable, including any discounts and alternative Bids; the presence or absence of a Bid Security, if required; and any other details as the Purchaser may consider appropriate.
- 25.6. Only Bids, alternative Bids and discounts that are opened and read out at Bid opening shall be considered further in the evaluation. The Letter of Bid and the Price Schedules are to be initialed by representatives of the Purchaser attending Bid opening in the manner **specified in the BDS.**
- 25.7. The Purchaser shall neither discuss the merits of any Bid nor reject any Bid (except for late Bids, in accordance with ITB 23.1).
- 25.8. The Purchaser shall prepare a record of the Bid opening that shall include, as a minimum:
 - (a) the name of the Bidder and whether there is a withdrawal, substitution, or modification;
 - (b) the Bid Price, per item, and/or per lot (contract) as applicable, including any discounts;
 - (c) any alternative Bids;

- (d) the presence or absence of a Bid Security or Bid-Securing Declaration, if one was required.

25.9. 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.

Evaluation and Comparison of Bids

26. Confidentiality

26.1 Information relating to the evaluation of Bids and recommendation of contract award, shall not be disclosed to Bidders or any other persons not officially concerned with the Bidding process until the information on Intention to Award the Contract is transmitted to all Bidders in accordance with ITB 40.

26.2 Any effort by a Bidder to influence the Purchaser in the evaluation or contract award decisions may result in the rejection of its Bid.

26.3 Notwithstanding ITB 26.2, from the time of Bid opening to the time of Contract Award, if any Bidder wishes to contact the Purchaser on any matter related to the Bidding process, it should do so in writing.

27. Preliminary Examination of Bids

27.1 Prior to the detailed evaluation, pursuant to ITB 35, the Purchaser will conduct preliminary examination of all bids that have been received by the deadline for bid submission and opened at public bid opening as the first step towards determination of their substantial responsiveness to the bidding document. The Purchaser's determination of a bid's responsiveness is to be based on the contents of the bid itself, as defined in ITB 11 without recourse to extrinsic evidence.

27.2 The Purchaser will verify and examine bids to determine whether they are complete, properly signed to bind the bidder, meet eligibility requirements of bidders, goods and services, bidders have no conflict of interest and have provided required bid validity, bid security or bid securing declaration, as required and other essential documents to complete the evaluation, and whether the bids are generally in order. Subject to ITB 28, Bids failing to meet the above requirements shall be rejected and not retained for further review.

28. Clarification of Bids

28.1 To assist in the examination, evaluation, comparison of the Bids, and qualification of the Bidders, the Purchaser may, at its discretion, ask any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder in respect to its Bid and that is not in response to a request by the

Purchaser shall not be considered. The Purchaser's request for clarification and the response shall be in writing. No change, including any voluntary increase or decrease, 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 Purchaser in the Evaluation of the Bids, in accordance with ITB 32

28.2 If a Bidder does not provide clarifications of its Bid by the date and time set in the Purchaser's request for clarification, its Bid may be rejected.

29. **Deviations, Reservations, and Omissions**

29.1 During the evaluation of Bids, the following definitions apply:

- (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.

30. **Determination of Responsiveness**

30.1 Following rejection of Bids if any, pursuant to ITB 27 and ITB 28, as the next step, the remaining Bids will be further reviewed in detail to determine their substantial responsiveness. The Purchaser's determination of a Bid's responsiveness is to be based on the contents of the Bid itself, as defined in ITB 11.

30.2 A substantially responsive Bid is one that meets the requirements of the bidding document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:

- (a) if accepted, would:
 - (i) affect in any substantial way the scope, quality, or performance of the Goods and Related Services specified in the Contract; or
 - (ii) limit in any substantial way, inconsistent with the bidding document, the Purchaser's rights or the Bidder's obligations under the Contract; or
- (b) if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive Bids.

30.3 The Purchaser shall examine the technical aspects of the Bid in accordance with ITB 16 and ITB 17, ITB 30, ITB 31, the BDS if applicable, and Section III Evaluation and Qualification Criteria in particular, to confirm that all requirements of Section VII, Schedule of Requirements and

technical specifications have been met without any material deviation or reservation, or omission. To this end, in consideration of materiality of any deviations, reservations or omissions, Bids failing to meet the mandatory technical requirements or minimum pass-fail technical criteria or failing to substantially meet any other technical requirements of the bidding document will be rejected.

- 30.4 The Purchaser shall similarly examine the commercial aspects of the bids including any deviations, other than technical specifications, submitted in response to the provisions of the bidding document, to determine if they conform to the terms and conditions of the draft contract and other documents included in the bidding document without any material deviation, reservation or omission, and establishment of materiality in such aspects will similarly risk rejection of the Bids.
- 30.5 If a Bid is not substantially responsive to the requirements of the bidding document, it shall be rejected by the Purchaser and not subsequently be made responsive by correction of the material deviation, reservation, or omission. All other bids determined substantially responsive will be retained for further evaluation.

31. **Nonconformities, Errors and Omissions**

- 31.1 Provided that a Bid is substantially responsive, the Purchaser may waive any nonconformities in the Bid.
- 31.2 Provided that a Bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the Bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.
- 31.3 Provided that a Bid is substantially responsive, the Purchaser shall rectify quantifiable nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component, and costs associated, if any, with non-material deviations, reservations and omissions to the requirements of the bidding documents in the manner **specified in the BDS.**

32. **Correction of Arithmetical Errors**

- 32.1 Provided that the Bid is substantially responsive, the Purchaser shall correct arithmetical errors on the following basis:
- (a) if there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected,

unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected;

- (b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
- (c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

32.2 Bidders shall be requested to accept correction of arithmetical errors. Failure to accept the correction in accordance with ITB 32.1, shall result in the rejection of the Bid.

33. Conversion to Single Currency

33.1 For evaluation and comparison purposes, the currency(ies) of the Bid shall be converted in a single currency as **specified in the BDS**.

34. Margin of Preference

34.1 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 Bank's Procurement Framework.

35. Evaluation of Bids

35.1 The Purchaser shall use the criteria and methodologies listed in this ITB and Section III, Evaluation and Qualification criteria. No other evaluation criteria or methodologies shall be permitted. By applying the criteria and methodologies, the Purchaser shall determine the successful Bid or Bids which has/have been determined to:

- (a) be substantially responsive to the bidding document;
- (b) offer the lowest evaluated total cost to the Purchaser for all items to be procured based on either a single Contract or all multiple Contracts combined, as the case may be, in accordance with the ITB 14.6 inviting bid prices and discounts, and provisions made in the Bidding Document for evaluation of bids and award of contract (s); and

- (c) be offered by Bidder or Bidders that substantially meet the qualification criteria applicable for Contract or Contracts for which they are selected.

35.2 To evaluate a Bid, the Purchaser shall consider the following factors with respect to the Base Bid and Alternative Bid (s) (if the latter is permitted in the BDS), in accordance with the criteria and methodology described in Section III—Evaluation and Qualification Criteria:

- (a) evaluation will be done for Items or Lots (contracts) or combination of Lots (Packages), as **specified in the BDS**; and the Bid Price as quoted in accordance with ITB 14;
- (b) price adjustment for correction of arithmetic errors in accordance with ITB 32.1;
- (c) price adjustment due to discounts offered in accordance with ITB 12.1, ITB 14.4, ITB 14.6 and ITB 14.7;
- (d) converting the amount resulting from applying (a) to (c) above, if relevant, to a single currency in accordance with ITB 33;
- (e) price adjustment due to quantifiable nonmaterial nonconformities in accordance with ITB 31.3;
- (f) the additional evaluation factors **specified in the BDS** if any, and Section III, Evaluation and Qualification Criteria; and
- (g) price adjustment due to application of Margin of Preference, if applicable, as per ITB 34, BDS and Section III, Evaluation and Qualification Criteria.

35.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in Bid evaluation.

35.4. If this bidding document allows Bidders to quote separate prices for different lots (contracts), the methodology to determine the lowest evaluated cost of the lot (contract) combinations, including any discounts offered in the Letter of Bid, is specified in Section III, Evaluation and Qualification Criteria.

35.5 The Purchaser's evaluation of a Bid will exclude and not take into account:

- (a) in the case of Goods manufactured in the Purchaser's Country, sales and other similar taxes, which will be payable on the goods if a contract is awarded to the Bidder; and
- (b) in the case of Goods manufactured outside the Purchaser's Country, already imported or to be imported, customs duties and other import taxes levied on the imported Good, sales and other similar taxes,

which will be payable on the Goods if the contract is awarded to the Bidder.

35.6 The Purchaser's evaluation of a Bid may require the consideration of other factors, in addition to the Bid Price quoted in accordance with ITB 14. These factors may be related to the characteristics, performance, and terms and conditions of purchase of the Goods and Related Services. The effect of the factors selected, if any, shall be expressed in monetary terms to facilitate comparison of Bids, unless otherwise **specified in the BDS** from amongst those set out in Section III, Evaluation and Qualification Criteria. The criteria and methodologies to be used shall be as specified in ITB 35.2(f).

36. Comparison of Bids

36.1 The Purchaser shall compare the evaluated costs of all substantially responsive Bids established in accordance with ITB 35.2 to determine the Bid that has the lowest evaluated cost. The comparison shall be on the basis of CIP (place of final destination) prices for goods to be imported and prices for delivery to final destination for goods already imported less the custom duties and other import taxes already paid or to be paid on such goods (need to be supported with documentary evidence) and EXW prices, plus cost of inland transportation and insurance to place of final destination, for goods manufactured within the Borrower's country, together with prices for any required installation, training, commissioning and other services as per price schedules included in Section IV. The evaluation of prices shall not take into account custom duties and other taxes levied on imported goods (to be imported or already imported) and sales and similar taxes levied in connection with the sale or delivery of goods.

37. Qualification of the Bidder

37.1 The Purchaser shall determine, to its satisfaction, whether the eligible Bidder or Bidders that is/are selected for Items, Lots, Packages and/or their combinations as having submitted the lowest evaluated cost and substantially responsive Bid (s) substantially meet the respective minimum qualifying criteria specified in Section III, Evaluation and Qualification Criteria. To this end, the Purchaser will determine for which Items, Lots and Packages, and their combinations, as the case may be, for which Bidder submitted bid, it substantially meets the respective minimum qualification criteria.

37.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB 17. The determination shall not take into consideration the qualifications of other firms such as the Bidder's subsidiaries, parent entities, affiliates, subcontractors (other than

specialized subcontractors if permitted in the bidding document), or any other firm(s) different from the Bidder.

37.3 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 Purchaser shall proceed to the Bidder or Bidders who offered the substantially responsive Bid (s) with the next lowest evaluated cost to make a similar determination of that Bidder's qualifications to perform satisfactorily.

37.4 The Purchaser reserves the right to waive minor deviations from the qualification criteria if they do not materially affect the technical capability and financial resources of the Bidder to perform the Contract or combination of Contracts.

38. Purchaser's Right to Accept Any Bid, and to Reject Any or All Bids

38.1 The Purchaser 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.

39. Standstill Period

39.1 The Contract shall not be awarded earlier than the expiry of the Standstill Period. The Standstill Period shall be ten (10) Business Days unless extended in accordance with ITB 44. The Standstill Period starts the day after the date the Purchaser has transmitted to each Bidder the Notification of Intention to Award the Contract. Where only one Bid is submitted, or if this contract is in response to an emergency situation recognized by the Bank, the Standstill Period shall not apply.

40. Notification of Intention to Award

40.1 The Purchaser shall send to each Bidder the Notification of Intention to Award the Contract to the successful Bidder. The Notification of Intention to Award shall contain, at a minimum, the following information:

- (a) the name and address of the Bidder submitting the successful Bid;
- (b) the Contract price of the successful Bid;
- (c) the names of all Bidders who submitted Bids, and their Bid prices as readout, and as evaluated;
- (d) a statement of the reason(s) the Bid (of the unsuccessful Bidder to whom the notification is addressed) was unsuccessful, unless the price information in c) above already reveals the reason;
- (e) the expiry date of the Standstill Period;
- (f) instructions on how to request a debriefing and/or submit a complaint during the standstill period.

Award of Contract

41. Award Criteria

41.1 Subject to ITB 38 and consistent with determination of successful Bid or Bids as per ITB 35, and unless otherwise **specified in the BDS**:

- i) For evaluation based on individual items as per ITB 1.1, 14.6 and 35.2 (a)

The Purchaser shall award the Contract or Contracts to the Selected Bidder or Bidders that have offered bids substantially responsive to the Bidding Document and have been determined successful for one or more items, evaluated bid prices of which shall result in the lowest evaluated cost to the Purchaser for all items combined provided further that the selected Bidder or Bidders substantially meet the required qualifying criteria for item or items for which they are successful.

- ii) For evaluation based on Lots or Packages as per ITB 1.1, 14.6 and 35.2 (a)

Same as i) above except replace “item” or “items” wherever appearing with “Lot” and “Lots”, or “Package” and “Packages” as the case may be.

42. Purchaser's Right to Vary Quantities at Time of Award

42.1 At the time the Contract is awarded, the Purchaser reserves the right to increase or decrease the quantity of Goods and Related Services originally specified in Section VII, Schedule of Requirements, provided this does not exceed the percentages **specified in the BDS**, and without any change in the unit prices or other terms and conditions of the Bid and the bidding document.

43. Notification of Award

43.1 Prior to the expiration of the Bid Validity Period and upon expiry of the Standstill Period, specified in ITB 39.1 or any extension thereof, and upon satisfactorily addressing any complaint that has been filed within the Standstill Period, the Purchaser shall notify the successful Bidder, in writing, that its Bid has been accepted. The notification of award (hereinafter and in the Contract Forms called the “Letter of Acceptance”) shall specify the sum that the Purchaser will pay the Supplier in consideration of the execution of the Contract (hereinafter and in the Conditions of Contract and Contract Forms called “the Contract Price”).

- 43.2 Within ten (10) Business Days after the date of transmission of the Letter of Acceptance, the Purchaser shall publish the Contract Award Notice which shall contain, at a minimum, the following information:
- (a) name and address of the Purchaser;
 - (b) name and reference number of the contract being awarded, and the selection method used;
 - (c) names of all Bidders that submitted Bids, and their Bid prices as read out at Bid opening, and as evaluated;
 - (d) names of all Bidders whose Bids were rejected either as nonresponsive or as not meeting qualification criteria, or were not evaluated, with the reasons therefor;
 - (e) the name of the successful Bidder, the final total contract price, the contract duration and a summary of its scope; and
 - (f) successful Bidder's Beneficial Ownership Disclosure Form, if specified in BDS ITB 45.1.
- 43.3 The Contract Award Notice shall be published on the Purchaser's website with free access if available, or in at least one newspaper of national circulation in the Purchaser's Country, or in the official gazette. The Purchaser shall also publish the contract award notice on the Bank's website and in UNDB online.
- 43.4 Until a formal Contract is prepared and executed, the Letter of Acceptance shall constitute a binding Contract.

44. **Debriefing by the Purchaser**

- 44.1 On receipt of the Purchaser's Notification of Intention to Award referred to in ITB 40.1, an unsuccessful Bidder has three (3) Business Days to make a written request to the Purchaser for a debriefing. The Purchaser shall provide a debriefing to all unsuccessful Bidders whose request is received within this deadline.
- 44.2 Where a request for debriefing is received within the deadline, the Purchaser shall provide a debriefing within five (5) Business Days, unless the Purchaser decides, for justifiable reasons, to provide the debriefing outside this timeframe. In that case, the standstill period shall automatically be extended until five (5) Business Days after such debriefing is provided. If more than one debriefing is so delayed, the standstill period shall not end earlier than five (5) Business Days after the last debriefing takes place. The Purchaser shall promptly inform, by the quickest means available, all Bidders of the extended standstill period
- 44.3 Where a request for debriefing is received by the Purchaser later than the three (3)-Business Day deadline, the Purchaser should provide the debriefing as soon as practicable, and normally no later than fifteen (15)

Business Days from the date of publication of Public Notice of Award of contract. Requests for debriefing received outside the three (3)-day deadline shall not lead to extension of the standstill period.

- 44.4 Debriefings of unsuccessful Bidders may be done in writing or verbally. The Bidders shall bear their own costs of attending such a debriefing meeting.

45. **Signing of Contract**

- 45.1 The Purchaser shall send to the successful Bidder the Letter of Acceptance including the Contract Agreement, and, if **specified in the BDS**, a request to submit the Beneficial Ownership Disclosure Form providing additional information on its beneficial ownership. The Beneficial Ownership Disclosure Form, if so requested, shall be submitted within eight (8) Business Days of receiving this request.
- 45.2 The successful Bidder shall sign, date and return to the Purchaser, the Contract Agreement within twenty-eight (28) days of its receipt.
- 45.3 Notwithstanding ITB 45.2 above, in case signing of the Contract Agreement is prevented by any export restrictions attributable to the Purchaser, to the country of the Purchaser, or to the use of the products/goods, systems or services to be supplied, where such export restrictions arise from trade regulations from a country supplying those products/goods, systems or services, the Bidder shall not be bound by its Bid, always provided however, that the Bidder can demonstrate to the satisfaction of the Purchaser and of the Bank that signing of the Contract Agreement has not been prevented by any lack of diligence on the part of the Bidder in completing any formalities, including applying for permits, authorizations and licenses necessary for the export of the products/goods, systems or services under the terms of the Contract.

46. **Performance Security**

- 46.1 Within twenty-eight (28) days of the receipt of Letter of Acceptance from the Purchaser, the successful Bidder, if required, shall furnish the Performance Security in accordance with the GCC 18, using for that purpose the Performance Security Form included in Section X, Contract Forms, or another Form acceptable to the Purchaser. 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 Purchaser. A foreign institution providing a bond shall have a correspondent financial institution located in the Purchaser's Country, unless the Purchaser has agreed in writing that a correspondent financial institution is not required.
- 46.2 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.

In that event the Purchaser may award the Contract to the Bidder or Bidders offering the next Lowest Evaluated Cost to the Purchaser as per the bid Evaluation and award criteria.

47. **Procurement Related Complaint**

47.1 The procedures for making a Procurement-related Complaint are as **specified in the BDS.**

Section II - Bid Data Sheet (BDS)

The following specific data for the goods to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in the ITB.

ITB Reference	A. General
ITB 1.1	<p>The reference number of the Invitation for Bids (IFB) is: OCBI/TVETE PHASE III/EQUIP/47/24-25</p> <p>The Purchaser is: Ministry of Education, State department for Vocational and Technical Training</p> <p>The name of the IFB is: Open Competitive Bidding (International) (OCBI) Tender for Lot 1 - Supply, Installation, Calibration, Commissioning and Training on the use and Maintenance of Building and Civil Engineering Training Equipment</p> <p>The number and identification of combination of packages (lots) comprising this IFB is: OCBI/TVETE PHASE III/EQUIP/47/24-25</p> <p>Lot 1 - Tender for Supply, Installation, Calibration, Commissioning and Training on the use and Maintenance of Building and Civil Engineering Training Equipment to Siaya Institute of Technology – Siaya County</p>
ITB 2.1	<p>The Borrower is: The Government of Kenya, Ministry of Education, State department for Vocational and Technical Training</p> <p>Loan or Financing Agreement amount: USD 43.14 Million</p> <p>The Specific Bank financing institution is: ADF</p> <p>The name of the Project is: Support to Technical and Vocational Education and Training and Entrepreneurship (TVETE) – (GOK/AfDB TVET PHASE III Project</p>
ITB 4.1 (a)	<p>i) The firms in a Joint Venture, Consortium or Association (JV) shall be jointly and severally liable.</p>

ITB 4.5	A list of debarred firms and individuals is available on the Bank's external website: https://www.afdb.org/en/projects-operations/debarment-and-sanctions-procedures
	B. Contents of Bidding Document
ITB 7.1	<p>For Clarification of Bid purposes only, the Purchaser's address is:</p> <p>The Project Coordinator Support to Technical and Vocational Education and Training and Entrepreneurship (TVETE) Project (GOK/AfDB TVET PHASE III Project) Teleposta Towers, Kenyatta Avenue Road Wing C, 24TH Floor Room 2412, P.O Box 9583-00200 Telephone: +254 020 318581 Tel/Fax: 254 020 2251991 procurement.afdb@education.go.ke</p> <p>Requests for clarification should be received by the Purchaser no later than: 10 days prior to the deadline for submission of bids</p>
	C. Preparation of Bids
ITB 10.1	<p>The language of the Bid is: English</p> <p>All correspondence exchange shall be in English language.</p>
ITB 11.1 (m)	<p>The Bidder shall submit the following additional documents in its Bid:</p> <ol style="list-style-type: none"> (1) Power of Attorney (2) Valid Registration certificates of the firm or firms in case of joint venture (3) Original Bid Security of Kenya Shillings Two Million Only (Kshs. 2,000,000.00) or its equivalent in any freely convertible currency from a reputable bank in Kenya or Foreign Bank Confirmed by Kenyan Bank valid for 28 days beyond the Tender Validity period. (4) Dully filled and signed letter of bid

	<p>(5) Joint Venture consortium/association be properly signed where necessary</p> <p>(6) Valid Tax Compliance Certificates or equivalent for international firms</p> <p>(7) Manufacturer's Authorization (s)</p> <p>(8) Brochures and catalogues for each item specifications</p> <p>(9) Guarantee of availability of spares and after sale services</p> <p>(10) Bid validity period of at least 120 days</p> <p>(11) Submit the required number of copies i.e. one (1) original and two (2) copies</p> <p>(12) Statement of compliance to specifications for each item</p> <p>(13) Comprehensive training plan on use and maintenance of the equipment</p>
ITB 13.1	Alternative Bids shall not be considered.
ITB 14.5	The prices quoted by the Bidder shall not be subject to adjustment during the performance of the Contract.
ITB 14.6	Bids are invited for Lots (combination of packages): Bidders should bid for the whole lot. Bids shall be evaluated, and contract(s) awarded per lot.
ITB 14.6	<p>Bids are invited lot-wise, and the following shall apply:</p> <p>i) Prices shall be quoted for each lot, package by package and shall correspond at least to 100% percent of the items specified for each package</p> <p>ii) Prices quoted for each item in a package shall correspond at least to 100% percent of the quantities specified for the respective item of a lot.</p> <p>iii) Prices shall be quoted for each package and shall correspond to at least 100% percent of packages. <i>Each package shall comply with stipulations in (i) and (ii) above with respect to minimum percent of items and minimum percent of quantities.</i></p>

ITB 14.8	The Incoterms edition is: Incoterms 2010 published by the International Chamber of commerce
ITB 14.9 (b)(i)	Place of destination: CIP (Siaya Institute of Technology – Siaya County)
ITB 14.9 (a)(iii), (b)(ii) and (c)(v)	Final Destination (Project Site): CIP (Siaya Institute of Technology – Siaya County)
ITB 15.1	The Bidder is not required to quote in the currency of the Purchaser's Country the portion of the Bid price that corresponds to expenditures incurred in that currency.
ITB 16.4	Period of time the Goods are expected to be functioning (for the purpose of spare parts): Two (2) Years
ITB 17.2 (a)	Manufacturer's authorization is: Required
ITB 17.2 (b)	Representation by an Agent for after sales service is: Required
ITB 18.1	The Bid validity period shall be 120 days.
ITB 19.1	A Bid Security amount shall be required. A Bid-Securing Declaration shall not be required. This must be accompanied by a bid security of Kenya Shillings Two Million (KES 2,000, 000) or its equivalent in any freely convertible currency . The bid security shall be in the form of a bank guarantee and must be from a reputable commercial bank supervised by the Central bank of Kenya.
ITB 19.3 (d)	Other types of acceptable securities: None
ITB 20.1	In addition to the original of the Bid, the number of copies is: Two (2) Copies

ITB 20.3	<p>The written confirmation of authorization to sign on behalf of the Bidder shall consist of: Power of Attorney</p> <p>(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; and</p> <p>(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 JVCA is awarded the Contract, during contract execution.”]</p>
	D. Submission and Opening of Bids
ITB 22.1	<p>For <u>Bid submission purposes</u> only, the Purchaser’s address is:</p> <p>Ministry of Education- State Department for Technical, Vocational Education and Training Directorate of Vocational, Technical Education Teleposta Towers, Kenyatta Avenue, 24th Floor, Room 2412 P.O. Box 9583 – 00200 Nairobi Telephone: +254 020 318581 Tel/Fax: 254 020 2251991 NAIROBI, KENYA procurement.afdb@education.go.ke</p> <p>The deadline for Bid submission is:</p> <p>Date: 7 August 2025</p> <p>Time: 10.00 am Local Time</p> <p>Bidders shall not have the option of submitting their Bids electronically.</p>
ITB 25.1	<p>The Bid opening shall take place at:</p> <p>Ministry of Education- State Department for Technical, Vocational Education and Training Directorate of Vocational, Technical Education Teleposta Towers, Kenyatta Avenue,</p>

	<p>24th Floor, Room 2412 P.O. Box 9583 – 00200 Nairobi Telephone: +254 020 318581 Tel/Fax: 254 020 2251991 NAIROBI, KENYA</p> <p>Date: 7 August 2025</p> <p>Time: 10.00 am Local Time</p>
ITB 25.6	The Letter of Bid and Price Schedules of the original bid shall be initialed by at least Three (3) representatives of the Purchaser conducting Bid opening.
	E. Evaluation and Comparison of Bids
ITB 31.3	The adjustments with respect to a missing or non-conforming item or component, and costs associated, if any, with non-material deviations, reservations or omissions to the requirements of the bidding document shall be based on the highest price of the item or component and cost, if any, of non-material deviations, reservations or omissions as quoted in or derived from other substantially responsive Bids unless any other specific evaluation criteria has been provided elsewhere in the bidding document for such adjustments in which case the latter shall be applied. If the price or cost of any of the above cannot be derived from the price or cost of other substantially responsive Bids, the Purchaser shall use its best estimate based on its own judgment, past experience or market search, as considered appropriate.
ITB 33.1	<p>The currency that shall be used for Bid evaluation and comparison purposes to convert at the selling exchange rate all Bid prices expressed in various currencies into a single currency is: KENYA SHILLING</p> <p>The source of exchange rate shall be: THE CENTRAL BANK OF KENYA</p> <p>The date for the exchange rate shall be: The deadline for submission of bids</p>
ITB 34.1	<p>A margin of domestic preference shall not apply.</p> <p>A margin of regional preference shall not apply</p>

ITB 35.2(a)	<p>Evaluation shall be done for combination of Packages consistent with ITB 1.1 and ITB14.6]</p> <p>Note:</p> <p><i>Bids will be evaluated, and Contracts awarded for the whole lot (combination of packages), taking into account all unconditional discounts including discounts offered for combination of Packages, if any. Contracts will be awarded to the Bidder offering the lowest evaluated cost to the Purchaser for the whole lot (all packages combined)</i></p> <p><i>If a Price Schedule shows items listed but not priced, their prices shall be assumed to be included in the prices of other items. An item not listed in the Price Schedule shall be assumed to be not included in the Bid, and provided that the Bid is substantially responsive, the highest price of the item quoted by substantially responsive Bidders will be added to the Bid price and the equivalent total cost of the Bid so determined will be used for price comparison.]</i></p>
ITB 35.6	<p>The adjustments shall be determined using the following criteria, from amongst those set out in Section III, Evaluation and Qualification Criteria: <i>[refer to Section III, Evaluation and Qualification Criteria; insert complementary details if necessary]</i></p> <ul style="list-style-type: none"> (a) Deviation in Delivery schedule: NO (b) Deviation in payment schedule: NO (c) The cost of major replacement components, mandatory spare parts, and service: NO (d) The availability in the Purchaser's Country of spare parts and after-sales services for the equipment offered in the Bid: NO (e) Life cycle costs: the costs during the life of the goods or equipment NO (f) The performance and productivity of the equipment offered; NO
F. Award of Contract	
ITB 42	<p>The maximum percentage by which quantities may be increased is: 15%</p>

	The maximum percentage by which quantities may be decreased is: 15%
ITB 45. 1	The successful Bidder shall submit the Beneficial Ownership Disclosure Form.
ITB 47.1	<p>The procedures for making a Procurement-related Complaint are detailed in the Part B of the Operations Procurement Manual under the Procurement Framework of the African Development Bank. If a Bidder wishes to make a Procurement-related Complaint, the Bidder shall submit its complaint following these procedures to the Purchaser, in writing (by the quickest means available, such as by email in accordance with the following:</p> <p>Attention: The Project Coordinator Support to Technical and Vocational Education and Training and Entrepreneurship (TVETE) Project – (GOK/AfDB TVET PHASE III PROJECT) Teleposta Towers, Kenyatta Avenue Road Wing C, 24th Floor Room 2409, P.O Box 9583-00200 NAIROBI- KENYA Electronic mail address: procurement.afdb@education.go.ke</p> <p>In summary, a Procurement-related Complaint may challenge any of the following:</p> <ol style="list-style-type: none"> 1. the terms of the Bidding Documents; 2. the purchaser's decision to exclude a bidder from the procurement process prior to the award of contract; and 3. the Purchaser's decision to award the contract. <p>The Bank's Procurement Framework stipulates that bidders may send copies of their communications with the Borrowers to the Bank or write to the Bank directly when, Borrowers do not respond promptly, any questions on any issues regarding the implementation of Bank funded projects, or when the communication is a complaint against the Borrower. In this regard, if a bidder wishes to protest against a decision made by a Borrower or the Bank with regards to the procurement process or wishes to inform the Bank that the Bank's procurement rules and/or provisions of the bidding documents have not been complied with, an email can be sent to the following address:</p>

	Email: procurementcomplaints@afdb.org
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Section III - Evaluation and Qualification Criteria

This Section contains the criteria that the Purchaser shall use to evaluate a Bid and qualify the Bidders. No other factors, methods or criteria shall be used other than specified in this bidding document. Wherever a Bidder is required to state a monetary amount, Bidders should indicate the USD equivalent using the rate of exchange determined as follows:

- For annual 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.
- Value of single contract - Exchange rate prevailing on the date of the contract.

Exchange rates shall be taken from the publicly available source identified in the ITB 33.1. Any error in determining the exchange rates in the Bid may be corrected by the Purchaser.

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I. Margin of Preference (ITB 34)- Not Applicable

II. Successful Bid or Bids

The Purchaser shall apply the criteria and methodologies listed in this Section to evaluate Bids and determine the successful Bid or Bids which has/have been determined to:

- (a) be substantially responsive to the bidding document;
- (b) offer the lowest evaluated total cost to the Purchaser for all items to be procured based on either a single Contract or all multiple Contracts combined, as the case may be, in accordance with the ITB 14.6 inviting bid prices and discounts, and provisions made in the Bidding Document for evaluation of bids and award of contract (s); and
- (c) be offered by Bidder or Bidders that substantially meet the qualification criteria applicable for Contract or Contracts for which they are selected.

1. Evaluation: Technical Bid and Commercial Conditions (ITB 30.3 and ITB 30.4)

1.1 Evaluation of Technical Bid (Reference ITB 16 and ITB 30.3): The Purchaser shall evaluate the Technical Bid to determine compliance with the Purchaser's requirements under Section VII 'Schedule of Requirement' and whether the Bids are substantially responsive to the Technical Specifications and other Requirements.

1.2 Evaluation of Commercial Terms and Conditions of the Bid (Reference ITB 30.4): The Purchaser shall determine whether the Bids are substantially responsive to the Commercial and Contractual Terms and Conditions. **[Bidder shall provide form titled "Commercial Terms and Conditions" as per Section IV]**

2. Evaluation (ITB 35.6)

2.1. Evaluation Criteria (Other Factors) (ITB 35.6)

The Purchaser's evaluation of a Bid may take into account, in addition to the Bid Price quoted in accordance with ITB 14.9, one or more of the following factors as specified in ITB 35.2(f) and in BDS referring to ITB 35.6, using the following criteria and methodologies.

- (a) Delivery schedule. (As per Incoterms **specified in the BDS**)

The Goods specified in the List of Goods are required to be delivered within the acceptable time range (after the earliest and

*before the final date, both dates inclusive) specified in Section VII, Schedule of Requirements. No credit will be given to deliveries before the earliest date, and Bids offering delivery after the final date shall be treated as non-responsive. Within this acceptable period, an adjustment of **0.5% per week of delay**, will be added, for evaluation purposes only, to the Bid price of Bids offering deliveries later than the “Earliest Delivery Date” specified in Section VII, Schedule of Requirements.*

(b) Deviation in payment schedule.

(i) *Bidders shall state their Bid price for the payment schedule outlined in the Special Conditions of Contract (SCC). Bids shall be evaluated on the basis of this base price.*

(c) Cost of major replacement components, mandatory spare parts, and service.

*Bidder shall provide along with its Bid, the list of recommended spare parts for Goods offered indicating for each item of spare part the recommended quantity and unit, and total CIP final destination prices required during the initial period of operation **specified in the BDS** 16.4. The cost of such spare parts will be taken into account for bid evaluation. The Bidder, if successful, undertakes to supply free of cost to the Purchaser any item and quantity not included in the above list which as per Purchaser's determination would be required during the above period of operation specified*

(d) Life Cycle Costs (LCC): **Not Applicable**

(f) Performance and productivity of the equipment: **Not Applicable**

(g) Specific additional criteria: **Not Applicable**

2.2. Evaluation of Multiple Contracts (ITB 35.4)

- a) Determination of substantial responsiveness of Bids and Qualifications of Bidders shall strictly follow the criteria and procedures described in Sections F, and G, of the ITB, Bid data Sheet and this Section III, 'Evaluation and Qualification Criteria'.
- b) Bids invited based on an item-wise approach, lot or package-wise shall be evaluated and the relevant contract shall be awarded based on each item, each lot or each package, as applicable. Contract(s) shall be awarded to the bidder or bidders offering substantially responsive Bid(s) and the lowest evaluated cost to the Purchaser for combined

Items, lots, or packages, as the case may be, after considering all possible combinations, and discounts offered subject to the selected bidder(s) substantially meeting the required Qualification Criteria for which they are selected (Ref: Section III, Qualification Requirements, including ITB 33, ITB 35 to ITB 40 and ITB 44). For each of the above approaches, a contract may contain more than one item, lot, or package, if a Bidder is determined successful accordingly.

- c) For each of the above approaches the determination of the lowest cost to the Purchaser will be based on the following:
- (i) Each and every item quoted in a bid for any approach of bidding and award of contract (Item, or lot or package-wise). shall be classified in one of the three Groups, namely, A, B and C as quoted in the bid;
 - (ii) The lowest evaluated cost of an item shall be determined by application of all criteria specified under sections, ITB, BDS and Section III as mentioned above in para (a) taking into account discounts offered for combined items (provided the Bidder (s) selected substantially meet the qualification criteria for combined items), and application of margin of domestic preference, if applicable. If an item in a bid qualifies for a margin of domestic preference, the evaluated price of such item in Group C will account for the applicable margin of preference over the CIP price for comparison with other bids in Group A; and
 - (iii) The lowest evaluated cost of a lot or a package as the case may be will be the sum of the evaluated cost of all Individual items in the lot or package, as applicable, determined as per para (c) (ii) above, taking into account discounts offered for combined lots or package, as applicable (provided that the Bidder (s) selected substantially meet the qualification criteria for combined lots or packages, as applicable).

2.3. Alternative Bids (ITB 13.1) Not Applicable

3. Qualification of Bidders (ITB 37)

[N.B. This SBD for Procurement of Goods assumes that no Prequalification has taken place before bidding. However, if a Prequalification process is undertaken, the Qualification Criteria stipulated in this Section III, Evaluation and Qualification Criteria must be updated to ensure that the Bidder and any Subcontractors shall meet or continue to meet the Criteria used at the time of Prequalification.]

3.1 Qualification Criteria (ITB 37.1)

After determining the substantially responsive Bid which offers the lowest-evaluated cost in accordance with ITB 35, the Purchaser shall carry out the post-qualification of the Bidder in accordance with ITB 37, using only the requirements specified. Requirements not included in the text below shall not be used in the evaluation of the Bidder's qualifications. The minimum qualification requirements for multiple contracts will be the sum of the minimum requirements for respective individual contracts, unless otherwise specified.

(I) If the Bidder is a manufacturer:

(i) Financial Capability:

The Bidder shall furnish documentary evidence that it meets the following financial requirement(s):

*(a): (i) The audited balance sheets or, if not required by the laws of the Bidder's country, other financial or Bank statements acceptable to the Purchaser, for the last **Three [3] years**, namely years **2022, 2023 and 2024** shall be submitted demonstrating the current soundness of the Bidder's financial position and availability of adequate financial resources to perform the contract. In case of JV, each member of the JV shall furnish its own financial statement as required above. Refer to Form FIN – 3.1 to provide the required information.]*

*(b): (iii) For Bid evaluation to be performed package-wise as per ITB 1.1, ITB 14.6, 14.7 and ITB 35.2 (a): The Bidder shall demonstrate the minimum average annual financial turnover of **3 times the total bid price of all items for which bid has been submitted** as certified payments received by the Bidder since **January 1, 2022 to December 31, 2024** for contracts in progress and completed for all Goods manufactured and supplied divided by **Three (3)** number of years and part thereof elapsed since **January 1, 2022 to December 31, 2024**. If the average annual turnover amount is less than the required turnover amount for all packages for which the Bidder is successful, limitation will be placed on the number of item(s) that will be awarded to the Bidder and Purchaser will decide which item or items will be awarded based on the most economical combination that will result in the lowest evaluated cost to the Purchaser for all packages. In case the Bidder is a JV, average annual turnover of all members to the JV shall be added to determine the turnover of the Bidder. Refer to Form FIN—3.2 to provide the required information.]*

(ii) Experience and Technical Capacity

The Bidder shall furnish documentary evidence to demonstrate that it meets the following experience requirement(s). In case the Bidder is a JV, experience and demonstrated technical capacity of only the JV shall be taken into account and not of individual members nor their individual experience/capacity will be aggregated. Wherever the words "Similar Goods" have been used it includes upgrades, latest and improved versions or models of similar specifications and technology. Refer to Form Exp-1 to provide the required information.

*(a) The Bidder shall be manufacturing similar Goods since **January 1, 2022 to December 31, 2024***

*(b) The Bidder shall furnish documentary evidence to demonstrate successful completion of at least Three (3) contracts of similar Goods since **January 1, 2022 to December 31, 2024** involving **total** supply of at least 70% of required quantity of each package*

(iii) Documentary Evidence of Usage of Goods (When appropriate)

The Bidder shall furnish documentary evidence to demonstrate that the Goods it offers meet the following usage requirement:

*The Bidder shall furnish documentary evidence satisfactory to the Purchaser to demonstrate that similar Goods as offered in the Bid have been in successful use or operation since **January 1, 2022 to December 31, 2024**. If the Bidder is a JV, the evidence of demonstrated usage of Goods supplied in the past shall be in the name of the JV.] Refer to Form Exp-1 to provide the required information.*

(II) If the Bidder is not a manufacturer:

If a Bidder is not a manufacturer, but is offering the Goods on behalf of the Manufacturer under Manufacturer's Authorization Form (Section IV, Bidding Forms), the bidder shall demonstrate the qualifications shown below. *If the Bidder is a JV, past performance contracts shall be in the name of the JV.* Refer to Form Exp-1 to provide the required information.

(i) Financial Capability:

The Bidder shall furnish documentary evidence that it meets the following financial requirement(s):

(a): (i) The audited balance sheets or, if not required by the laws of the Bidder's country, other financial or Bank statements acceptable to the Purchaser, for the last **Three [3] years**, namely years **2022, 2023 and 2024** shall be submitted demonstrating the current soundness of the Bidder's financial position and availability of adequate financial resources to perform the contract. In case of JV, each member of the JV shall furnish its own financial statement as required above. Refer to Form FIN – 3.1 to provide the required information.]

(b): (iii) For Bid evaluation to be performed package-wise as per ITB 1.1, ITB 14.6, 14.7 and ITB 35.2 (a): The Bidder shall demonstrate the minimum average annual financial turnover of **3 times the total bid price of all items for which bid has been submitted** as certified payments received by the Bidder since **January 1, 2022 to December 31, 2024** for contracts in progress and completed for all Goods manufactured and supplied divided by **Three (3)** number of years and part thereof elapsed since **January 1, 2022 to December 31, 2024**. If the average annual turnover amount is less than the required turnover amount for all packages for which the Bidder is successful, limitation will be placed on the number of item(s) that will be awarded to the Bidder and Purchaser will decide which item or items will be awarded based on the most economical combination that will result in the lowest evaluated cost to the Purchaser for all packages. In case the Bidder is a JV, average annual turnover of all members to the JV shall be added to determine the turnover of the Bidder. Refer to Form FIN—3.2 to provide the required information.]

(ii) Experience and Technical Capacity

The Bidder shall furnish documentary evidence to demonstrate that it meets the following experience requirement(s). In case the Bidder is a JV, experience and demonstrated technical capacity of only the JV shall be taken into account and not of individual members nor their individual experience/capacity will be aggregated. Wherever the words "Similar Goods" have been used it includes upgrades, latest and improved versions or models of similar specifications and technology. Refer to Form Exp-1 to provide the required information.

(a) The Bidder shall be supplying similar Goods since **January 1, 2022 to December 31, 2024**

(b) The Bidder shall furnish documentary evidence to demonstrate successful completion of at least **Three (3)**

*contracts of similar Goods since **January 1, 2022 to December 31, 2024** involving **total** supply of at least 70% of required quantity of each package*

(iii) Documentary Evidence of Usage of Goods

The Bidder shall furnish documentary evidence to demonstrate that the Goods it offers meet the following usage requirement:

*The Bidder shall furnish documentary evidence satisfactory to the Purchaser to demonstrate that similar Goods as offered in the Bid have been in successful use or operation since **January 1, 2022 to December 31, 2024**. If the Bidder is a JV, the evidence of demonstrated usage of Goods supplied in the past shall be in the name of the JV.] Refer to Form Exp-1 to provide the required information.*

(III) History of non-performing contracts:

Bidder including manufacturer, if the Bidder is not a manufacturer, and each members of JV in case the Bidder is a JV, shall demonstrate that Non-performance of a contract did not occur as a result of the default of the Bidder, manufacturer or the member of JV as the case may be, since **1st January 2022**. The required information shall be furnished as per form CON-2.

(IV) Pending Litigation:

Financial position and prospective long-term profitability of the Single Bidder, and in the case the Bidder is a JV, of each member of the JV, shall remain sound according to criteria established with respect to Financial Capability under paragraph I (i) above assuming that all pending litigation will be resolved against the Bidder. Bidder shall provide information on pending litigations as per Form CON-2.

(V) Litigation History:

There shall be no consistent history of court/arbitral award decisions against the Bidder¹ since **1st January 2022**. All parties to the contract shall furnish the information as per Form CON-2.

¹ The Bidder shall provide accurate information on the related Form (CON-2) about any litigation or arbitration resulting from contracts completed or ongoing under its execution since Jan. 1 2017). A consistent history of awards against the Bidder or any member of a JV may result in rejection of the bid.

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Letter of Bid

INSTRUCTIONS TO BIDDERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE DOCUMENT

The Bidder must prepare this Letter of Bid on stationery with its letterhead clearly showing the Bidder's complete name and business address.

Note: All italicized text is to help Bidders in preparing this form.

Date of this Bid submission: *[insert date (as day, month and year) of Bid submission]*

OCBI / LCB No.: *[insert number of bidding process as per procurement plan]*

Invitation for Bid No.: *[insert same IFB No. as advertised]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To: ***[insert complete name of Purchaser]***

- (a) **No reservations:** We have examined and have no reservations to the bidding document, including Addenda issued in accordance with Instructions to Bidders (ITB 8);
- (b) **Eligibility-of Bidder:** We including any subcontractors or suppliers for any part of the Contract, have nationalities from eligible countries and meet the eligibility requirements and have no conflict of interest in accordance with ITB 4;
- (c) **Eligibility of Goods and Related Services:** We meet the eligibility requirements for Goods and Related Services in accordance with ITB 5;
- (d) **Bid-Securing Declaration:** We have not been suspended nor declared ineligible by the Purchaser based on execution of a Bid-Securing Declaration in the Purchaser's Country in accordance with ITB 4.7;
- (e) **Conformity:** We offer to supply in conformity with the bidding document and in accordance with the Delivery Schedules specified in the Schedule of Requirements the following Goods: *[insert a brief description of the Goods and Related Services]*;
- (f) **Bid Price:** The total price of our Bid, excluding any discounts offered in paragraph (g) below is:

Option 1: Procurement of one or several Items--Item-wise:

- (a) Total bid price of each item in words and figures, indicating item number and total amounts of respective currencies in which bid prices for that item have been submitted and payment requested;
- (b) Grand Total Bid Price of all Bid items in respective currencies. Use the following format.

Item No.	Total Price of each item in quoted currency (ies) in words and figure
1; 2; etc.	

Grand Total Bid Price of all Bid Items: Currency A-----; Currency B-----, etc.in words and figures

Or

Option 2: Procurement of items in one or several Lots---Lot-wise- each lot containing one or more items:

- (a) Total bid price of each lot in words and figures, indicating lot number and total amounts of respective currencies in which bid prices for that lot have been submitted and payment requested:
- (b) Grand Total Bid Price of all Bid lots in respective currencies. Use the following format.

Lot No.	Total Price of each lot in quoted currency (ies) in words and figure
1; 2; etc.	

Grand Total Bid Price of all Bid lots: Currency A-----; Currency B-----, etc. in words and figures

Or

Option 3: Procurement of items in one or several Packages—each package containing one more lots:

- (a) Total bid price of each lot of the package and total bid price of each package in words and figures, indicating lot numbers

and corresponding package number and total amounts of respective currencies in which bid prices for each package have been submitted and payment requested:

- (b) Grand Total Bid Price of all Bid packages in respective currencies. Use the following format.

Package No	Lot No	Total Price of each lot in quoted currency(ies) in words and figures
1	Lot 1	
	Lot 2, etc.	
Total Price of Package 1=Total Price of Lots 1, 2, etc.=		
Package No	Lot No	Total Price of each lot in quoted currency(ies) in words and figures
2	1	
	Lot 2, etc.	
Total Price of Package 2=Total Price of Lots 1, 2, etc.=		

Grand Total Bid Price of all Bid packages: Currency A-----; Currency B-----etc.-in words and figures.

- (g) **Discounts:** The discounts offered and the methodology for their application are:

- (i) The discounts offered are: *[Specify in detail each discount offered.]*
- (ii) The exact method of calculations to determine the net price of each item, and in case of multiple lots or multiple packages, net price of each item, each lot and each package as applicable, after application of discounts is shown below: *[Specify in detail the method*

that shall be used to apply the discounts and ensure clarity, unambiguity, etc. in accordance with ITB 14.7];

- (h) **Bid Validity Period:** Our Bid shall be valid for the period specified in BDS 18.1 (as amended, if applicable) from the date fixed for the Bid submission deadline specified in BDS 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;
- (i) **Performance Security:** If our Bid is accepted, we commit to obtain a performance security in accordance with the bidding document;
- (j) **One Bid per Bidder:** We are not submitting any other Bid(s) as an individual Bidder, and we are not participating in any other Bid(s) as a Joint Venture member, or as a subcontractor, and meet the requirements of ITB 4.3, other than alternative Bids submitted in accordance with ITB 13;
- (k) **Suspension and Debarment:** We, along with any of our subcontractors, suppliers, consultants, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the Bank or a debarment imposed by the Bank in accordance with the Agreement for Mutual Enforcement of Debarment Decisions between the Bank and other development banks. Further, we are not ineligible under the Purchaser's Country laws or official regulations or pursuant to a decision of the United Nations Security Council;
- (l) **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 ITB 4.6];*
- (m) **Commissions, gratuities, fees:** We have paid, or will pay the following commissions, gratuities, or fees with respect to the Bidding 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.")

- (n) **Binding Contract:** We understand that this Bid, 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;
- (o) **Purchaser Not Bound to Accept:** We understand that you are not bound to accept the lowest evaluated cost Bid, or any other Bid that you may receive; and
- (p) **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.

Name of the Bidder: **[insert complete name of the Bidder]*

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

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

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]*

* In the case of the Bid submitted by a Joint Venture specify the name of the Joint Venture (JV) as Bidder or names of all members (partners) of JV and sign on behalf of the JV and not on behalf of only one member that has been given power of attorney.

** Person signing the Bid shall have the power of attorney given by the Bidder. If the Bidder is a JV the power of attorney shall be given by the JV or by all members of the JV. The power of attorney shall be attached with the Bid Schedules.

Price Schedule Forms

*[The Bidder shall fill in these Price Schedule Forms for the Base-Bid in accordance with the instructions indicated. The list of line items in column 1 of the **Price Schedules** shall coincide with the List of Goods and Related Services specified by the Purchaser in the Schedule of Requirements. For Alternative Bid, if permitted, use same set of Price Schedules by identifying and differentiating them as Alternative Price Schedule from the Base-Bid]*

Price Schedule: Goods Manufactured Outside the Purchaser's Country, to be Imported – Siaya Institute of Technology

				(Group C Bids, goods to be imported)		Date: _____ OCBI / LCB No: _____ Alternative No: _____ Page N° _____ of _____		
				Currencies in accordance with ITB 15				
1	2	3	4	5	6	7	8	9
Line Item N°	Description of Goods	Country of Origin	Delivery Date as defined by Incoterms	Quantity and physical unit	Unit price CIP FINAL DESTINATION Siaya Institute of Technology	CIP Price per line item (Col. 5x6)	Price per line item for inland transportation and other services required in the Purchaser's Country to convey the Goods to their final destination as specified in BDS in accordance with ITB 14.9 (b) (ii) [This column is not applicable if destination as per column 6 under ITB 14.9 (b) (i) and final destination as per ITB 14.9 (b) (ii) is the same]	Total Price per Line item (Col. 7+8)
BCEE 01	Theodolite (Electronic Total Station)		18 Months from date of contract signing	1 pcs				

BCEE 02	Automatic Electronic Levels and EDM		18 Months from date of contract signing	1 pcs				
BCEE 03	Dumpy Level And/ Automatic Level		18 Months from date of contract signing	1 pcs				
BCEE 04	Gps Receiver		18 Months from date of contract signing	2 pcs				
BCEE 05	Survey Compass		18 Months from date of contract signing	2 pcs				
BCEE 06	Prismatic Compass		18 Months from date of contract signing	2 pcs				
BCEE 07	Survey Chain		18 Months from date of contract signing	5 pcs				
BCEE 08	Ranging Rod		18 Months from date of contract signing	6 pcs				
BCEE 09	Leveling Staff		18 Months from date of contract signing	3 pcs				
BCEE 10	Engineer's Multi-Purpose Tilting Level		18 Months from date of contract signing	2 pcs				

BCEE 11	Triple Prism Set		18 Months from date of contract signing	3 pcs				
BCEE 12	Robotic Total Stations		18 Months from date of contract signing	1 pcs				
BCEE 13	Plane Table With Metal Head		18 Months from date of contract signing	2 pcs				
BCEE 14	Telescopic Alidade		18 Months from date of contract signing	2 pcs				
BCEE 15	Survey Umbrella		18 Months from date of contract signing	3 pcs				
BCEE 16	Tracing Table		18 Months from date of contract signing	2 pcs				
BCEE 17	Prism Pole		18 Months from date of contract signing	5 pcs				
BCEE 18	Motorized Compression/Tension Machine		18 Months from date of contract signing	1 pcs				
BCEE 19	Laboratory Concrete Mixer		18 Months from date of contract signing	1 pcs				

BC EE 20	Slump Test Apparatus		18 Months from date of contract signing	3 pcs				
BC EE 21	Porker Vibrator		18 Months from date of contract signing	3 pcs				
BC EE 22	In-Situ Water Permeability Test Kit		18 Months from date of contract signing	1 pcs				
BC EE 23	Concrete Cover Meter		18 Months from date of contract signing	2 pcs				
BC EE 24	Bulk Density Kit		18 Months from date of contract signing	2 pcs				
BC EE 25	Coarse Aggregate Density Test Set		18 Months from date of contract signing	2 pcs				
BC EE 26	Dunagan Test Set		18 Months from date of contract signing	2 pcs				
BC EE 27	Organic Impurities Test Set		18 Months from date of contract signing	3 pcs				
BC EE 28	Riffle Boxes (Sample Splitters)		18 Months from date of contract signing	3 pcs				

BCEE 29	Sieve Shaker		18 Months from date of contract signing	2 pcs				
BCEE 30	Los Angeles Abrasion Machine		18 Months from date of contract signing	1 pcs				
BCEE 31	Digital Point Load Tester		18 Months from date of contract signing	2 pcs				
BCEE 32	Impact Testing Machine		18 Months from date of contract signing	1 pcs				
BCEE 33	Drying Oven		18 Months from date of contract signing	2 pcs				
BCEE 34	Laboratory Bench Ovens		18 Months from date of contract signing	1 pcs				
BCEE 35	Field Cbr Equipment		18 Months from date of contract signing	1 pcs				
BCEE 36	CBR Test Machine (Hand Operated)		18 Months from date of contract signing	1 pcs				
BCEE 37	Hand Operated Casagrande Equipment		18 Months from date of contract signing	3 pcs				

BCEE 38	Motorised Casangarnde Equipment		18 Months from date of contract signing	2 pcs				
BCEE 39	Shrinkage Limit Set		18 Months from date of contract signing	5 pcs				
BCEE 40	Cone Apparatus		18 Months from date of contract signing	3 pcs				
BCEE 41	Shear Machine		18 Months from date of contract signing	1 pcs				
BCEE 42	Sieve Shaker		18 Months from date of contract signing	2 pcs				
BCEE 43	Particle Size Analysis Test Set		18 Months from date of contract signing	1 pcs				
BCEE 44	ISO 200mm Test Sieve		18 Months from date of contract signing	2 pcs				
BCEE 45	Soil Hydrometers		18 Months from date of contract signing	3 pcs				
BCEE 46	Consolidation Apparatus		18 Months from date of contract signing	1 pcs				

BCEE 47	Soil Volume Change Meter		18 Months from date of contract signing	2 pcs				
BCEE 48	Plate Bearing Test Machine		18 Months from date of contract signing	1 pcs				
BCEE 49	Core Cutter		18 Months from date of contract signing	3 pcs				
BCEE 50	Automatic Mechanical Soil Compactor		18 Months from date of contract signing	1 pcs				
BCEE 51	Soil Permeability Apparatus		18 Months from date of contract signing	2 pcs				
BCEE 52	Motorised Cbr Machine		18 Months from date of contract signing	1 pcs				
BCEE 53	Cone Penetrometer		18 Months from date of contract signing	2 pcs				
BCEE 54	Plastic Limit Roller		18 Months from date of contract signing	3 pcs				
BCEE 55	Plastic Limit Set		18 Months from date of contract signing	3 pcs				

BCEE 56	Shrinkage Limit Set		18 Months from date of contract signing	3 pcs				
BCEE 57	Shrinkage Prong Plate		18 Months from date of contract signing	3 pcs				
BCEE 58	Geotechnical Gauge		18 Months from date of contract signing	3 pcs				
BCEE 59	Grain Size Chart		18 Months from date of contract signing	3 pcs				
BCEE 60	Sand Gauge Chart		18 Months from date of contract signing	3 pcs				
BCEE 61	Cone Apparatus		18 Months from date of contract signing	3 pcs				
BCEE 62	Sand Cone Density Apparatus		18 Months from date of contract signing	3 pcs				
BCEE 63	Particle Size Analysis Test Set		18 Months from date of contract signing	3 pcs				
BCEE 64	Expansion Index Test Apparatus		18 Months from date of contract signing	2 pcs				

BCEE 65	Soil Volume Change Meter		18 Months from date of contract signing	2 pcs				
BCEE 66	Volu Vessel Device		18 Months from date of contract signing	2 pcs				
BCEE 67	Sand Replacement Equipment		18 Months from date of contract signing	2 pcs				
BCEE 68	Riffle Boxes		18 Months from date of contract signing	3 pcs				
BCEE 69	Permeability Test System		18 Months from date of contract signing	1 pcs				
BCEE 70	Tri-Axial Test Set		18 Months from date of contract signing	1 pcs				
BCEE 71	Masonry Saw		18 Months from date of contract signing	1 pcs				
BCEE 72	Vibrating Table		18 Months from date of contract signing	1 pcs				
BCEE 73	Rammers		18 Months from date of contract signing	5 pcs				

BC EE 74	Block Maker		18 Months from date of contract signing	1 pcs				
BC EE 75	Block Making Machine (Manually Operated)		18 Months from date of contract signing	1 pcs				
BC EE 76	Site Dumper		18 Months from date of contract signing	1 pcs				
BC EE 77	Scaffold & Platform		18 Months from date of contract signing	1 pcs				
BC EE 78	Hoisting Equipment		18 Months from date of contract signing	1 pcs				
BC EE 79	Concrete Poker Vibrator		18 Months from date of contract signing	2 pcs				
BC EE 80	Gauge Rods		18 Months from date of contract signing	5 pcs				
BC EE 81	Chapman Flask - % Voids In Aggregates		18 Months from date of contract signing	3 pcs				

BCEE 82	Coarse Aggregate Density Test Set		18 Months from date of contract signing	2 pcs				
BCEE 83	Length Gauge		18 Months from date of contract signing	5 pcs				
BCEE 84	Drying Oven		18 Months from date of contract signing	2 pcs				
BCEE 85	Deval Attrition Test Machine		18 Months from date of contract signing	1 pcs				
BCEE86	Impact Testing Machine		18 Months from date of contract signing	1 pcs				
BCEE 87	Rebound Hammer		18 Months from date of contract signing	2 pcs				
BCEE 88	Pulse Velocity Measurement		18 Months from date of contract signing	1 pcs				
BCEE 89	Mortar Mixer		18 Months from date of contract signing	1 pcs				
BCEE 90	Test Bar Moulds		18 Months from date of contract signing	5 pcs				

BCEE 91	Length Comparator		18 Months from date of contract signing	3 pcs				
BCEE 92	Blaine Fineness Apparatus		18 Months from date of contract signing	2 pcs				
BCEE 93	Laboratory Concrete Mixer		18 Months from date of contract signing	1 pcs				
BCEE 94	Le Chatelier Flask		18 Months from date of contract signing	3 pcs				
BCEE 95	Shrinkage Mould		18 Months from date of contract signing	2 pcs				
BCEE 96	Brass Ring Mould		18 Months from date of contract signing	2 pcs				
BCEE 97	Standard Spatula		18 Months from date of contract signing	5 pcs				
BCEE 98	Gauging Trowel		18 Months from date of contract signing	5 pcs				
BCEE 99	Ball Mill		18 Months from date of contract signing	1 pcs				

BCEE 100	Vicat Apparatus		18 Months from date of contract signing	3 pcs				
BCEE 101	Flow Table		18 Months from date of contract signing	2 pcs				
BCEE 102	Pipe Threading Tools		18 Months from date of contract signing	2 pcs				
BCEE 103	Strap Wrench		18 Months from date of contract signing	3 pcs				
BCEE 104	Pipe Bender		18 Months from date of contract signing	2 pcs				
BCEE 105	Power Driven Pipe Treading Machine		18 Months from date of contract signing	1 pcs				
BCEE 106	Die Stock		18 Months from date of contract signing	4 pcs				
BCEE 107	Pipe Bending Machine		18 Months from date of contract signing	2 pcs				
BCEE 108	Guillotine Shears (Up To Gauge 16)		18 Months from date of contract signing	1 pcs				

BCEE 109	Arc Welding Transformers		18 Months from date of contract signing	2 pcs				
BCEE 110	Oxy-Acetylene Equipment		18 Months from date of contract signing	1 pcs				
BCEE 111	P.P.R Welding Machine		18 Months from date of contract signing	3 pcs				
BCEE 112	Rivet Gun (Different Sizes)		18 Months from date of contract signing	3 pcs				
BCEE 113	Nipple Chuck (13-38 Mm) For Making Nipples		18 Months from date of contract signing	2 pcs				
BCEE 114	Guillotine Shears		18 Months from date of contract signing	1 pcs				
BCEE 115	Slip Roller Machine		18 Months from date of contract signing	1 pcs				
BCEE 116	Heavy Duty Bench Vice		18 Months from date of contract signing	8 pcs				
BCEE 117	Arc Welding Shields		18 Months from date of contract signing	5 pcs				

BCEE 118	Centrifugal Pump		18 Months from date of contract signing	2 pcs				
BCEE 119	Bath Tubes With Pillar Taps		18 Months from date of contract signing	3 pcs				
BCEE 120	WC With Cisterns		18 Months from date of contract signing	3 pcs				
BCEE 121	Kitchen Sink		18 Months from date of contract signing	3 pcs				
BCEE 122	Basins With Pillar Taps		18 Months from date of contract signing	1 pcs				
BCEE 123	Hot Water Cylinder With Immersion Heater		18 Months from date of contract signing	1 pcs				
BCEE 124	Woodworking Lathes		18 Months from date of contract signing	1 pcs				
BCEE 125	Surface Dust Chip Remover		18 Months from date of contract signing	1 pcs				

BCEE 126	Multipurpose Wood Working Machine		18 Months from date of contract signing	1 pcs				
BCEE 127	Vertical Band Saw		18 Months from date of contract signing	1 pcs				
BCEE 128	Shaper		18 Months from date of contract signing	1 pcs				
BCEE 129	Tenoner		18 Months from date of contract signing	1 pcs				
BCEE 130	Compressible Flow Bench		18 Months from date of contract signing	1 pcs				
BCEE 131	Training Equipment In Industrial Hydraulics		18 Months from date of contract signing	1 pcs				
BCEE 132	Pressure Measurement Bench		18 Months from date of contract signing	1 pcs				
BCEE 133a	Flow Meter Demonstration		18 Months from date of contract signing	1 pcs				

[illegible]

BCEE 139a	Teacher PC Kit		18 Months from date of contract signing	4 pcs				
	Classroom / Workshop		18 Months from date of contract signing	4 pcs				
	Digital Whiteboard		18 Months from date of contract signing	4 pcs				
	Whiteboard		18 Months from date of contract signing	4 pcs				
	Printer		18 Months from date of contract signing	1 pcs				
BCEE 139b	Teacher and student furniture kit consisting of:							
	Teacher furniture kit		18 Months from date of contract signing	4 pcs				
	Student furniture kit		18 Months from date of contract signing	4 pcs				
BCEE 139c	Storage cabinets and equipment consisting of:							
	Storage cabinets open frond		18 Months from date of contract signing	4 pcs				

	Storage cabinets lockable		18 Months from date of contract signing	2 pcs				
	Storage rack		18 Months from date of contract signing	2 pcs				
	Storage shelves		18 Months from date of contract signing	2 pcs				
	Tool board		18 Months from date of contract signing	2 pcs				
	Parts storage		18 Months from date of contract signing	2 pcs				
BCEE 139d	Workbenches complete		18 Months from date of contract signing	4 pcs				
BCEE 139e	Student tool kits		18 Months from date of contract signing	2 pcs				
BCEE 139f	General workshop tools & equipment		18 Months from date of contract signing	2 pcs				
BCEE 139g	Tool trolleys empty		18 Months from date of contract signing	2 pcs				

BCEE 139h	Demo tables		18 Months from date of contract signing	4 pcs				
Totals Exclusive of Taxes								
Taxes								
Totals Inclusive of Taxes								
							Sub-Total Price	
Name of Bidder: _____ Signature of Bidder: _____ Date: _____								
Price and Completion Schedule - Related Services								
		Currencies in accordance with ITB 15					Date: _____ OCBI / LCB No: _____ Alternative No: _____ Page N° _____ of _____	
1	2	3	4	5	6	7		

Service N°	Description of Services (excludes inland transportation and other services required in the Purchaser's Country to convey the goods to their final destination)	Country of Origin	Delivery Date at place of Final destination	Quantity and physical unit	Unit price	Total Price per Service (Col. 5*6 or estimate)
1	Equipment pre-inspection: The supplier shall organize pre-inspection of equipment in the country of origin before shipping into the country by members of the pre-inspection team nominated by the employer		Not later than 12 months from date of contract signing	5		
2.	Training and Services Related to Equipment/Machines Supplied should include: i. Training of members of the teaching staff and technicians on Major and Routine Maintenance of equipment/ Machines, ii. Training members of the teaching staff and technicians on Use of the machines/equipment (i.e the total scope of use equipment/machines and experiments they can perform)		Not later than 18 months from date of contract signing	10		
3.	Training manuals: Bidder must provide hard copies and soft copies of Training manuals in English for the range of experiments/operation for each equipment/machines supplied Hard copy and a soft copy for each equipment		Not later than 18 months from date of contract signing	5 sets		
4.	Installation, testing and commissioning of equipment/ machines: Bidders must install, test, calibrate and commission the equipment supplied		Not later than 18 months from date of contract signing	All equipment in each package supplied		

5.	Branding of equipment: 1. Each piece of equipment should be branded/tagged as follows: "GoK/AfDB TVETE III-SIT..."; followed by a serial number 2. The branding/tagging words should be permanent and will be either engraved on a small metal plate and riveted on metallic machines/equipment or engraved on the item.		Not later than 18 months from date of contract signing	All equipment in each package supplied		
				Sub - Total Price		
Name of Bidder: _____ Signature of Bidder: _____ Date: _____						

Grand Total Bid Price (Goods and Related Services)

	CIP Institution	Bid Price per Package for Goods and related services
1	Sub - Total Bid Price – Siaya Institute of Technology	
	Grand Total Bid Price	
<p>Name of Bidder: _____</p> <p>Signature of Bidder: _____</p> <p>Date: _____</p>		

Bidder Information Form -Form ELI-1.1

[The Bidder shall fill in this Form in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date: *[insert date (as day, month and year) of Bid submission]*

OCBI / LCB No.: *[insert number of bidding process]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

Page _____ of _____ pages

1. Bidder's Name <i>[insert Bidder's legal name]</i>
2. In case of JV, legal name of each member: <i>[insert legal name of each member in JV]</i>
3. Bidder's actual or intended country of registration: <i>[insert actual or intended country of registration]</i>
4. Bidder's year of registration: <i>[insert Bidder's year of registration]</i>
5. Bidder's Address in country of registration: <i>[insert Bidder's legal address in country of registration]</i>
6. Bidder's Authorized Representative Information Name: <i>[insert Authorized Representative's name]</i> Address: <i>[insert Authorized Representative's Address]</i> Telephone/Fax numbers: <i>[insert Authorized Representative's telephone/fax numbers]</i> Email Address: <i>[insert Authorized Representative's email address]</i>
7. Attached are copies of original documents of <i>[check the box(es) of the attached original documents]</i> <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above, in accordance with ITB 4.4. <input type="checkbox"/> In case of JV, letter of intent to form JV or JV agreement, in accordance with ITB 4.1.

- In case of state-owned enterprise or institution, in accordance with ITB 4.6 documents establishing:
 - Legal and financial autonomy
 - Operation under commercial law
 - Establishing that the Bidder is not under the supervision of the Purchaser
- 8. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership. *[If required under BDS ITB 45.1, the successful Bidder shall provide additional information on beneficial ownership, using the Beneficial Ownership Disclosure Form.]*

Bidder's JV Members Information Form-Form ELI-1.2

[The Bidder shall fill in this Form in accordance with the instructions indicated below. The following table shall be filled in for the Bidder and for each member of a Joint Venture].

Date: *[insert date (as day, month and year) of Bid submission]*

OCBI / LCB No.: *[insert number of Bidding process]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

Page _____ of _____ pages

1. Bidder's Name: <i>[insert Bidder's legal name]</i>
2. Bidder's JV Member's name: <i>[insert JV's Member legal name]</i>
3. Bidder's JV Member's country of registration: <i>[insert JV's Member country of registration]</i>
4. Bidder's JV Member's year of registration: <i>[insert JV's Member year of registration]</i>
5. Bidder's JV Member's legal address in country of registration: <i>[insert JV's Member legal address in country of registration]</i>
6. Bidder's JV Member's authorized representative information Name: <i>[insert name of JV's Member authorized representative]</i> Address: <i>[insert address of JV's Member authorized representative]</i> Telephone/Fax numbers: <i>[insert telephone/fax numbers of JV's Member authorized representative]</i> Email Address: <i>[insert email address of JV's Member authorized representative]</i>
7. Attached are copies of original documents of <i>[check the box(es) of the attached original documents]</i> <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITB 4.4. <input type="checkbox"/> 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 Purchaser, in accordance with ITB 4.6.

8. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership. *[If required under BDS ITB 45.1, the successful Bidder shall provide additional information on beneficial ownership for each JV member using the Beneficial Ownership Disclosure Form.]*

Technical Bid-Base Bid

[Note for information of Bidder: Bidder shall demonstrate compliance with the Purchaser's requirements and Technical Specifications as described in Section VII of the Bidding Documents. Any departures or deviations from the required Technical Specifications shall be highlighted and if there are none, full compliance shall be confirmed.

The Bidder shall provide complete information and documentation of technical standards, codes, designs and specifications, of Goods and Related Services offered along with Model number or any other identification number of the manufacturer wherever applicable and in accordance with all requirements mentioned in ITB 16. Bidding document may stipulate a Table, Form, or Template to present Technical designs, specification, characteristics, functional or other guaranteed parameters, the Bidder shall invariably use the same without any changes and ensure that all requested details and supporting documents are provided. Lack or omission or non-confirmation of substantial details, information and documentation for major or essential technical requirements/features may result in rejection of the Bid.

If the details of specifications for the offered Goods in the written text of the Bid differ from the details provided in the supporting literature, drawings or other parts of the document, all such discrepancies shall be explained to the satisfaction of the Purchaser failing which the Purchaser, may reject the Bid, or if deemed appropriate, may consider the information in the written text of the Bid to be valid ignoring details in other parts of the Bid. Failure of the Bidder to confirm this will result in rejection of the Bid.

Bid shall establish conformity with the Purchaser's Specifications and requirements as specified in the Bidding Document along with all supporting documents mentioned in ITB 16. The documentary evidence may be in the form of literature, drawings or data, and shall consist of a detailed item by item description of the essential technical and performance characteristics of the Goods and Related Services, demonstrating substantial responsiveness of the Goods and Related Services to the technical specification, and if applicable, a statement of deviations and exceptions to the provisions of the Section VII, Schedule of Requirements.

Any deviations in the technical standards, codes, designs or specifications or other requirements from those stated in the Bidding Documents shall be explained indicating their impact on the performance requirements, characteristics or parameters of the Goods and Related Services required. To this end, for any such deviations to be acceptable, Bid shall establish substantial responsiveness to the required technical specifications by explaining and documenting for the offered Goods, and Related Services equivalency with or improvement to the required technical standards, codes, designs and Specifications.

Any Major deviation from the Purchaser's requirements shall be the cause for rejection of the Bid. Any deviation which in the Bidder's opinion is considered minor, the Bidder shall provide evidence to this effect including evidence of any monetary implications caused by such deviation. The Purchaser's evaluation shall be independent of Bidder's opinion on such matters and shall be final.]

Technical Bid-Alternative Bid

(If permitted in the Bidding Document)

[Note for information of Bidder: Text under Appendix A applicable for the Base Bid is also applicable for Alternative Bid. In addition, the Bidder shall explain and establish to the satisfaction of the Purchaser how the specification under the Alternative bid is equal or better than the Purchaser's required Specifications and that offered in the Base Bid when Alternative Bid is permitted only with the Base Bid]

Commercial Terms and Conditions

[Bidder shall specify any deviations to the provisions of the Bidding Document (other than Technical Specifications) in particular those specified in Part 3 of the Bidding document including General and Special Conditions of Contract. If "None" it shall be confirmed accordingly]

Historical Contract Non-Performance--Pending Litigation-- Litigation History Form CON-2

Bidder's Legal Name: _____ Date: _____

JV Member's Legal Name: _____

OCBI / LCB No.: _____

Page _____ of _____ pages

Non-Performing Contracts in accordance with Section III, Evaluation Criteria

- Contract non-performance did not occur during the stipulated period, in accordance with Section III, Evaluation Criteria
- Contract non-performance during the stipulated period, in accordance with Section III, Evaluation Criteria. List all Non-performed contracts since date specified in the Section III.

Year	Non-performed portion of contract	Contract Identification	Total Contract Amount (current value, currency, exchange rate and US\$ equivalent)
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/number, and any other identification]</i> Name of Purchaser: <i>[insert full name]</i> Address of Purchaser: <i>[insert street/city/country]</i> Reason(s) for non-performance: <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>

Pending Litigation, in accordance with Section III, Evaluation Criteria

- No pending litigation in accordance Section III, Evaluation Criteria
- Pending litigation in accordance with Section III, Evaluation Criteria, as indicated below. List all pending litigation contracts.

Year	Brief reasons for litigation	Contract Identification	Total Contract Amount (current value, US\$ equivalent)
_____	_____	Contract Identification: Name of Purchaser: Address of Purchaser: Matter in dispute: Amount in dispute	_____
_____	_____	Contract Identification: Name of Purchaser: Address of Purchaser: Matter in dispute: Amount in dispute:	_____
Form CON-2 Continued			
Litigation History in accordance with Section III—List all contracts since the date specified in Section III indicating:			
Year	Brief reasons for litigation	Contract Identification Contract Identification: Name of Purchaser: Address of Purchaser: Matter in dispute: Amount in dispute Court or Arbitral award decision:	Total Contract Amount (current value, US\$ equivalent)

Financial Situation

Form FIN – 3.1

Historical Financial Performance

Bidder's Legal Name: _____ Date: _____

JV Member's Legal Name: _____ OCBI / LCB No.: _____

Page _____ of _____ pages

To be completed by the Bidder and, if JV, by each member

Financial information in US\$ equivalent	Historic information for previous _____ (3) years (US\$ equivalent in 000s)						
	Year 1	Year 2	Year 3	Year ...	Year n	Avg.	Avg. Ratio
Information from Balance Sheet							
Total Assets (TA)							
Total Liabilities (TL)							
Net Worth (NW)							
Current Assets (CA)							
Current Liabilities (CL)							
Information from Income Statement							
Total Revenue (TR)							
Profits Before Taxes (PBT)							

- Attached are copies of financial statements (balance sheets, including all related notes, and income statements) for the years required above complying with the following conditions:

- (a) Must reflect the financial situation of the Bidder or partner to a JVCA, and not sister or parent companies;
- (b) Historic financial statements must be audited by a certified accountant;
- (c) Historic financial statements must be complete, including all notes to the financial statements;
- (d) Historic financial statements must correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).

Average Annual Turnover

Form FIN – 3.2

Bidder's Legal Name: _____

Date: _____

JV Member Legal Name: _____

OCBI / LCB No.: _____

Page _____ of _____ pages

To be completed by the Bidder and, if JV, by each member

Annual turnover data		
Year	Amount and Currency	US\$ equivalent
	<div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black;"></div>	<div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black;"></div>
	<div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black;"></div>	<div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black;"></div>
	<div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black;"></div>	<div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black;"></div>
	<div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black;"></div>	<div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black;"></div>
	<div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black;"></div>	<div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black;"></div>
*Average Annual Turnover	<div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black;"></div>	<div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black;"></div>

*Average annual turnover calculated as total certified payments received for supply in progress or completed, divided by the number of years as per Section III, Evaluation Criteria.

Experience—Form Exp-1

Bidder's Legal Name: _____

Manufacturer's Legal name: _____

Date: _____

JV 's Legal Name: _____

OCBI / LCB No.: _____

Page _____ of _____ pages

If Bidder is JV specify only those contracts that were performed by the same JV

Complete all information requested below that are required to assess Bidder's qualifications as per post qualification criteria specified under Section III

To be completed by Bidder, Bidder and Manufacturer if Bidder is not the Manufacturer, and by JV if JV is the Bidder

Similar Contract Number: ____ of ____ required.	Information	
Contract Identification	_____	
Award date	_____	
Completion date	_____	
Role in Contract	_____	
Total contract amount	_____ —	US\$_____
Purchaser's Name:	_____	

Similar Contract Number: ____ of ____ required.	Information
Address: Telephone/fax number: E-mail:	<hr/> <hr/>
Description of Goods	
Quantity of Goods supplied under this contract	
Quantity of Goods supplied under all other contracts since the date indicated in Section III- Provide similar separate details as for this contract for all such other contracts	
Form Exp-1 continued	
First date of manufacturing similar goods as offered in the bid	
Period of Successful use/operation –Number of Years	
Installed manufacturing capacity—Number of units per month of item (s) specified in section III	
Demonstrated proven capacity to supply since the date and for Item (s) specified in Section III	

Form of Bid Security

(Bank Guarantee)

[The bank shall fill in this Bank Guarantee Form in accordance with the instructions indicated.]

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: *[Purchaser to insert its name and address]*

IFB No.: *[Purchaser to insert same IFB No as advertised]*

Alternative No.: *[Insert identification No if this is a Bid for an alternative]*

OCBI / LCB No: *[Purchaser to insert same OCBI number as in procurement plan]*

Date: *[Insert date of issue]*

Bid Guarantee No.: *[Insert guarantee reference number]*

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

We have been informed that _____ *[insert name of the Bidder, which in the case of a joint venture shall be the name of the joint venture (whether legally constituted or prospective) or the names of all members thereof]* (hereinafter called "the Applicant") has submitted or will submit to the Beneficiary its Bid (hereinafter called "the Bid") for the execution of _____ under Invitation for Bids No. _____ ("the IFB") and Open Competitive Bidding (International) No. _____ ("the OCBI").

Furthermore, we understand that, according to the Beneficiary's conditions, Bids must be supported by a Bid guarantee.

At the request of the Applicant to issue this guarantee, 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 Bid during the period of Bid validity set forth in the Applicant's Letter of Bid ("the Bid Validity Period"), or any extension thereto provided by the Applicant; or
- (b) having been notified of the acceptance of its Bid by the Beneficiary during the Bid Validity Period or any extension thereto provided by the Applicant, (i) has failed to sign the contract agreement, or (ii) has failed to furnish the performance security, in accordance with the Instructions to Bidders ("ITB") of the Beneficiary's bidding document.

This guarantee will expire: (a) if the Applicant is the successful Bidder, upon our receipt of copies of the Contract agreement signed by the Applicant and the performance security issued to the Beneficiary in relation to such Contract agreement; or (b) if the Applicant is not the successful Bidder, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Applicant of the results of the Bidding process; or (ii) twenty-eight days after the end of the Bid Validity Period.

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

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758.

[Signature(s)]

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

Form of Bid Security (Bid Bond)

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

IFB No.

OCBI / LCB No.: [number as in procurement plan].

Alternative No.: [insert identification No if this is a Bid for an alternative]

[The Surety shall fill in this Bid Bond Form in accordance with the instructions indicated.]

BOND NO.

BY THIS BOND [name of Bidder] as Principal (hereinafter called "the Principal"), and [name, legal title, and address of surety], **authorized to transact business in** [name of country of Purchaser], as Surety (hereinafter called "the Surety"), are held and firmly bound unto [name of Purchaser] as Oblige (hereinafter called "the Purchaser") in the sum of [amount of Bond]² [amount in words], for the payment of which sum, well and truly to be made, we, the said Principal and Surety, bind ourselves, our successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Principal has submitted or will submit a written Bid to the Purchaser dated the ___ day of _____, 20___, for the supply of [name of Contract] (hereinafter called the "Bid").

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal:

- (a) has withdrawn its Bid during the period of Bid validity set forth in the Principal's Letter of Bid ("the Bid Validity Period"), or any extension thereto provided by the Principal; or
- (b) having been notified of the acceptance of its Bid by the Purchaser during the Bid 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 Bidders ("ITB") of the Purchaser's bidding document.

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

² The amount of the Bond shall be denominated in the currency of the Purchaser's Country or the equivalent amount in a freely convertible currency.

The Surety hereby agrees that its obligation will remain in full force and effect up to and including the date 28 days after the date of expiration of the Bid Validity Period set forth in the Principal's Letter of Bid or any extension thereto provided by the Principal.

IN TESTIMONY WHEREOF, the Principal and the Surety have caused these presents to be executed in their respective names this ____ day of _____ 20__.

Principal: _____ Surety: _____

Corporate Seal (where appropriate)

(Signature)

(Printed name and title)

(Signature)

(Printed name and title)

Form of Bid-Securing Declaration

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

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

OCBI / LCB No.: *[number as in procurement plan]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To: *[complete name of Purchaser]*

We, the undersigned, declare that:

We understand that, according to your conditions, Bids must be supported by a Bid-Securing Declaration.

We accept that we will automatically be suspended from being eligible for bidding in any contract with the Purchaser for the period of time of *[insert number of months or years consistent with BDS 19.9]*, if we are in breach of our obligation(s) under the Bid conditions, because we:

- (a) have withdrawn our Bid during the period of Bid validity specified in the Letter of Bid or any extension thereto provided by us; 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 sign the Contract; or (ii) fail or refuse to furnish the Performance Security, if required, in accordance with the ITB.

The start date of suspension shall be the first date we perform any of the actions mentioned in paragraphs (a) and (b) above. We understand this Bid Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder; or (ii) twenty-eight days after the expiration of our Bid.

Name of the Bidder* _____

Name of the person duly authorized to sign the Bid on behalf of the Bidder** _____

Title of the person signing the Bid _____

Signature of the person named above _____

Date signed _____ day of _____,

- *: In the case of the Bid submitted by joint venture specify the name of the Joint Venture as Bidder
- **.: Person signing the Bid shall have the power of attorney given by the Bidder attached to the Bid

[Note: In case of a Joint Venture, the Bid-Securing Declaration must be in the name of all members to the Joint Venture that submits the Bid.]

Manufacturer's Authorization

*[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer. The Bidder shall include it in its Bid, if so indicated in the **BDS**.]*

Date: *[insert date (as day, month and year) of Bid submission]*

OCBI / LCB No.: *[insert number as in procurement plan]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To: *[insert complete name of Purchaser]*

WHEREAS

We *[insert complete name of Manufacturer]*, who are official manufacturers of *[insert type of goods manufactured]*, having factories at *[insert full address of Manufacturer's factories]*, do hereby authorize *[insert complete name of Bidder]* to submit a Bid the purpose of which is to provide the following Goods, manufactured by us *[insert name and or brief description of the Goods]*, and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 28 of the General Conditions of Contract, with respect to the Goods offered by the above firm.

Signed: *[insert signature(s) of authorized representative(s) of the Manufacturer]*

Name: *[insert complete name(s) of authorized representative(s) of the Manufacturer]*

Title: *[insert title]*

Dated on _____ day of _____, _____ *[insert date of signing]*

Section V - Eligible Countries

Eligibility for the Provision of Goods, Works and Services in Bank Group Financed Procurement

A. Provisions under Section 5 “Eligibility” of the Procurement Policy for Bank Group Funded Operations and Chapter A2 of the Operations Procurement Manual under Procurement Framework of the African Development Bank

1. The African Development Fund (ADF) permits firms and individuals from all countries to offer goods, works and services for ADF funded projects.

However, the proceeds of any Financing undertaken in the operations of the African Development Bank (ADB) and the Nigeria Trust Fund (NTF) shall be used for procurement of goods and works, including the related services, provided by bidders from Eligible³ Countries.⁴ Any conditions for participation shall be limited to those that are essential to ensure the firm's capability to fulfill the contract in question. In the case of ADB and NTF, bidders from non-Member Countries offering goods, works and related services (including transportation and insurance) are not eligible even if they offer these from Eligible Member Countries. Any waiver to this rule will be in accordance with the Articles 17(1) (d) of the Agreement Establishing the African Development Bank and 4.1 of the Agreement Establishing the Nigeria Trust Fund.

B. Rules and Procedures for Procurement of Goods and Works

Overview

1. The eligibility criteria for participation in the supply of goods, works and related services, to be procured through the ADB and NTF Financing, derive from the requirements of the Agreement Establishing the African Development Bank, Article 17.1.d, and the Agreement Establishing the Nigeria Trust Fund, Article 4.1. The foregoing requirements basically prescribe two types of eligibility criteria:
 - (a) The eligibility of the bidder;
 - (b) The eligibility of the goods, works and related services.

³ Refer to Bank Framework for additional information on Eligibility.

⁴ “Eligible Countries” shall mean: (a) in the case of the African Development Bank (ADB) and the Nigeria Trust Fund, the Member Countries of the ADB; and (b) in the case of the African Development Fund (ADF), any country.

Eligibility of the Bidder Under the ADB & NTF Financing

2. The eligibility of the bidder shall be based on nationality, in accordance with the following rules:
 - (a) Natural Persons: A natural person is eligible if he or she is a national of a Member Country of the ADB. Where a person has more than one nationality, such a person shall be eligible if the nationality indicated in his or her bid is that of a Member Country of the ADB.
 - (b) Corporations: A corporation is eligible if it satisfies the following criteria:
 - i) it is incorporated in a country that is a Member of the ADB;
 - ii) it is a national of a country that is a Member of the ADB, as determined by the law of its place of incorporation;
 - iii) it has its principal place of business in a country that is a Member of the ADB.
 - (c) Joint Ventures and Associations: An unincorporated joint venture, partnership, or association, shall be eligible if more than 50% of the value of its works and/or services is executed by its members satisfying the eligibility requirements for individuals or corporations.

Eligibility of the Goods, Works and Related Services

3. In order to be eligible, the goods to be procured must have been mined, grown, or produced, in the form in which they are purchased, in an Eligible Member Country.
4. For works contracts, which may include civil works, plant construction, or turnkey contracts, the contractor must satisfy the nationality criteria of eligibility, either as a natural person, or corporation, or joint venture and association. Labour, equipment, and materials needed for carrying out the works contract, shall be supplied from Eligible Member Countries.
5. For contracts, which have been awarded on the basis of Cost, Insurance and Freight (CIF), or Carriage and Insurance Paid (CIP), bidders shall be free to arrange for ocean and other transportation, and the related insurance, from any Eligible Member Country. On the other hand, where goods are shipped on FOB basis, and the Bank has agreed to finance transportation and insurance separately, which are arranged by the purchaser, under a separate contract, the Bank shall be satisfied that the services are supplied from Eligible Member Countries.

List of Eligible Countries

6. List of Eligible countries can be found in African Development Bank's website:

[Eligible Countries](#)

Ineligible Countries in reference to ITB 4.8 and ITB 5.1

7. In reference to ITB 4.8 and ITB 5.1, for the information of the Bidders, at the present time firms, goods and services from the following countries are excluded from this Bidding process:

Under ITB 4.8(a) and ITB 5.1: *[insert a list of the countries following approval by the Bank to apply the restriction or state "none"]*.

Under ITB 4.8(b) and ITB 5.1: *[insert a list of the countries following approval by the Bank to apply the restriction or state "none"]*

Section VI - Fraud and Corruption

(Section VI shall not be modified)

1. Purpose

1.1 The Bank's Integrity Framework and this annex apply with respect to procurement under Bank Investment Project Financing operations.

2. Requirements

2.1 The Bank requires that Borrowers (including beneficiaries of Bank financing); bidders (applicants), consultants, contractors and suppliers; any sub-contractors, sub-consultants, service providers or suppliers; any agents (whether declared or not); and any of their personnel, observe the highest standard of ethics during the procurement process, selection and contract execution of Bank-financed contracts, and refrain from Fraud and Corruption⁵.

2.2 To this end, the Bank:

- a. Defines, for the purposes of this provision, the terms set forth below as follows:
 - i. "corrupt practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party⁶;
 - ii. "fraudulent practice" is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party⁷ 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;

⁵ In this context, any action to influence the procurement process or contract execution for undue advantage is improper.

⁶ For the purpose of this sub-paragraph, "another party" refers to a public official acting in relation to the procurement process or contract execution, including Bank staff and employees of other organizations taking or reviewing procurement decisions.

⁷ For the purpose of this sub-paragraph, "party" refers to a public official, including Bank staff and employees of other organizations taking or reviewing procurement decisions.; the terms "benefit" and "obligation" relate to the procurement process or contract execution; and the "act or omission" is intended to influence the procurement process or contract execution."

v. “obstructive practice” is:

- (a) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive, or collusive practice; and/or threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or
 - (b) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under paragraph 2.2 e. below.
- b. Rejects a proposal for award if the Bank determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
- c. In addition to the legal remedies set out in the relevant Legal Agreement, may take other appropriate actions, including declaring misprocurement, if the Bank determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement process, selection and/or execution of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;
- d. Pursuant to the Bank's Integrity Framework, and in accordance with the Bank's prevailing sanctions policies and procedures, may sanction a firm or individual, either indefinitely or for a stated period of time, including by publicly declaring such firm or individual ineligible (i) to be awarded or otherwise benefit from a Bank-financed contract, financially or in any other

- manner;⁸ (ii) to be a nominated⁹ sub-contractor, consultant, manufacturer or supplier, or service provider of an otherwise eligible firm being awarded a Bank-financed contract; and (iii) to receive the proceeds of any loan made by the Bank or otherwise to participate further in the preparation or implementation of any Bank-financed project;
- e. Requires that a clause be included in bidding documents and in contracts financed by a Bank loan, requiring (i) bidders (applicants), consultants, contractors, and suppliers, and their sub-contractors, sub-consultants, service providers, suppliers, agents personnel, permit the Bank to inspect¹⁰ all accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have them audited by auditors appointed by the Bank.

⁸ For the avoidance of doubt, a sanctioned party's ineligibility to be awarded a contract shall include, without limitation, (i) applying for pre-qualification, expressing interest in a consultancy, and bidding, either directly or as a nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider, in respect of such contract, and (ii) entering into an addendum or amendment introducing a material modification to any existing contract.

⁹ A nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider (different names are used depending on the particular bidding document) is one which has been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.

¹⁰ Inspections in this context usually are investigative (i.e., forensic) in nature. They involve fact-finding activities undertaken by the Bank or persons appointed by the Bank to address specific matters related to investigations/audits, such as evaluating the veracity of an allegation of possible Fraud and Corruption, through the appropriate mechanisms. Such activity includes but is not limited to: accessing and examining a firm's or individual's financial records and information, and making copies thereof as relevant; accessing and examining any other documents, data and information (whether in hard copy or electronic format) deemed relevant for the investigation/audit, and making copies thereof as relevant; interviewing staff and other relevant individuals; performing physical inspections and site visits; and obtaining third party verification of information.



Part 2 – Supply Requirements

Section VII - Schedule of Requirements

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1. List of Goods and Delivery Schedule - Siaya Institute of Technology							
Line Item N°	Description of Goods	Quantity	Physical unit	Final Destination (Project Site) as specified in BDS	Delivery (as per Incoterms) Date		
					Earliest Delivery Date	Latest Delivery Date	Bidder's offered Delivery date [to be provided by the Bidder]
BCEE 01	Theodolite (Electronic Total Station)	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 02	Automatic Electronic Levels and EDM	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 03	Dumpy Level And/ Automatic Level	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 04	Gps Receiver	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 05	Survey Compass	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 06	Prismatic Compass	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	

BCEE 07	Survey Chain	5	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 08	Ranging Rod	6	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 09	Leveling Staff	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 10	Engineer's Multi-Purpose Tilting Level	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 11	Triple Prism Set	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 12	Robotic Total Stations	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 13	Plane Table With Metal Head	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 14	Telescopic Alidade	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 15	Survey Umbrella	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 16	Tracing Table	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 17	Prism Pole	5	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	

BCEE 18	Motorized Compression/Tension Machine	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 19	Laboratory Concrete Mixer	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 20	Slump Test Apparatus	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 21	Porker Vibrator	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 22	In-Situ Water Permeability Test Kit	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 23	Concrete Cover Meter	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 24	Bulk Density Kit	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 25	Coarse Aggregate Density Test Set	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 26	Dunagan Test Set	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 27	Organic Impurities Test Set	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 28	Riffle Boxes (Sample Splitters)	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	

BCEE 29	Sieve Shaker	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 30	Los Angeles Abrasion Machine	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 31	Digital Point Load Tester	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 32	Impact Testing Machine	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 33	Drying Oven	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 34	Laboratory Bench Ovens	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 35	Field Cbr Equipment	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 36	CBR Test Machine (Hand Operated)	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 37	Hand Operated Casagrande Equipment	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 38	Motorised Casangarnde Equipment	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 39	Shrinkage Limit Set	5	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	

BCEE 40	Cone Apparatus	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 41	Shear Machine	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 42	Sieve Shaker	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 43	Particle Size Analysis Test Set	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 44	ISO 200mm Test Sieve	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 45	Soil Hydrometers	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 46	Consolidation Apparatus	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 47	Soil Volume Change Meter	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 48	Plate Bearing Test Machine	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 49	Core Cutter	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 50	Automatic Mechanical Soil Compactor	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	

BCEE 51	Soil Permeability Apparatus	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 52	Motorised Cbr Machine	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 53	Cone Penetrometer	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 54	Plastic Limit Roller	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 55	Plastic Limit Set	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 56	Shrinkage Limit Set	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 57	Shrinkage Prong Plate	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 58	Geotechnical Gauge	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 59	Grain Size Chart	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 60	Sand Gauge Chart	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 61	Cone Apparatus	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	

BCEE 62	Sand Cone Density Apparatus	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 63	Particle Size Analysis Test Set	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 64	Expansion Index Test Apparatus	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 65	Soil Volume Change Meter	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 66	Volu Vessel Device	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 67	Sand Replacement Equipment	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 68	Riffle Boxes	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 69	Permeability Test System	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 70	Tri-Axial Test Set	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 71	Masonry Saw	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 72	Vibrating Table	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	

BCEE 73	Rammers	5	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 74	Block Maker	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 75	Block Making Machine (Manually Operated)	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 76	Site Dumper	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 77	Scaffold & Platform	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 78	Hoisting Equipment	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 79	Concrete Poker Vibrator	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 80	Gauge Rods	5	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 81	Chapman Flask - % Voids In Aggregates	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 82	Coarse Aggregate Density Test Set	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 83	Length Gauge	5	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	

BCEE 84	Drying Oven	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 85	Deval Attrition Test Machine	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE86	Impact Testing Machine	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 87	Rebound Hammer	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 88	Pulse Velocity Measurement	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 89	Mortar Mixer	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 90	Test Bar Moulds	5	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 91	Length Comparator	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 92	Blaine Fineness Apparatus	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 93	Laboratory Concrete Mixer	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 94	Le Chatelier Flask	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	

BCEE 95	Shrinkage Mould	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 96	Brass Ring Mould	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 97	Standard Spatula	5	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 98	Gauging Trowel	5	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 99	Ball Mill	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 100	Vicat Apparatus	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 101	Flow Table	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 102	Pipe Threading Tools	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 103	Strap Wrench	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 104	Pipe Bender	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 105	Power Driven Pipe Treading Machine	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	

BCEE 106	Die Stock	4	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 107	Pipe Bending Machine	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 108	Guillotine Shears (Up To Gauge 16)	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 109	Arc Welding Transformers	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 110	Oxy-Acetylene Equipment	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 111	P.P.R Welding Machine	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 112	Rivet Gun (Different Sizes)	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 113	Nipple Chuck (13-38 Mm) For Making Nipples	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 114	Guillotine Shears	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 115	Slip Roller Machine	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 116	Heavy Duty Bench Vice	8	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	

BCEE 117	Arc Welding Shields	5	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 118	Centrifugal Pump	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 119	Bath Tubes With Pillar Taps	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 120	WC With Cisterns	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 121	Kitchen Sink	3	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 122	Basins With Pillar Taps	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 123	Hot Water Cylinder With Immersion Heater	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 124	Woodworking Lathes	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 125	Surface Dust Chip Remover	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 126	Multipurpose Wood Working Machine	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 127	Vertical Band Saw	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	

BCEE 128	Shaper	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 129	Tenoner	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 130	Training Equipment In Industrial Pneumatics	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 131	Properties Of Fluids And Hydrostatics	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 132	Pressure Measurement Bench	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 133a	Flow Meter Demonstration	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 133b	Flow Meter Demonstration	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 134	Flow In Pipe Network Apparatus	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 135	Multi-Pump Test Rig	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 136	Essential Accessories For Computer Interfaced Fluid Machine	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 137	Cavitation Demonstration	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	

BCEE 138	21 st century learning system for: building, civil, electrical, electronics and green energy	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 139	Furniture, workbenches, cabinets, storage equipment and IT equipment	1	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 139a	IT package consisting of:						
	Teacher PC Kit	4	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
	Classroom / Workshop	4	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
	Digital Whiteboard	4	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
	Whiteboard	4	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
	Printer	1	pc	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 139b	Teacher and student furniture kit consisting of:						
	Teacher furniture kit	4	pc	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
	Student furniture kit	4	pc	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	

BCEE 139c	Storage cabinets and equipment consisting of:						
	Storage cabinets open frond	4	pc	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
	Storage cabinets lockable	2	pc	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
	Storage rack	2	pc	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
	Storage shelves	2	pc	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
	Tool board	2	pc	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
	Parts storage	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 139d	Workbenches complete	4	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 139e	Student tool ktis	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 139f	General workshop tools & equipment	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
BCEE 139g	Tool trolleys empty	2	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	

BCEE 139h	Demo tables	4	pcs	Siaya Institute of Technology	9 Months From the date of contract signing	12 Months From the date of contract signing	
Totals Exclusive of Taxes							
Taxes							
Totals Inclusive of Taxes							
						Sub-Total Price	
Name of Bidder: _____ Signature of Bidder: _____ Date: _____							
2. List of Related Services and Completion Schedule							
Service	Description of Service	Quantity	Physical Unit	Place where Services shall be performed	Final Completion Date(s) of Services		
1	Equipment pre-inspection: The supplier shall organize pre-inspection of equipment in the country of origin before shipping into the country by members of the pre-inspection team nominated by the employer	5	No	country of origin of the equipment	Not later than 12 months from date of contract signing		

2.	<p>Training and Services Related to Equipment/Machines Supplied should include:</p> <p>i. Training of members of the teaching staff and technicians on Major and Routine Maintenance of equipment/ Machines,</p> <p>ii. Training members of the teaching staff and technicians on Use of the machines/equipment (i.e the total scope of use equipment/machines and experiments they can perform)</p>	10	NO	Siaya Institute of Technology	Not later than 18 months from date of contract signing
3.	<p>Training manuals:</p> <p>Bidder must provide hard copies and soft copies of Training manuals in English for the range of experiments/operation for each equipment/machines supplied</p> <p>Hard copy and a soft copy for each equipment</p>	5 sets	Sets	Siaya Institute of Technology	Not later than 18 months from date of contract signing
4.	<p>Installation, testing and commissioning of equipment/ machines:</p> <p>Bidders must install, test, calibrate and commission the equipment supplied</p>	All equipment in each package supplied	NO	Siaya Institute of Technology	Not later than 18 months from date of contract signing
5.	<p>Branding of equipment:</p> <p>1. Each piece of equipment should be branded/tagged as follows:</p> <p>"GoK/AfDB TVETE III-OTTI..."; followed by a serial number</p> <p>2. The branding/tagging words should be permanent and will be both engraved on a small metal plate and riveted on metallic machines/equipment or engraved on the items.</p>	All equipment in each package supplied	NO	Siaya Institute of Technology	Not later than 18 months from date of contract signing

3. Technical Specifications

The purpose of the Technical Specifications (TS), is to define the technical characteristics of the Goods and Related Services required by the Purchaser. The Purchaser shall prepare the detailed TS take into account that:

- The TS constitute the benchmarks against which the Purchaser will verify the technical responsiveness of Bids and subsequently evaluate the Bids. Therefore, well-defined TS will facilitate preparation of responsive Bids by Bidders, as well as examination, evaluation, and comparison of the Bids by the Purchaser.
- The TS shall require that all goods and materials to be incorporated in the goods be new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided for otherwise in the contract.
- The TS shall make use of best practices. Samples of specifications from successful similar procurements in the same country or sector may provide a sound basis for drafting the TS.
- The Bank encourages the use of metric units.
- Standardizing technical specifications may be advantageous, depending on the complexity of the goods and the repetitiveness of the type of procurement. Technical Specifications should be broad enough to avoid restrictions on workmanship, materials, and equipment commonly used in manufacturing similar kinds of goods.
- Standards for equipment, materials, and workmanship specified in the bidding document shall not be restrictive. Recognized international standards should be specified as much as possible. Reference to brand names, catalogue numbers, or other details that limit any materials or items to a specific manufacturer should be avoided as far as possible. Where unavoidable, such item description should always be followed by the words “or substantially equivalent.” When other particular standards or codes of practice are referred to in the TS, whether from the Borrower's or from other eligible countries, a statement should follow other authoritative standards that ensure at least a substantially equal quality, then the standards mentioned in the TS will also be acceptable.

- Reference to brand names and catalogue numbers should be avoided as far as possible; where unavoidable the words “or at least equivalent” shall always follow such references.
- Technical Specifications shall be fully descriptive of the requirements in respect of, but not limited to, the following:
 - (a) Standards of materials and workmanship required for the production and manufacturing of the Goods.
 - (b) Any sustainable procurement technical requirements shall be clearly specified. Please refer to the Bank's Procurement Framework for further information. The requirements to be specified shall be specific enough to not demand evaluation based on rated criteria/merit point system. The sustainable procurement requirements shall be specified to enable evaluation of such a requirement on a pass/fail basis. To encourage bidders' innovation in addressing sustainable procurement requirements, as long as the bid evaluation criteria specify the mechanism for monetary adjustments for the purpose of bid comparisons, bidders may be invited to offer Goods that exceeds the specified minimum sustainable procurement requirements.
 - (c) Detailed tests required (type and number).
 - (d) Other additional work and/or Related Services required to achieve full delivery/completion.
 - (e) Detailed activities to be performed by the Supplier, and participation of the Purchaser thereon.
 - (f) List of detailed functional guarantees covered by the Warranty and the specification of the liquidated damages to be applied in the event that such guarantees are not met.

SUMMARY OF TECHNICAL SPECIFICATIONS

TENDER FOR SUPPLY, INSTALLATION, CALIBRATION, COMMISSIONING AND TRAINING ON THE USE AND MAINTENANCE OF BUILDING AND CIVIL ENGINEERING EQUIPMENT TO SIAYA INSTITUTE OF TECHNOLOGY

The Goods and Related Services shall comply with following Technical Specifications and Standards:

Item No	Name of Goods or Related Service	Technical Specifications and Standards	Compliance
BCEE 01	Theodolite (Electronic Total Station)	<p>Use: traversing, setting out Measuring range: Single prism: 5000m Triple prism: 8000-10,000m Mini prism: 800m</p> <p>Accuracy: with prism 2mm+2ppm without prism 3mm+2ppm</p> <p>Digital display: Maximum 99999999.9999 - Minimum 0.1mm</p> <p>Measuring time: Tracking 0.1S, Fine 0.3S (Optimal)</p> <p>Atmospheric correction: Automatic correction by inputting Parameter</p> <p>Prism constant: Automatic correction by inputting Parameter</p> <p>Angle Measurement: Measurement method: Absolute Encoding Diameter of the raster disk: 79mm Minimum reading 1" / 5" Optional Accuracy 5" Detection method: Horizontal: Dual – Vertical : Dual</p> <p>Telescope: Image: Erect Length: 154mm Effective aperture: 45mm, (DTM: 50mm)</p>	

		<p>Magnification: 30X Field of view : 1° 30' Resolving power: 3" Minimum focus: 1m</p> <p>Compensation: System: Dual axis liquid-electric Working range: ±3' Resolving power: 1"</p> <p>Sensitivity of Vials: Plate vial: 30" / 2mm Circular vial: 8' / 2mm</p> <p>Optical Plummet: Image: Erect Magnification: 3X Focusing range: 0.5m to ∞ Field of view: 5°</p> <p>Data storage & communications: Internal memory: 2M/ 24000 points External memory: SD card (upto 32GB) Communication port: RS-232, mini USB</p> <p>Display: Dual side, 6 lines</p> <p>Battery: Rechargeable Ni-H (2700mAh), 6VDC, 10 Hrs continuous operation. Dust/Water (IEC 60529) : IP 54 Weight: 4.5Kg</p> <p>Accessories: Aluminum Tripod Rechargeable Battery Battery charger & Adaptor Communication cable SD-CARD Tools kit Plummet Carrying case Operational manual Software CD QC Pass Certificate Rain cover Case Belt</p>	
BCEE 02	Automatic Electronic Levels and EDM	Use: obtaining linear distances automatically and for leveling exercises	

		<p>4th Order Level & Stave Standard deviation for 1km double run leveling: Digital reading: 1.5mm Optical reading: 2.0 mm Distance accuracy : Digital reading : $D \leq 10\text{m}$: 10mm; $D > 10\text{m}$: $D \times 0.001$ Distance range: Digital reading: 1.5m to 100m</p> <p>Minimum display: HD: 1mm/0.1mm Distance: 0.1/1cm Measuring time: within 3S in normal conditions</p> <p>Telescope: Magnification: 32X Resolving power: 3" Image: Erect Objective Aperture: 36mm Field of view: $1^\circ 30'$ Multi-constant: 100 Add-constant : 0</p> <p>Compensator: Type: Magnetic-damped Range: $> \pm 12'$ Accuracy: $0.30''/1'$</p> <p>Circular vial accuracy: $8'/2\text{mm}$</p> <p>Horizontal circle: graduation 1°</p> <p>Display: LCD of 160 x 64 dpi with illumination</p> <p>Auto power off: 5 minutes OFF</p> <p>Weight: 2.5Kg Supplied with dust cover & 5 meter dual face Aluminum Staff (Graduated /Barcode)</p> <p>3rd Order Level & Staves:</p> <p>Accuracy: Height accuracy: ± 0.7 mm/km Distance accuracy: $D < 10 \text{ m}$, 10 mm $D \geq 10 \text{ m}$, $0.001 \times D$</p> <p>Systems: Maximum Range: 105 m</p>	
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		<p>Minimum Range: 2 m Single measurement speed: < 3 sec. Minimum lighting condition: 20 Lux minimum field of view: >=50%</p> <p>Display: Minimum resolution (Ht): 0.1 mm Minimum resolution (Dist): 1 mm</p> <p>Telescope: Magnification: 24 x Image: Erect Objective Aperture: 36mm</p> <p>Compensator: Range: $\pm 10'$ Setting accuracy: $\pm 0.35''$</p> <p>Communication: Internal memory: 2'000 measurements Interface: RS232 The recorded data on the site can be downloaded by connecting with PC or laptop.</p> <p>Weight including battery < 2.5 kg</p> <p>Battery: AA dry cells (4 x AA 1.5V). 1800mAh / 2300mAh 14 /16 hours continuous measurement.</p> <p>Accessories: Aluminum Tripod. Dust cover. Dual face fiberglass leveling staff, 3meter, 1 section, Barcode/E-Scale cm-graduation, with circular bubble, in transport bag.</p>	
BCEE 03	Dumpy Level And/ Automatic Level	<p>Use: performing simple leveling exercises on building construction sites</p> <p>Type: Automatic Image: Erect Reticle: Cross Reticle Objective Aperture: 36mm Magnification: 20 X</p>	

		<p>Horizontal Circle: 1° graduation Compensator: Air damping Compensator Range: $\pm 15'$ Compensator Accuracy: $\pm 0.5''$ Standard Deviation of 1 km double run: $\pm 1.0\text{mm}$ Minimum Focus: 1.0m Field of View: 1°20' (2.1m/100m) Outer Circle: 360°/1° or 400gon/ 1gon Sensitivity of Circular Level: 8'/2mm Multiplication Constant: 100 Additive Constant: 0 Leveling Mechanism: Foot Screws</p> <p>Accessories: Aluminum Tripod Leveling staff Plumb Bob Adjusting Pin Hex Key, User Manual, Desiccating Agent, Rain Cover</p>	
BCEE 04	Gps Receiver	<p>Use: to obtain altitude and X-Y positions</p> <p>Water proof handheld GPS Used to obtain altitude and X- Y positions, 4-inch dual orientation, glove-friendly touchscreen display, 8 megapixel autofocus camera, automatic geotags photos, tracks both GPS and GLONASS satellites, 1-year Satellite Imagery subscription, 3-axis compass with barometric altimeter, touch screen size 2"W x 3.5"H, resolution 270x480, 65K color TFT, battery life 22 hours, memory 4GB, USB- interface.</p>	
BCEE 05	Survey Compass	<p>Use: determination of geographical locations, for easy and fast leveling and greater degree of accuracy</p> <p>Made of either brass or gun metal.</p>	

		<ul style="list-style-type: none"> • The compass is graduated to degrees with adjustments for setting declination. • Provided with two bubble and bar needle fitted with real agate stone to give accurate bearing. • Consist of a strong molded leather or FRP carrying case and shoulder strap. • Provided with ball and socket joint and a permanently mounted circular spirit level. • The base is flat and is provided with a straight edge beveled and graduated to $\frac{1}{4}$ "for plane table work . • Should be portable and easy to use. 	
BCEE 06	Prismatic Compass	<p>Use: obtaining the true north and getting magnetic north</p> <p>Standards:</p> <ul style="list-style-type: none"> • ISO 8729:1999 <p>Specifications:</p> <ul style="list-style-type: none"> • Made of Aluminium/brass • Size 100mm, 125 mm, 150 mm dia. • Complete in Case with Aluminium Telescopic/Rigid/Wooden Tripod. • Aluminium circle consist of a needle graduated to 30min (0.5) graduations • Painted with water proof paints. • Carrying cases are made of Fibre with carrying straps • Least count 30' 	
BCEE 07	Survey Chain	<p>Use: to indicate land distances for legal and commercial purposes.</p> <p>100 braced links, 2 rings per link,</p>	

		<p>0.10" wire Cast brass handles,</p> <p>Adjustable calibration and tally tags at $\pm 10, 20, 30, 40$ and centre on side rings. Measuring chains with brass handles and arrows – 20 m, 30 m, 40 m and 50m</p>	
BCEE 08	Ranging Rod	<p>Use: marking positions in surveying or for sighting by surveyors.</p> <p>Aluminium Ranging Rods made from best quality conduit pipes. Socket type and screw type. Each section painted alternately with red and white paints at 20 cms intervals. Fitted with pointed shoe.</p>	
BCEE 09	Leveling Staff	<p>Use: Accessories to level</p> <p>Standards: BS 4484;IS-11961-1986 Compatible with level, theodolite and total station</p> <p>Specifications: The levelling staff shall be of sturdy design that meets the requirements for intensive field work. The staff material should be one of the following: teak, cypress, kail, aimi, champ, hollock or aluminium alloy (A6 of IS-617-1975). If timber is used as staff material, then it shall be well seasoned, sawn in radial direction and free of defects. The staff shall be telescopic, comprising three sections without any joint in length. The shoe shall be of brass conforming to grade IS-292-1983. The top plate shall be of aluminium, anodised black and of grade A6 of IS-627-1975. Length 4 m</p>	

		<p>Graduations 200 divisions per meter</p> <p>Graduation colour alternating black and white (10 mm width)</p> <p>Numerals every decimetre in black</p> <p>every meter in red</p> <p>Accessories (conforming to same standard as above)</p> <p>circular bubble sensitivity of 25 minutes per 2 mm run</p> <p>carrying case canvas</p> <p>plummet fittings for test and adjustment of bubble</p>	
BCEE 10	Engineer's Multi-Purpose Tilting Level	<p>Use: For general leveling</p> <p>Type: Automatic</p> <p>Image: Erect</p> <p>Objective Aperture: 36mm</p> <p>Magnification: 24X</p> <p>Horizontal Circle: 360 ° / 1 ° graduation (Diameter 106 mm)</p> <p>Horizontal fine motion screws</p> <p>Double-sided endless drive:</p> <p>Field of view : < 2.1 m at 100 m</p> <p>Reticle: Cross hairs, with stadia lines</p> <p>Stadia multiplication constant: 100</p> <p>Stadia additive constant: 0</p> <p>Sensitivity of circular bubble: 8 ' / 2 mm</p> <p>Mirror for circular level: Plane mirror</p> <p>Compensator: Automatic, Air damping</p> <p>Compensator Range: ± 15'</p> <p>Compensator Accuracy: ± 0.5"</p> <p>Standard Deviation of 1 km double run: ± 2.0mm</p> <p>Minimum Focus: < 1.0 m</p> <p>Leveling Mechanism: Foot screws</p> <p>Dust and Water resistance: Conforms to IP54 (IEC60529)</p> <p>Accessories: Aluminum Tripod. Telescopic level staff. Cover & adjustment tools.</p>	

BCEE 11	Triple Prism Set	<p>Use: Accessory for total station and theodolite</p> <p>Standards: ISO/DIS12585-3.</p> <p>Specifications: To be compatible with theodolite/total station zero constant, with target supplied with carrying plastic container</p>	
BCEE 12	Robotic Total Stations	<p>Instrument comes with a complete range of powerful applications: Survey Set-up with resection Set out Area 3D & volume Remote elevation Construction Reference Line Reference Arc Grid SetOut Column Offset CoGo routines Missing line measurement Two prism offsets Road 2D & 3D</p> <p>Angle measurements: Accuracy 2" (0.6 mgon) Display resolution 0.1" (0.1 mgon) Method Absolute, continuous, diametrical Compensation Quadruple axis</p> <p>Distance measurements: Reflectorless (Non-prism): 600 meters / 2 mm + 2 ppm Reflector (prism): 3,500 meters / 2 mm + 2 ppm Footprint: 8 x 20 mm</p> <p>Instrument includes: EDM technology up to 600 m reflectorless Coaxial visible laser beam</p> <p>Keyboard: Full alphanumeric Display: 3.5" Quarter-VGA Colour touch screen (320 x</p>	

		<p>240 pixel), 10 lines x 30 characters, illuminated. Internal memory: 50,000 pts Removable memory: USB memory stick Interface: USB, serial RS232 & external power & Bluetooth® Device Class 1 Light alignment aid: Working range 5m to 150m /Position accuracy 5cm at 100m Operating system Windows® Embedded CE Plummet Type Laser point, adjustable brightness Plummet Accuracy 1.5 mm at 1.5 m instrument height Internal battery Removable Li-Ion 4.4 Ah / 7.4 V Operating time 36 h (continuous angle), 9 hours (continuous distance measurement every 30s) Protection class IP54 dust- and waterproof Distance meter (Reflector Mode): Laser class 1 in accordance with IEC 60825-1 resp. EN 60825-1 Laser plummet: Laser class 2 in accordance with IEC 60825-1 resp. EN 60825-1</p> <p>Including the following accessories: Tribrach adaptor with optical plummet. Circular prism with holder and Telescopic pole. Target plate and Reflective tape. Aluminum Tripod.</p>	
BCEE 13	Plane Table With Metal Head	<p>Use: For drawing site plans and maps and various engineering recordings during field surveys</p> <p>Equipment parts Plane table board Brass circular disc Compete with brass sight vane Spirit level Plumb bob Plumbing fork Magnetic compass Canvas cover</p>	

		<p>Telescopic alidade Wooden stand.</p> <p>Speculations Spirit level Meeting BS 3509:1962 Specifies dimensional, constructional and performance requirements for a range of spirit level vials - both cylindrical and circular - and describes a recommended method of testing.</p> <p>Plumb bob Brass Plumb Bob with waxed string. Small size - stows easily into Bike Fit Systems Cleat Screw Kit, measuring 1" in length. The Plumb Bob is a standard component of the Bicycle Fitting System.</p> <p>Complete in Case with Aluminium Telescopic/Rigid/Wooden Tripod. Aluminium circle consist of a needle graduated to 30min (0.5) graduations Painted with water proof paints. Carrying cases are made of Fibre with carrying straps with a fitted tripod, Size :board 600mmx750mm</p> <p>Plane table board High quality fir wood with hard wood battens (meeting at the back fitted with brass screws and washers, meeting BS 4978:1996 nuts for clamping</p>	
BCEE 14	Telescopic Alidade	<p>Use: Used with the plane table</p> <p>Standards: BS EN 1803:2002, IS 13393 : 1992 /ISO 6709 : 1983</p> <p>Specifications: Telescopic alidade with compass on brass base and foot screws & bubble, Compass dia 8.8 cms,</p>	

		Telescope's lens 25 mm. Magnification 15 X, Telescope extended: 32 cms, collapsed 23 cms	
BCEE 15	Survey Umbrella	Use: to shade levels, theodolite, and total stations during survey exercises. Diameter 1574.8mm (62"). Pole 31.75mm x 2108.2mm (1- 1/4" x 83") Material vinyl pole	
BCEE 16	Tracing Table	Use: tracing other works Made of wooden or metallic box opened up on the superior face covered with a translucent surface of plastic. The face is illuminated by either a source of light located inside the box. either a bulb or a fluorescent lamp.	
BCEE 17	Prism Pole	Use: Accessory for total station Standards: ISO 17123-3: 2001 Specifications: To be compatible with theodolite/total station 2,6m telescopic graduated in centimetres such that graduations are compatible with the following prism combinations for the Robotic application Prism poles made for aluminium pipe of 25mm dia. Telescopic in two sections, painted alternately with red and white water proof paint at 20 cms intervals, fitted with quick locking system, provided with water proof canvas cover. Strong High Tensile Extruded aluminium alloy. Painted with water proof paints. Brightly coloured for high on site visibility.	

BCEE 18	Motorized Compression/Tension Machine	<p>Use: For compression & Tension tests machine for tensile test (500KN) and compression test (1500 KN)</p> <ul style="list-style-type: none"> - Max. tensile test load: 500 kn (0.01 kn divisions) - Max. compression test load: 1500 kn (0.1 kn divisions) - Piston stroke: 100 mm - Span between the columns: 270 mm - Manual regulation of the load/tensile rate with pacer <p>Includes:</p> <ul style="list-style-type: none"> - Tensile Grips (in 4 pieces) with interchangeable wedges: Round bars with diameters from 15 to 25 mm For flat bars max. width 50 mm, (thickness: 6 to 15 mm) - Platens, spacing pieces and ball seating to test cylinders dia. 15x30 cm and 15-20 cm cubes. - Grip holders, for specimens mm 300-350 - Lifting winch for ball seating - Oil bath joint. - Load sensors: n.2 electric transducers. - Load measuring instrument: 2 electric transducers in conjunction with digital display unit - Electronic instrument Display Unit: Function (data acquisition - processing - storage – display) 500,000 nominal resolution points Memory for test programs and results allows up to 340 tests to be stored 2 channels (standard) Compressive, flexural, tensile tests and calibration. 	
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		<p>Has a numerical keypad to facilitate data entry. Numbers are entered by touching a key rather than having to scroll a long list using arrow keys.</p> <p>Uses a 24 bit A/D converter for each input.</p> <p>SOFTWARE is enhanced by the variety of testing programs installed at the factory.</p> <p>Power supply is 12 V D.C. via external adaptor</p> <p>Fitted with several ports: Two serial ports RS 232 (one of which may be configured as RS 485). Ten ON/OFF logic outputs Four ON/OFF logic inputs. 12 bit proportional output for connecting machines requiring a closed loop feedback system One input for uploading new software from a PC.</p> <p>The user interface comprises a pixel graphic display. The lower part is comprised of symbols indicating the functions attributed by the software to the 5 keys located beneath.</p> <p>A numeric keypad enables data to be input in a practical, no-nonsense manner, while a further set of keys are dedicated to the most common operations.</p> <p>Machine Dimensions: 780x420x1700 mm Machine Weight: 900 kg Machine Power: 220 V, 50 Hz, 1 ph, 1200 W</p>	
BCEE 19	Laboratory Concrete Mixer	<p>Use: To prepare concrete specimens and samples.</p> <p>The mixing blades and paddle made of steel to resist wear, and to ensure a fast and effective mixing operation. Pan capacity: 130 litres</p>	

		<p>The mixing pan not removable and tilt able for easy access to the pan and emptying on completion of the mixing operation.</p> <p>Mixing capacity: 90 litres</p> <p>Overall dimensions: 783x710x1300 mm approx.</p> <p>Power: 220 – 240 V AC, 50 Hz, 1 ph.</p> <p>Weight approx.: 110 kg To be cleaned and stored after use</p>	
BCEE 20	Slump Test Apparatus	<p>Use: testing concrete</p> <p><u>Standards:</u> EN 12350-2, ASTM C143 and AASHTO T119</p> <p><u>Specifications:</u> Slump cone of internal dimensions 200mm. dia at base 100mm. top dia. and 300mm height Tamping Rod made of Steel, 600 mm long x 16 mm dia, hemispherical at both ends Steel Rule 300mm long Metal tray 600x600x80 mm Aluminium scoop</p>	
BCEE 21	Porker Vibrator	<p>Use: compaction of concrete</p> <p><u>Standards:</u> EN 12390-2: ASTM C31, C192: AASHTO T126</p> <p><u>Specifications:</u> Tip dimensions mm: dia. 32 x250mm long Flexible shaft: 3000mm Electric operated Current specifications: 220-230V, 50-60Hz, 1 ph Power: 500W Weight approx: 7 kg</p>	
BCEE 22	In-Situ Water Permeability Test Kit	<p>Use: testing Concrete water permeability</p> <p>Pressure chamber unit with 0-1.5 bar gauge & built-in micrometer gauge & valves. Wrench for pressure lid. Extra 0-6.0 bar gauge. Water filling cup.</p>	

		<p>Adjustable clamping pliers. Set of anchoring tools with drift & hammer. Wrenches: 14 and 17 mm. Sealant tape. Bottles with boiled water, 3 bottles. Gaskets, 10 mm thick, 4 pcs. Gaskets, 15 mm thick, 4 pcs. Operating Manual. Hard Carrying Case.</p>	
BC EE 23	Concrete Cover Meter	<p>Use: Reinforcement depth measurement</p> <p>Bar size can be preset if known, or detected automatically for survey and investigation tasks. For non-standard bar sizes, large diameter pipes or other pre-fabricated items, it can also show absolute measurements that can be used to look up cover using custom tables.</p> <p>For immediate results on-site, the onscreen gauge and audio feedback rapidly pinpoint rebar location and orientation.</p> <p>Meets or exceeds the requirements of BS1881 part 204 over the full range of the instrument</p> <p>Cover range 5mm – 185 mm Accuracy: ± 1mm up to 60mm cover ± 2mm up to 120mm ± 3mm up to 160mm ± 4mm over 160mm</p> <p>Automatic Bar Sizing Accuracy ± 0.5mm – ± 1.5 mm Resolution 0.1mm</p> <p>Operating Depth 6mm bar up to 60mm cover 40mm bar up to 80mm cover</p> <p>Bar Resolution Bar size: 16mm, Cover: 60mm, Minimum spacing: 70mm</p>	

		<p>Bar size: 16mm, Cover: 100mm, Minimum spacing: 110mm Bar size: 25mm, Cover: 130mm, Minimum spacing: 150mm</p> <p>Operating Weight 800g Battery Operation 20 hrs Ingress Protection IP65</p> <p>Cover meter Includes: Probe with integral cable Battery charger Spare probe sole-plate Certificate of Conformity Light & tough equipment bag 2 year warranty</p>	
BCEE 24	Bulk Density Kit	<p>Use: Bulk density measurement</p> <p>Bulk density measurement of: Fresh concrete Hardened concrete and Aggregates.</p> <p><u>Standard:</u> EN 1097-3 or ASTM C138.</p> <p><u>Specifications:</u> Manufactured from heavy gauge steel to standards above</p> <p><u>Accessories:</u> Compacting Bar for BS/EN tests Tamping Rod for ASTM tests Cradle for holding specimens Digital balance 6000 g x 0.1 g Digital balance 30 kg x 0.5 g Digital balance 30 kg x 0.1 g Digital balance 30 kg x 0.5 g</p>	
BCEE 25	Coarse Aggregate Density Test Set	<p>Use: measurement of density and specific density, standard weighing</p> <p><u>Standards:</u> EN 1097-6, 12697-6; ASTM C127; AASHTO T85</p> <p><u>Specifications:</u></p> <p>Buoyancy Balance, of capacity 30000 g for aggregates between 63mm and 5mm 8" Stainless Steel Sieve no.4 Mesh</p>	

		<p>1 Pan, Stainless Steel Power 220vAC, 50/60H Density Basket: with dimensions 203 mm diameter x 203 mm deep, constructed of reinforced no. 8 wire mesh). Suspension hook Water tank with dimensions: 400x400x330 mm approx. (lxwxh).</p>	
BCEE 26	Dunagan Test Set	<p>Uses: Specific gravity, Absorption of fine and coarse aggregates, Silt determination Constituents of fresh concrete</p> <p><u>Standards:</u> ASTM C127, C128; AASHTO T84, T85</p> <p><u>Specifications:</u> Balance of 6 kg capacity. Containers: Immersion and soaking buckets with handles; water overflow container. Density Basket: with dimensions 203 mm diameter x 203 mm deep, constructed of reinforced no. 8 wire mesh). Weights: 2,000 g Stainless Steel weight and 1 kg slotted types. Scoops: set of three for weighing Sieves: 203 mm (8") diam.; one no.4 mesh x 4" (102 mm) h.; one no.100 mesh, standard height with no.100 mesh side openings to AASHTO M 92 standards Case: Galvanized steel construction with cover and carrying handles. Weight: 33kg</p>	
BCEE 27	Organic Impurities Test Set	<p>Use: Presence of injurious organic compounds in sand</p> <p><u>Standard:</u> ASTM C40</p> <p><u>Specifications:</u> 6 Graduated Impurities Test Bottles. Construction of glass; 500 ml capacity; graduated.</p>	

		<p>Cap made of plastic; screw-on. Net weight 4 oz. (113 g)</p> <p><u>Accessories:</u> 1 Color Standard Chart. Five Color Standards, on non-fading glass. Dimensions 76 x 73 x 102 mm (3" w. x 2-7/8" d. x 4" h). Net weight 113g (4 oz.) 1 pt. Sodium Hydroxide Solution.</p>	
BCEE 28	Riffle Boxes (Sample Splitters)	<p>Use: Aggregate sampling To divide aggregates into a representative sample increment for testing.</p> <p><u>Standard:</u> BS 1377-2 (1990), EN 932-1</p> <p><u>Specification:</u> Capacity ranges from 0.24 to 11.3 dm³ The sizes range from 7 mm to 64 mm slot widths. Slots range from 12 to 8</p> <p><u>Accessories:</u> 2 2 metal pans for each rifle box</p>	
BCEE 29	Sieve Shaker	<p>Use: Electrically shake aggregates on sieves</p> <p>High frequency sieve shaker Electric operated 220 V-AC, 200 Watt The shaker accepts sieves sizes 8" sieve dia. and 12" sieve dia. Shaker capacity up to 15 sieves. Vibration frequency 42 Hz Vibration mode: Upper & Lower Regular timer: 0-60 min Dimension (l x w x h) : 51 x 51 x 100 cm Gross Weight : 24 kg</p>	
BCEE 30	Los Angeles Abrasion Machine	<p>Use: Aggregate resistance to abrasion; Should be housed in a soundproof and protection cabinet.</p>	

		<p><u>Standards:</u> EN 1097-2, NF P18-573, ASTM C131</p> <p><u>Specifications:</u> Capacity of 5,000 g each of aggregate and charge. Drum Speed 31-33 rpm. Welded structural steel frame Adjustable; automatic shut-off; push-button reset and adjustment counter Magnetic motor starter with overload protection and integral On-Off switches. Dimensions of 1100 x 1150 x 1250 mm (+/- 38.6" w. x 36.2" d. x 38.6" h). Net weight 882 lbs. (500 kg). Power: 220-240vAC, 60 Hz</p> <p><u>Accessories:</u> Set of 12 abrasive charges conforming to ASTM Standards stated above</p>	
BCEE 31	Digital Point Load Tester	<p>Use: Aggregate strength</p> <p><u>Specifications:</u> Capacity. 13,000 lbf. (50 kN). Specimen Size: 4" (101.6 mm) maximum. Load Range. 0 to 50 kN Accuracy is $\pm 1\%$ Net weight 55 lbs. (25 kg)</p>	
BCEE 32	Impact Testing Machine	<p>Use: tests Aggregate impact value and Resistance of aggregate to shock or impact</p> <p><u>Standard:</u> BS 812-112</p> <p><u>Specifications:</u> Made of plated steel against corrosion, safety locking bar, and built in counter Cylindrical Measure Machine steel, 75 mm diameter., 50 mm deep 2 Tamping Rod Galvanized steel, 3/ 8" (9.3mm) diameter, 8" (203mm) length Dimensions: 444x300x879 mm (lxwxh) Weight approx. 58 kg</p>	

		<p><u>Accessories:</u> Sieve 1/ 2", Sieve 3/ 8", Sieve No. 8 and Pan & Cover to AASHTO M 92 standards Triple Beam Balance of 2610g capacity and sensitivity of 0.1g made of stainless steel Mixing Bowl made of stainless steel and of 255mm diameter Soft Brush</p>	
BC EE 33	Drying Oven	<p>Use: Drying large quantities of aggregate samples; Also in drying large quantities of soil samples</p> <p>Interior body is made from stainless steel by argon-arc-welding technique. - Exterior body is made of high-quality steel sheet with a novel appearance. - Temperature control protection. - Digital display - Microcomputer PID temperature controller with timer function to ensure precise & reliable temperature control. - Hot air circulation system is composed of blower fan and proper air channels. - Oven door with Silicon gasket & transparent thermal glass window for watching the samples under drying. - Can adjust blast and exhaust in control panel.</p> <p><u>Specifications:</u> Capacity: 250 liters Temp. range: +50~300°C Time Locating Range: 1~9999Min Dimensions: 800x850x1040mm external, 570x560x800mm internal Temp. Fluctuation: ± 0.75 °C Temperature Resolution: $\pm 2^{\circ}\text{C}$</p>	

		<p>Rated power heater elements: 2.5 KW Shelves: 3 Shelf positions; 3 Weight: 100 kg</p>	
BCEE 34	Laboratory Bench Ovens	<p>Use: Drying large quantities of aggregate samples; Also in drying large quantities of soil samples</p> <p>Interior body is made from stainless steel by argon-arc-welding technique.</p> <ul style="list-style-type: none"> - Exterior body is made of high-quality steel sheet with a novel appearance. - Temperature control protection. - Digital display - Microcomputer PID temperature controller with timer function to ensure precise & reliable temperature control. - Hot air circulation system is composed of blower fan and proper air channels. - Oven door with Silicon gasket & transparent thermal glass window for watching the samples under drying. - Can adjust blast and exhaust in control panel. <p><u>Specifications:</u> Capacity: 250 liters Temp. range: +50~300°C Time Locating Range: 1~9999Min Dimensions: 800x850x1040mm external, 570x560x800mm internal Temp. Fluctuation: ± 0.75 °C Temperature Resolution: $\pm 2^\circ\text{C}$ Rated power heater elements: 2.5 KW Shelves: 3 Shelf positions; 3 Weight: 100 kg</p>	

BCEE 35	Field Cbr Equipment	<p>Use: Measuring in-situ soil bearing capacity.</p> <p><u>Standard:</u> BS 1377, 1924, EN 13286-47, ASTM D1883, AASHTO T193</p> <p><u>Equipment parts to the above standards</u> Field CBR Jack 50kN capacity; weight 8.5 kg; total height: 254mm 1 Ball Seating Attachment 1 Proving Ring, 30 kN capacity. 1 Proving Ring, 50kN. capacity 1 Field Penetration Piston 50 mm dia. threaded at the upper end</p> <p>Extension Rod machined from steel tubing, consisting of 2 lengths 5 cm. 2 lengths 10 cm., 1 length 30 cm., 1 length 50 cm., and 1 length 100 cm., used as spacers between the proving ring and penetration piston. 1 Bracket and Adapter. 1 Bridge Support. 1 Penetration Dial Indicator. 1 Circular 4.54 kg Surcharge Weight. 250 mm dia with 53 mm dia central hole, 1 Slotted (4.54 kg) Surcharge Weight. 215 mm to 250 mm dia with 53 mm dia slot 1 Slotted (9.07 kg) Surcharge Weight 215 mm to 250 mm dia with 53 dia slot</p> <p>Dial gauge support of seamless pipe construction, 30 cm high and 45 cm wide at the base, with a quick release screw type clamp capable of sliding and locking anywhere along 2 meter length of the bridge. Carrying case.</p> <p><u>Accessories:</u> Dial gauge 0.01mm x 25mm. (as per item S70)</p>	
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		Proving ring calibration charts as per equipment standards above	
BCEE 36	CBR Test Machine (Hand Operated)	<p>Use: CBR test in Lab to determine soil bearing capacity</p> <p><u>Standard:</u> BS 1377, 1924, EN 13286-47, ASTM D1883, AASHTO T193 specifications</p> <p><u>Equipment parts to above standards:</u> 1 CBR Loading Press. Proving Ring. 30 kN (6,000 lb) capacity. Proving Ring. 50 kN (11,200 lb) capacity. Penetration Dial Indicator. 25 mm range x 0.01 mm divisions. 4 CBR Molds. 1 Spacer Disc. 4 Filter Screens. 1 Box, Filter Paper. 2 Swell Plates. 1 Tripod Attachment. 4 Surcharge Weights. 4 Slotted Surcharge Weights. 1 Compaction Hammer. 1 Straightedge. 1 Cutting Edge.</p> <p><u>Specifications:</u> CBR loading press: Jack: Mechanical, NO QUICK RELEASE DEVICE FOR RAPID ADJUSTMENTS. Frame: Heavy-duty steel construction with two column uprights. Dimensions: 368 x 260 x 1,168 mm (14.5" w. x 10.25" d. x 46" h). Weight: Net 65.7 kg (145 lbs)</p> <p><u>Filter paper</u> Filter Paper made to ASTM D-1883; AASHTO T-193 Grade: Coarse. Size: 15 cm diam. (5.9"). Weight: Net 227 g. (8 oz).</p> <p><u>Filter screen</u></p>	

		<p>Mesh: Cut to 135 mm (5-15/16") in diameter. Brass: number 100. Size: 135 mm diam. (5-15/16"), Weight: Net 1 oz. (28 g). <u>Spacer discs</u> Construction: Steel; machined on all sides. Finish: Plated. Size: 47.6 x 50.8 mm (5-7/8" diam. x 2" h.) and 150.8 x 61.3mm (15/16" diam. x 2.416" h). Weight: Net 6.3kg and 7.3 kg.</p> <p><u>Surcharge weights</u> Construction: Machined steel made to BS ISO 19960:2005 Finish: Plated.</p> <p><u>Weights:</u> 2.27 kg Slotted. 149.2 x 52.4 mm. 2.27 kg Circular. Slot 149.2 x 52.4 mm. 4.54 kg Slotted 216 mm. 4.54 kg Circular 254 mm 9.07 kg Slotted 216 mm.</p> <p><u>CBR Mould</u> CBR Mold made to ASTM D-1883; AASHTO T-193 and BS 1377 Internal diameter: 152.4 mm (6") Height: 177.8 mm (7") Mould: 152.4 x 177.8 mm (6" d. x 7" h.). Collar: 50.8 mm. (2" h); fits both ends of mould. Base Plate: Perforated; fits both ends of mould. Construction: All steel and plated. Weight: Net 9 kg. (20 lbs).</p> <p><u>Swell plate</u> Swell Plate made to ASTM D-1883; AASHTO T-193. Base Plate: 149.2 mm. (5-7/8" diam); perforated. Contact Head: Adjustable; locks on stem with knurled nut. Construction: All brass. Weight: Net 1.1 kg. (2-1/2 lbs).</p>	
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		<p><u>Cutting edge</u> Construction: Machined from seamless steel tubing Inside diameter: 152.4 mm (6") Height: 38 mm (1-1/2"). Overall Dimensions: 152.4 x 38 mm. (6" d. x 1-1/2" h). Construction: Machined seamless steel tubing; recessed for mounting on CBR Mould. Finish: Plated. Weight: Net 0.7 kg. (1-1/2 lbs).</p> <p><u>Tripod attachment</u> Tripod Attachment made to ASTM D-1883; AASHTO T-193 Construction: Machined, one-piece cast aluminum. Clamp: Integral part of assembly; holds dial indicator. Extension Point: 50.8 mm. (2" l) included. Weight: Net 0.4 kg. (1 lb).</p> <p><u>Dial indicators</u> Low friction for long wear and highly accurate repeat readings. Low contact pressure for fast response in both directions. Contact Point. Immediate response, up or down; tip movement magnified to indicator hand with minimal friction; 5 mm (3/16") radius x 6 mm (1/4"). Dials, with continuous graduations and revolution counters. Range 5mm up to 25mm Divisions 0.0025 mm up to 0.1mm Movement Clockwise and counter clockwise Face dimensions 57 mm to 92mm Weight Net 340 g. (12 oz). Extension points: 6 mm (1/4"), 13 mm (1/2"), 25 mm (1"), 76 mm (3") Dial Indicator Holder with Magnet Base.</p> <p><u>Proving rings</u></p>	
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		<p>Integral type Compressive Proving Rings of different capacities Proving ring ranges: 50 to 500kg. 500 to 3000kg, 3000 to 5000kg, 5000 to 10000 kg, 10000 to 20000 kg.</p> <p><u>Standard compaction rammer</u> Has 2.5kg (5.5lb) mass enclosed in a guide sleeve with vent holes to insure unrestricted free-fall. Drop 305mm (12in). Weight Net 4.1 kg. (9 lbs). Guide Sleeve. Machined steel tubing with integrally spun end cap; air pressure release holes.</p> <p><u>Heavy compaction rammer</u> Rammer 4.89 kg x 450 mm controlled fall for heavy compaction test according to IS 2720 (Part - VIII). Modified Compaction Hammer has 10lb (4.5kg) mass enclosed in a guide sleeve with vent holes to insure unrestricted free-fall. Drop 457mm (18in). Weight Net 6.3 kg (14 lbs.)</p>	
BCEE 37	Hand Operated Casagrande Equipment	<p>Use: Measuring the Liquid limit</p> <p><u>Standard:</u> ASTM D4318 –1/AASHTO T 89.</p> <p><u>Specifications:</u> Hand operated with counter A brass cup suspended from a carriage designed to control its drop exactly 1cm onto a hard rubber base. Adjustable height of drop by a nut at the rear of the cup Casagrande grooving tool. Rubber feet isolate base from work surface. Overall dimension 165x178x127mm, LxWxH.</p>	
BCEE 38	Motorised Casangrande Equipment	<p>Use: Measuring liquid limit</p> <p><u>Standard:</u></p>	

		<p>ASTM D4318 –1/AASHTO T 89</p> <p><u>Specifications:</u> Gear Motor: Attached to metal base; enclosed in housing with on-off switch. Counter: Mechanical; records number of cup drops.</p> <p>Cup. Spun brass; pin and slot mounting. Base.</p> <p>Molded hard rubber. Cam. Molded, self-lubricating plastic.</p> <p>Housing. Aluminum; holds cup and drop adjustment parts.</p> <p>Overall Dimensions. 216 x 381 x 191 mm. (8-1/2" w. x 15" d. x 7-1/2" h). Weight: Net 6.6 kg (14-1/2 lbs.). Power requirements 220v AC, 50 Hz Grooving Tools</p> <p><u>Replacement Parts</u> ASTM D4318-1 Plastic Grooving Tools. Pkg. of 10. Brass Cup. With mounting holes. ASTM D4318 – 1 Slider and Pin Cup Holder</p>	
BCEE 39	Shrinkage Limit Set	<p>Use: Performing shrinkage limit tests</p> <p><u>Standard:</u> BS 1377:2, EN 1997-2</p> <p><u>The set comprises:</u> 1 Shrinkage Dish. 1 Crystallizing Dish. 1 Shrinkage Prong Plate. 1 25 ml Graduated Cylinder. 1 Evaporating Dish. dish</p>	
BCEE 40	Cone Apparatus	<p>Use: For accurately determining density of gravels and coarse soils</p>	

		<p><u>Standard:</u> ASTM D1556, AASHTO T191</p> <p><u>Specifications:</u> 305mm (12") diameter cone apparatus The unit should have two identical cones with valve in the centre. Metal cylinder attached to top cone with clear plastic end for viewing sand flow and handles for carrying.</p> <p><u>Accessories (same standard as above):</u> circular density plate Poly sample bags, qty. 100, 25°-125°F pocket dial thermometer, Bristle brush 1in steel chisel Stainless steel spoon Rubber mallet.</p>	
BCEE 41	Shear Machine	<p>Use: Measuring direct/residual shear strength of soils</p> <p>This apparatus is of robust construction, equipped with an advanced, electromechanical operating device comprising a stepper motor, a precision made reduction unit and final worm screw with reduced play. These devices are designed to obtain linear, micrometrical movements at constant speed and, independently from force developed, fast reverse drive. Noise levels are virtually imperceptible and no maintenance is required. Continual drive speed in either direction can be varied via the electronic control unit from 0.00001 to 9.9999999 mm/minute. RS232 Interface for PC. Graphic display. The number of cycles, forward/reverse speeds and displacement for the measurement of residual shear may also be programmed.</p>	

		<p>Instructions for use are provided in sequence on the display unit and data are input directly via the alphanumeric keypad.</p> <p>Also provided are separate buttons for rapid approach</p> <p>Electronic Control console: It consists of: numeric pad contains DEL, ENTER, Decimal point, Function keys(Forward, reverse..etc) LCD display , LED indicators, Start/Stop keys</p> <p>Specifications: -</p> <ul style="list-style-type: none"> - Max. force forward/reverse: 6 kN - Speed range: 0.00001 to 50mm/minute - Different speeds may be selected for forward and reverse drive - Speed/load limitations: none - Displacement movements: 0,03 μm - Rapid approach speed (unloaded): 12 mm/min. - Forward/reverse cycles: programmable up to 20 mm - Number of cycles: no limit to number which may be programmed - Micro switches prevent piston over travel and dynamometer overload - Leverage system allows applied weights to be amplified by 10, 9, 7.92 and 6.125 - A small hand wheel serves to sustain/release the vertical load - Supports are provided for transducers, dial gauges and dynamometers. <p>Dimensions (packed): 1100 x 700 x 1250 mm (h) Weight (packed): 140 kg.</p> <p>Accessories:</p>	
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		<p>Shear Box 6x6cm made of brass Sample cutter 6x6cm Shear Box 6.77cm dia. made of brass Sample cutter 6.77cm dia. Shear Box 6.35cm dia. made of brass Sample cutter 6.35cm dia. Shear Box 10x10cm made of brass Sample cutter 10x10cm 6KN proving Ring complete with dial gauge 5mm travel – 0.001 sensitivity Dial gauge 10mm travel – 0.01 sensitivity Dial gauge 25mm travel – 0.01 sensitivity Calibrated Weight 1Kg x 4 Calibrated Weight 4Kg x 5 Poros plates 6x6cm (set of 2) made of silicon carbide Poros plates 10x10cm (set of 2) made of silicon carbide Poros plates 6.35cm dia (set of 2) made of silicon carbide Poros plates 6.35cm dia (set of 2) made of Sintered Bronze Extra accessories: Poros plates 6x6cm (set of 2) made of silicon carbide Poros plates 10x10cm (set of 2) made of silicon carbide Poros plates 6.35cm dia (set of 2) made of silicon carbide Poros plates 6.35cm dia (set of 2) made of Sintered Bronze</p>	
BCEE 42	Sieve Shaker	<p>Use: For shaking soil samples when sieving.</p> <p>Electromagnetic Sieve Shaker for 200, 250, 300, 315, 400 & 450mm, 8 & 12 inch diameter sieves. The shaker can hold up to 11 sieves</p> <p>It uses electromagnetic impulses to impart a triple vibrating action. Vertical Lateral Rotational Sieve sizes accepted:</p>	

		200mm, 250mm, 300mm, 315mm, 400mm, 450mm diameter 8 inch & 12 inch diameter Digital control panel functions: Digital 1 - 99 minute test timer Vibration intensity Pause timer Rating power 375W Power Supply 220-240V 50/60Hz 1ph Dimensions 585 x 460 x 1250mm Weight 79kg	
BCEE 43	Particle Size Analysis Test Set	<p>Use: Particle size analysis for fine grained soils, determination of specific gravity of soils types</p> <p><u>Standard:</u> ASTM D-422;AASHTO T-88.</p> <p><u>Specifications:</u> 1 Mechanical Analysis Stirrer. 1 Sodium Hexametaphosphate, 1 lb. 1 Hydrometer ASTM 152H. 1 Hydrometer ASTM 151H. 2 Hydrometer Jar, 1000ml. 1 Hydrometer Jar Bath. 1 203.2mm (8") Stainless Steel Sieve #4 Mesh 1 203.2mm (8") Stainless Steel Sieve #10 Mesh 1 203.2mm (8") Stainless Steel Sieve #20 Mesh 1 203.2mm (8") Stainless Steel Sieve #40 Mesh. 1 203.2mm (8") Stainless Steel Sieve #60 Mesh. 1 203.2mm (8") Stainless Steel Sieve #140 Mesh. 1 203.2mm (8") Stainless Steel Sieve #200 Mesh. 1 203.2mm (8") Stainless Steel Cover Less Ring . 1 203.2mm (8") Stainless Steel Pan.</p> <p>1 203.2mm (8") Stainless Steel Sieve 3/8 Mesh. 1 203.2mm (8") Stainless Steel Sieve 3/4 Mesh. 1 203.2mm (8") Stainless Steel Sieve 1 1/2" Mesh.</p>	

		<p>1 203.2mm (8") Stainless Steel Sieve 2" Mesh. 1 203.2mm (8") Stainless Steel Sieve 3" Mesh. 1 Sieve Brush. 1 Fine Sieve Brush. 1 Wire Sieve Brush. 1 Graduated Cylinder, 1000 ml. 1 Beaker, Glass 600 ml. 1 Evaporating Dish, 1285ml . 110 - 220vAC, 50/60Hz,</p> <p><u>Accessories specifications</u> Hygrometer jar bath</p> <p><u>Standard:</u> BS 1377, ASTM D422, AASHTO T88</p> <p><u>Specifications:</u> Capacity. 8 hydrometer jars. Construction. Glass tank; steel finish exterior. Jar Support. No jar support Temperature Range. Ambient to 35°C</p> <p>Sensitivity. ±0.5°C at 20°C (68°F). Circulating System. Circulation Air pump with motor. Heating System. Immersion type; 700 watt heater. (No in stainless steel mixing chamber.) No Plumbing Ports. Overflow; Drain; Inflow and outflow for cooling system.</p> <p>Inside Dimensions. 300 x 550 x 400 mm</p> <p>Outside Dimensions. 200 x 400 x 300 mm</p> <p>Weight. 25 kg (No 110vAC) 230vAC, 50/60 Hz, Hygrometer Jar</p> <p><u>Standard:</u> ASTM D-422 and AASHTO T-88 <u>Specifications:</u> Heavy beaded finish on the top.</p>	
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		<p>White graduation ring calibrated at 20°C displays the 1,000 ml point of the cylinder. Construction in Glass.</p> <p>Graduation. 1,000 ml at 20°C.</p> <p>Dimensions 64 x 457 mm. (2-1/2" o.d. x 18" h.); 108 mmϕ (-1/4" diam.) base.</p> <p>Weight Net 0.7 kg (1-1/2 lbs.).</p>	
BCEE 44	ISO 200mm Test Sieve	<p>Use: for sieving soil samples</p> <p><u>Standard:</u> ISO: 565 with tolerances to ISO 3310-1.</p> <p><u>Specifications:</u> Test Sieves, 200mm diameter Stainless steel frames with stainless steel mesh. All mesh sizes in 50mm full-height frames. Sizes 5.6mm and smaller with 25mm half-height frames. All ISO Sieves are serial numbered, supplied with certificates of quality, and include SBR rubber o-ring seals.</p>	
BCEE 45	Soil Hydrometers	<p>Use: to determine specific gravity of soils</p> <p><u>Standard:</u> ASTM D-422/AASHTO T-88</p> <p><u>Specifications:</u> Construction: Moulded, seamless. Scale: Bouyoucos; double scale. Calibration: At 68°F. Weight: Net 113 g (4 oz.). Graduations: -5 to 60 g colloids/liter. scale 152H.0.995 to 1.038 specific gravity x 0.001 divisions</p>	
BCEE 46	Consolidation Apparatus	<p>Use: The One-dimensional Consolidation test is used to determine the consolidation characteristics of soils of low permeability, consolidation tests to determine the settlement characteristics of soil over a period of time.</p>	

		<p>Standard: ASTM D-2435, D-4546; AASHTO T-216.</p> <p>General Description: Loading Pressures on 50 mm (2.5") diameter samples of up to 8800 kPa using 11:1 beam ratio. Single beam ratios of 9:1, 10:1 and 11:1 minimize loading weight requirements. Rigid frame construction ensures accuracy, repeatability and reliability of test results. Integral beam support jack eliminates possible shock to sample during load application procedures. Compact, table top design for maximum space savings in the laboratory. Cast aluminium and plated steel construction for rust resistance and long life. .The apparatus features a rigid loading mechanism, capable of applying loads for long durations. Load pressures of up to 8800 kPa can be generated on 50 mm (2") diameter samples. The unit incorporates an integral beam support jack that eliminates the possibility of shock to the sample during load application procedures.</p> <p>Technical Specifications Load Capacity: 8800 kPa. on 50 mm (2.5") diam. samples. Loading Beam: Cast aluminium; counterbalanced; 11:1 ratios. Frame: Cast aluminium; integral beam support jack; plated steel and platform. Dimensions: 203L x 711W x 508 H mm excluding weight hanger. Weight: Net 13.6 kg (30 lbs.)</p>	
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		<p>Accessories (same standards as above)</p> <p>Floor Mounting Stand.</p> <p>50mm (2") Fixed Ring Consolidometer. With cutting (specimen) ring.</p> <p>2" Floating Ring Consolidometer.</p> <p>Dial Indicator. 25 mm range x 0.010 mm graduations.</p> <p>Weight Set A. Includes: four 10 kg, one 5 kg, two 2kg and one 1 kg weights.</p> <p>Weight Set B. Includes: nine 10 kg, one 5 kg and two 2kg and one 1 kg weights.</p> <p>Fixed ring consolidometers ASTM D-2435, D-4546; AASHTO/BS T-216.</p> <p>Specimen cutting ring for trimming directly from sample tubes.</p> <p>Integral water reservoir for specimen inundation, when required.</p> <p>Base. One-piece machined bronze.</p> <p>Specimen Ring. Machined brass.</p> <p>Fixed Ring Consolidometer. For 50mm (2") diam. specimens.</p> <p>Replacement Parts</p> <p>Specimen Ring. For 50 mm (2") diam. samples.</p> <p>Porous Stone. 62.7 x 12.7 mm (2-15/32" diam. x 1/2" thick).</p>	
BCEE 47	Soil Volume Change Meter	<p>Use: Measures both shrinkage and swelling of soils.</p> <p><u>Standard:</u> BS 812, ASTM D4944, AASHTO T217</p> <p><u>Specifications:</u> <u>Mould Assembly:</u> Includes porous stones and loading cap. Proving Ring: 4.5 kN (1,000 lb.) capacity; dial indicator. Other Components Loading pistons; compaction hammer. Specimen Ring: 70 mm (2-3/4") diam.</p>	

		<p>Sample Size. 10 teaspoons. Water Required. 140g (5 oz.) Charts. Convert readings to lbs./sq. ft. and then to PVC (Potential Volume Change) rating. Dimensions: 184 x 394 mm. (7-1/4" diam. base x 15-1/2" h). Weight Net 16.3 kg (32 lbs.).</p>	
BCEE 48	Plate Bearing Test Machine	<p>Use: for estimating the bearing capacity of shallow foundations in situ and for the design of flexible pavement; also used for load tests of soil and flexible pavement components</p> <p><u>Standard:</u> ASTM D 1194, D1195, D1196, BS 1377:9</p> <p><u>Specifications:</u> Hydraulic jack with fixed pumping unit capacity: 0-500 kN. x 0.5 kN. Pressure gauge and flexible metal pipe 5m long - 1No. 1 Special ball and socket arrangement between the jack and the bearing plate 16 Extension rod 12mm. dia x 25cm long 4 Magnetic base with female thread on top for holding extension rod. 4 Top end plate, 50mm, dia with male thread for fitting onto the extension rods and positioning the dial gauge plunger. 2 Column 15cm dia x 25cm long with flanges complete with four bolts and nuts 1 Column 15cm x 50cm long with flanges complete with four bolts and nuts. 1 Bridge support of welded steel angle construction, 5m, span and stands approximately 30cm, high, fitted with two quick release clamps, dial bracket Plane M.S (Mild Steel) Plate 60 cms x 60cms sq. x 25mm thick</p>	

		<p>Plane M.S. Plate 45cms x 45cm.sq. x 25mm thick Plane M.S. Plate 30cms x 30cm.sq. x 25mm thick 4 Dial Gauge 0.01mm x 25mm</p> <p><u>Accessories (same standards as above)</u> Plane Mild Steel. (M.S) Plate 75cm x 25mm thick Plane M.S. Plate 50cm x 25mm thick Grooved M.S. Plate 60cm. x 60 cm. x 25mm thick Grooved M.S. Plate 45cm x 45cm x 25mm thick Grooved M.S. Plate 30 cm x 30cm x 25mm thick Grooved M.S. Plate 75cm x 75cm x 25mm thick. Flexible rubber pipe 1m. Length for the hydraulic jack in the place of metal pipe.</p>	
BCEE 49	Core Cutter	<p>Use: to extract sample of the soil with the help of a dolley and rammer.</p> <p><u>Standards</u> ASTM D 1556; AASHTO T19; BS 1377</p> <p><u>Specifications:</u> Cylindrical core cutter made of steel, 130 mm long and 100mm internal diameter. Steel Dolley, 25 mm high with a lip to enable it to be located on top of the core cutter. Rammer with detachable steel rod.</p> <p>Spare and Accessories: Cylindrical core cutter 100 mm I.D. x 130 mm long. Test form pad of 50</p>	
BCEE 50	Automatic Mechanical Soil Compactor	<p>Use: For compacting soils, for proctor test, CBR tests, Consolidation tests</p> <p><u>Standard:</u> BS 1377-4, 1990, EN 1997-2, 1924, 13286-2, 47, ASTM D558, 560, 698, 1557, AASHTO T99, T134, 136, 180, 193</p>	

		<p><u>Specifications:</u> 102mm internal diameter(ID) moulds, 2.5kg weight with 305mm drop, 152mm ID moulds 4.5kg weight with 457mm drop. Standard 51mm hammer. Automatically counts the number of hammer blows and shuts off when a preset number is reached. The sample mould indexes to a new position with each count to assure uniform compaction.</p> <p><u>Accessories(same standards as above)</u> 51mm round,2.5kg hammer, Pie-faced hammer for use with 152mm moulds, Surcharge weight to increase total hammer weight to 4.5kg (10lbs). 102mm (4in) and 152mm (6in) standard compaction moulds, Digital automatic counter with start/stop switching. Compaction mould Split type moulds separate longitudinally for easy sample removal. Moulds of 102mm internal Diam. 116.4mm (4.584in) in height with detachable extension collar and base plate, and are plated for rust resistance. 12in Steel Straightedge for trimming compacted soil</p>	
BCEE 51	Soil Permeability Apparatus	<p>Constant Head Permeability Test</p> <p>Use: Permeability Test System for efficient and accurate permeability testing of a wide range of construction materials</p> <p>Permeability Cell: Cell Diameter Ø 75 mm. The (b) type permeability cell is specially designed for constant head tests on incoherent soil samples.</p>	

		<p>It has a central body with 3 outlets for 3 manometer tubes through which water is collected after seepage through the sample. Inlet and drainage ducts are found in the metal base. A movable stem enables stabilization of the upper surface of the sample. Weight 3 Kg</p> <p>Standpipe with three manometers tubes: Comprises 3 glass tubes all of the same diameter, relevant graduated rods, taps and metal pedestal for bench mounting Dimensions: 320x1450x500 mm Weight: 15 g</p> <p>Constant level tank: Supplied with support for wall mounting, it comprises a transparent body, water supply ducts, discharge and flow valves. Weight: 3 kg.</p>	
BCEE 52	Motorised Cbr Machine	<p>Use: CBR test for determining bearing capacity of soils</p> <p>Standard: ASTMD-1883,AASHTO T-193 and BS 1377</p> <p>Specifications: Consisting twin column frame and a motorized drive system. Capacity: 50 kN. Load Speeds: Selectable; 1.27 mm (0.5") or 1.0 mm. Horizontal Clearance: 270 mm (10"). Vertical Clearance: 730 mm (31.5") maximum. Platen size: 133 mm (5.24") diam.? Platen Travel: 105 mm (4.13")? Dimensions: 670 x 545 x 1,40 mm (15.75" w. x 21.65" d. x 48" h.). Weight: Net 112 kg (106 lbs.).</p>	

		<p>Accessories (same standards as above)</p> <p>Penetration Piston Assembly.</p> <p>Proving Ring. 50 kN (capacity. 11,200 lb)</p> <p>Penetration Dial Indicator. 25 mm range x 0.01 mm divisions.</p> <p>Dial Indicator Holder.</p>	
BCEE 53	Cone Penetrometer	<p>Use: Performing liquid limit and other penetration tests; for testing a wide variety of materials such as grease, petroleum, bitumen, tar, asphalt, wax, polish, food stuffs, rubber, cement, pharmaceutical creams and soils</p> <p><u>Standard:</u> BS 1377, 1924-2, EN DD ENV 1997-2</p> <p><u>Specifications:</u> Dial Indicator: 150 mm diameter graduated in 400 x 0.1 mm divisions. Indicator incorporates a friction/gear system. Height: Adjustable using rapid integral clamping mechanism. Cone Release. Manual. Cone. 1 x 30°, 35 mm test cone included. Base. Cast aluminium with adjustable levelling feet. Weight. Net 6 kg (13.25 lbs.). Test Gauge for checking the condition of the cone point. Penetration test cup: 55 mm diam. x 40 mm deep with rim parallel to the flat base. Penetration test cone: Stainless steel; 35 mm long with smooth surface at an angle of 30°.</p> <p><u>Accessories (same standards as above)</u> Evaporating/mixing dish, Ground glass plate 305x305x10mm (12x12x3/8in) with seamed edges, 24 aluminium containers 51x22mm (2in dia. x 0.9in H) with snug-fitting lids,</p>	

		<p>Wash pan Wooden-handled spatula with stainless steel blade 19x102mm, WxL, 24 250ml polyethylene squeeze wash bottle</p>	
BCEE 54	Plastic Limit Roller	<p>Use: Mechanical rolling to determine plastic limit</p> <p><u>Standards</u> AASHTO T89-90</p> <p><u>Specifications:</u> Includes integral top plate handle, 50-sheet pad of adhesive paper, and instructions. The 4.8mm and 9.5mm (3/16in -3/8in) rigid acrylic device measures 203x114x32mm, LxWxH. Consists of top and bottom roller plates separated by 3.2mm (1/8in) side rails. Special adhesive-backed absorbent paper that adds no fibre to soil samples.</p>	
BCEE 55	Plastic Limit Set	<p>Use: Performing plastic limit test</p> <p><u>Standard:</u> ASTM D4318, AASHTO T90, BS 1377:2</p> <p><u>Specifications:</u> 1 Plastic Limit Plate. 1 25 ml Graduated Cylinder. 1 Mixing Dish. 1 Doz Aluminum moisture cans 1 Flexible Spatula. 1 Rod Comparator: 3 mm diameter</p> <p><u>Accessories (same standards as above)</u> Evaporating Ground Glass Plate 305x305x10mm (12x12x3/8in) with seamed edges 24 aluminium containers 51x22mm (2in dia. x 0.9in H) with snug-fitting lids, Wash pan Wooden-handled spatula with stainless steel blade 19x102mm, WxL,</p>	

		24 250ml polyethylene squeeze wash bottle	
BCEE 56	Shrinkage Limit Set	<p>Use: Performing shrinkage limit tests</p> <p><u>Standard:</u> BS 1377:2, EN 1997-2</p> <p><u>The set comprises:</u> 1 Shrinkage Dish. 1 Crystallizing Dish. 1 Shrinkage Prong Plate. 1 25 ml Graduated Cylinder. 1 Evaporating Dish.</p>	
BCEE 57	Shrinkage Prong Plate	<p>Use: Accessory to shrinkage limit set</p> <p><u>Standard:</u> ASTM D-2850, D-4767; AASHTO T-296, T-297.</p> <p><u>Specifications:</u> Rust-resistant construction, three rust-resistant metal prongs for immersing soil pat. Construction of Acrylic plastic with 3 metal prongs. Dimensions: 76 x 3.2 mm (3" square x 1/8" thick). Weight: Net 28 g (1 oz.). Shrinkage Dish. Crystallizing Dish.</p>	
BCEE 58	Geotechnical Gauge	<p>Use: Soil properties chart</p> <p><u>Standards</u> To classify soils to BS 1377:2, ENV 1997-2, ASTM D4318, AASHTO T89</p> <p><u>Specifications:</u> Geotechnical Gauge; water-resistant 127x203mm (5x8in) plastic card on a lanyard with a wealth of information for classification of soils. Six color chips, four patches of sized grains, and four tables for classifying: Soils by particle size using the Unified Soils Classification System. Coarse and fine grained soils into fifteen descriptive</p>	

		<p>categories from gravels and sands to silts and clays. Sand by type from very loose to very dense. Clays from very soft to hard. Edges of the card with separate 0-6in and 0-110mm scales</p>	
BCEE 59	Grain Size Chart	<p>Use: Soil grain chart</p> <p><u>Standards</u> To classify soils to BS 1377:2, ENV 1997-2, ASTM D4318, AASHTO T89</p> <p><u>Specifications:</u> Grain Size Chart is widely used by field geologists for describing samples. pocket-sized with recessed die-cut sample cavities filled with precision sieved sedimentary particles permanently mounted to the chart, classed according to the Wentworth grading system</p>	
BCEE 60	Sand Gauge Chart	<p>Use: A unique chart for uniform classification of sands</p> <p><u>Standards</u> To classify soils to BS 1377:2, ENV 1997-2, ASTM D4318, AASHTO T89</p> <p><u>Specifications:</u> Nine granule patches firmly attached to the handy water-resistant plastic card defining roundness and size of particles from 2mm very coarse sand to 1/16mm silt. A checklist defining bed thickness. Flip side of chart with tables of geologic age and carbonate classification information. Sample Panels. Very coarse; coarse; medium; fine; very fine; silt. Particle Shape Panels. Angular; sub-angular; sub-rounded and rounded.</p>	

		Chart Size. 83 x 102 mm (3-1/4" w. x 4" h.). Weight. Net 28 g (1 oz.).	
BCEE 61	Cone Apparatus	<p>Use; For accurately determining density of gravels and coarse soils</p> <p>Standard: ASTM D1556, AASHTO T191</p> <p>Specifications: 150mm (6") diameter cone apparatus The unit should have two identical cones with valve in the centre. Plastic container attached to top cone with metal end for viewing sand flow and handles for carrying.</p> <p>Accessories (same standard as above): circular density plate Poly sample bags, qty. 100, not Included -10 to 110 Degrees pocket dial thermometer, Bristle brush not Included 1in steel chisel Stainless steel spoon Rubber mallet.</p>	
BCEE 62	Sand Cone Density Apparatus	<p>Use: Used to determine in-place density of soils having maximum particle sizes up to 51mm using test hole volumes of approximately 2.8L</p> <p>Standard: ASTM D1556, AASHTO T191</p> <p>Specifications: 3.8L threaded plastic jar with detachable brass double cone fitting. The brass cone threaded on one end, flanged to 165mm (6-1/2in) on the other, with a brass cylindrical valve of 12.7mm (1/2in) dia. orifice between ends. Valve with stops to prevent rotating past completely open or closed positions. Replacement plastic jar</p>	

		<p>Density Plates 305x305mm (12x12in) aluminium alloy with 12.7mm (1/2in) high edge walls.</p> <p>Poly sample bags, qty. 100, 25°-125°F pocket dial thermometer,</p> <p>Accessories</p> <p>Bristle brush</p> <p>1in steel chisel</p> <p>Stainless steel spoon</p> <p>Rubber mallet.</p>	
BCEE 63	Particle Size Analysis Test Set	<p>Use: Particle size analysis for fine grained soils, Determination of specific gravity of soils types</p> <p><u>Standard:</u> ASTM D-422;AASHTO T-88.</p> <p><u>Specifications:</u> 1 Mechanical Analysis Stirrer. 1 Sodium Hexametaphosphate, 1 lb. 1 Hydrometer ASTM 152H. 1 Hydrometer ASTM 151H. 2 Hydrometer Jar, 1000ml. 1 Hydrometer Jar Bath. 1 203.2mm (8") Stainless Steel Sieve #4 Mesh 1 203.2mm (8") Stainless Steel Sieve #10 Mesh 1 203.2mm (8") Stainless Steel Sieve #20 Mesh 1 203.2mm (8") Stainless Steel Sieve #40 Mesh. 1 203.2mm (8") Stainless Steel Sieve #60 Mesh. 1 203.2mm (8") Stainless Steel Sieve #140 Mesh. 1 203.2mm (8") Stainless Steel Sieve #200 Mesh. 1 203.2mm (8") Stainless Steel Cover Less Ring . 1 203.2mm (8") Stainless Steel Pan. 1 203.2mm (8") Stainless Steel Sieve 3/8 Mesh. 1 203.2mm (8") Stainless Steel Sieve 3/4 Mesh. 1 203.2mm (8") Stainless Steel Sieve 1 1/2" Mesh. 1 203.2mm (8") Stainless Steel Sieve 2" Mesh.</p>	

		<p>1 203.2mm (8") Stainless Steel Sieve 3" Mesh. 1 Sieve Brush. 1 Fine Sieve Brush. 1 Wire Sieve Brush. 1 Graduated Cylinder, 1000 ml. 1 Beaker, Glass 600 ml. 1 Evaporating Dish, 1285ml . 110 - 220vAC, 50/60Hz,</p> <p><u>Accessories specifications</u> Hygrometer jar bath <u>Standard:</u> BS 1377, ASTM D422, AASHTO T88</p> <p><u>Specifications:</u> Capacity. 8 hydrometer jars. Construction. Glass tank; steel finish exterior. Jar Support. No jar support Temperature Range. Ambient to 35°C</p> <p>Sensitivity. $\pm 0.5^{\circ}\text{C}$ at 20°C (68°F). Circulating System. Circulation Air pump with motor. Heating System. Immersion type; 700 watt heater. (No in stainless steel mixing chamber.) No Plumbing Ports. Overflow; Drain; Inflow and outflow for cooling system.</p> <p>Inside Dimensions. 300 x 550 x 400 mm</p> <p>Outside Dimensions. 200 x 400 x 300 mm</p> <p>Weight. 25 kg (No 110vAC) 230vAC, 50/60 Hz, Hygrometer Jar</p> <p><u>Standard:</u> ASTM D-422 and AASHTO T-88</p> <p><u>Specifications:</u> Heavy beaded finish on the top. White graduation ring calibrated at 20°C displays the 1,000 ml point of the cylinder.</p>	
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		<p>Construction in Glass. Graduation. 1,000 ml at 20°C. Dimensions 64 x 457 mm. (2-1/2" o.d. x 18" h.); 108 mmϕ (-1/4" diam.) base. Weight. Net 0.7 kg (1-1/2 lbs.).</p>	
BCEE 64	Expansion Index Test Apparatus	<p>Use: determining the expansion index of soils.</p> <p>Standard: ASTM D-2435, D-4546; AASHTO T-216.</p> <p>Specifications: Construction The unit consists of a cast aluminium base and collar, stainless steel specimen ring Base and Collar. Cast aluminium construction; brass hold-down rods. Specimen Ring. Stainless steel; 101.6 x 25.4 mm (4" internal diam. x 1" h.). Porous Stones. 101.4 x 12.7 mm (4" diam. x 1/2" thick). Loading Weight. Brass; 5.7 kg (12.6 lbs.). Dial Indicator: 0.5" range x 0.0001" graduations. 8 mm range x 0.002 mm graduations. Test Duration. 24 hours or less on cured sample. Dimensions. 152 x 279 mm (6" diam. x 11" h.). Weight. Net 8.2 kg (18 lbs.)</p>	
BCEE 65	Soil Volume Change Meter	<p>Use: Measures both shrinkage and swelling of soils.</p> <p>Standard: BS 812, ASTM D4944, AASHTO T217</p> <p>Specifications: Mould Assembly: Includes porous stones and loading cap. Proving Ring: 4.5 kN (1,000 lb.) capacity; dial indicator. Other Components Loading pistons; compaction hammer. Specimen Ring: 70 mm (2-3/4") diam. Sample Size. 10 teaspoons.</p>	

		<p>Water Required. 140g (5 oz.) Charts.</p> <p>Convert readings to lbs./sq. ft. and then to PVC (Potential Volume Change) rating.</p> <p>Dimensions: 184 x 394 mm. (7-1/4" diam. base x 15-1/2" h).</p> <p>Weight Net 11.3 kg (25 lbs.).</p>	
BCEE 66	Volu Vessel Device	<p>Use: Used to determine the in-place density of compacted or firmly-bonded soils</p> <p><u>Standard:</u> ASTM D2167; AASHTO T205 specifications</p> <p><u>Specifications:</u> Graduated Cylinder. Heavy-duty plastic; dual graduated. Balloons. Resilient latex. Guard. Aluminium with integral carrying handle. Guard Base. Aluminium; with fittings, outlets, valves and vent tube for balloon and actuator bulb. Actuator Bulb. Double acting type for pressure or vacuum; fitted with adapter, quick coupler and valve assembly. Density Plate. Aluminium with flanged sides; 229x229 x 19 mm). Operating Liquid. Water. Weight. Net 5.4 kg (12 lbs.).</p> <p><u>Accessories (same standards as above)</u> Balloons in packs of ten. Aqua-Check for moisture determinations In-Place Density Accessory Kit.</p>	
BCEE 67	Sand Replacement Equipment	<p>Used to determine the dry density of in-situ compact, fine, medium grained soils and for layers not exceeding 50 cm thickness</p> <p><u>Standard:</u> BS 1377:9, 1924:2</p> <p><u>Equipment parts specifications:</u></p>	

		<p>Pouring cylinder made of cast aluminum and precisely machined.</p> <p>Calibration container and a tray are made of plated sheet steel.</p>	
BCEE 68	Riffle Boxes	<p>Use: for dividing soil aggregates into representative sample increment for testing</p> <p><u>Standard:</u> BS 1377, 1924, 812, EN 932-1, 933-3, ASTM C72</p> <p><u>Specifications:</u> Heavy Duty Electrostatic painted and manufactured from heavy gauge sheet metal the slot widths and number of slots as required in the standards. Riffle boxes supplied complete with 3 containers easy to handle.</p>	
BCEE 69	Permeability Test System	<p>Constant Head Permeability Test</p> <p>Use: Permeability Test System for efficient and accurate permeability testing of a wide range of construction materials</p> <p>Permeability Cell: Cell Diameter Ø 75 mm. The (b) type permeability cell is specially designed for constant head tests on incoherent soil samples. It has a central body with 3 outlets for 3 manometer tubes through which water is collected after seepage through the sample. Inlet and drainage ducts are found in the metal base. A movable stem enables stabilization of the upper surface of the sample. Weight 3 Kg</p> <p>Standpipe with three manometers tubes: Comprises 3 glass tubes all of the same diameter, relevant</p>	

		<p>graduated rods, taps and metal pedestal for bench mounting Dimensions: 320x1450x500 mm Weight: 15 g</p> <p>Constant level tank: Supplied with support for wall mounting, it comprises a transparent body, water supply ducts, discharge and flow valves. Weight: 3 kg.</p>	
BCEE 70	Tri-Axial Test Set	<p>Use: For the Tri-axial test; Unconsolidated Undrained (UU), Consolidated Undrained (CU), Consolidated Drained (CD), Unconfined Compression (UC)</p> <p>TRIAXIAL CELL: Triaxial cell for specimens up to 76 mm diameter. Pedestal for 70 mm specimens. Top cap with drainage for specimens of 70 mm. Extension top cap and vylastic sleeve also included Base plate, in aluminum for specimens of 70 mm. Porous disc for 76 mm specimens (set of 10). Suction sleeve stretcher for 76 mm - 2.8" - 3" specimens. Membrane, rubber latex for 76 mm - 2.8" specimens (100 pieces). O-ring neoprene for 76 mm - 2.8" specimens (30 pieces). Filter drain for 76 mm specimens pack of 50. Two part split mould for 70 mm specimens</p> <p>SAMPLE PREPARATION: Sampler for 76 mm samples piston and tube included. Rack and pinion sample extruder bench model: Allows the insertion of sampling tubes into a soil sample with a rack and pinion mechanism with minimal disturbance; it is then used to extrude the</p>	

		<p>resultant sample from the sampling tube. Max. Clearance between platens: 435 mm. Min. Clearance between platens: 0 mm.</p> <p>ELECTRIC AUTOMATIC LATHE: Used to turn the sample then a cutting disc can move horizontally & vertically so that to trim the sample to the required diameter. Variable speed control Max sample diameter 106 mm Max vertical movement of cutting disc 220 mm Turning speed 0-100 rpm. Complete with a pair of 38.1 mm dia. Platens Power: 220 v - 50 hz - 1 ph Extra Platens: diam. 70 mm (2 pcs)</p> <p>PORE PRESSURE MEASUREMENT: Digital gauge 10 bar; battery operated De-airing block for pressure transducer</p> <p>VOLUME CHANGE MEASUREMENT: Volume change measurement device: Made of bronze with a measurement capacity of 100cc Supplied with 2 rolling membranes Max working pressure 1000Kpa Supplied with dial gauge: precision 0.01 mm 30 mm travel.</p> <p>CONSTANT PRESSURE SOURCES: Bladder air-water cylinder: (10 bar) with valve and connectors Max working pressure 1000Kpa Max input air pressure 1700Kpa Regulation range 0-1000Kpa Cylinder capacity 3500cc Dimensions: 240mm dia x 550mm H Weight : 20Kg</p>	
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		<p>Manometer : 0 - 10 bar with support column, base and valves With 6 inlet and no-volume change valves Dial gauge class 0.5, Diameter 200mm, scale 0-10bar (0.1 bar resolution)</p> <p>Perspex de-airing tank: with ionized Aluminum base and attachments for wall mounting Made from transparent Perspex De-airing jet inlet and flow outlet 15 liters capacity</p> <p>3-valve group</p> <p>Vacuum pump: Flow: 66 litres air/min. - 1 torr It is particularly suitable for laboratory use. Fitted with Manometer with vacuum indication Power: 220 v - 50 hz - 1 ph Dimension: 350x450x280mm Weight: 13Kg</p> <p>Tubing: 8 x 16 mm (red rubber) & 5 m long Universal block assembly for connection to triaxial cells Draining burette: 10 cc</p>	
BCEE 71	Masonry Saw	<p>Use: cutting small to medium sized building materials for example bricks, blocks, Rocks, tiles and slabs</p> <p>For disk up to 450 mm. Max rotation of disc 2800 rpm Max cutting thickness 120mm Max cutting length 500mm Dimensions: 1220x700x1360 mm Electrical supply: 220-240V AC , 50 Hz, 1 ph, Rated power: 2200W Weight: 130 kg</p> <p>Fitted with: -Pedal control.</p>	

		-Water cooling circulation pump -Emergency switch -Sliding cutting table /carriage: 570 x 430 mm (550 mm translation) -Cutting angle device -Beam for adjusting cutting height <u>Accessories</u> 350 mm diameter diamond blade 450 mm diameter diamond blade	
BCEE 72	Vibrating Table	Use: Providing controlled vibro-compaction <u>Standards:</u> Made to EN 12390-2 standards <u>Description:</u> Vibrating motor, Control unit and clamping assembly. Size: 1250 x 625 mm. Capacity: 8 cube, cylinder moulds or beam moulds by using clamping assembly	
BCEE 73	Rammers	Use: for pressing exposed aggregate into concrete It is usually in the shape of a long or short handle attached to a flat blade surface. Wooden Shaft. Head Weight. 4.5kg	
BCEE 74	Block Maker	Use: making standard bricks, hollow blocks and multi-hole bricks <u>Standard</u> ISO 9000 <u>Specification</u> Power: 7HP Hydraulic Pump: 5 HP , 1440rpm Vibrator: 1.5HP/2880 rpm : Host Size: 2000x1750x2000(mm) Forming area: 1060x600(mm) ; Forming a high degree: 30-200 Molding cycle: 72-90(s)	

		<p>Pallet size: Pallets are not required. Since the machine is movable. (egg laying type)</p> <p>Required for Concrete platform.</p> <p>Host weight: 4.2T. (Block making machine + Concrete Mixer + Mould & Ram, with Wheel Barrow & Plate form Trolley)</p>	
BCEE 75	Block Making Machine (Manually Operated)	<p>Use: making solid and hollow blocks</p> <p><u>Specification</u></p> <p>Overall size: 1550x950x1800mm</p> <p>Model: Hand Operated double block vibrator / Manual.</p> <p>Body: firm/rigid frame, easy to remove dies with handle.</p> <p>Vibrator: 1.5HP/2880 rpm</p> <p>Forming area: 500x500(mm) ;</p>	
BCEE 76	Site Dumper	<p><u>Standard</u></p> <p>BS EN 474-6 2006</p> <p><u>Specification</u></p> <p>Payload capacity 3000kg</p> <p>Skip capacity (litre) 1500</p> <p>Chassis: Articulated Frame</p> <p>Gearbox: Heavy duty, 5+5 gearbox</p> <p>Bucket tipping system:</p> <p>Hydraulic tipping hopper</p> <p>Diesel engine, 40hp, water cooling, 30kw/2300rpm</p> <p>Driving 4x4 WD</p> <p>Tires Four wheels 12.5-16</p> <p>Turning radius (m) 4.5</p> <p>Hydraulic steering</p> <p>Weight (kg) 2250</p> <p>Dimensions (mm) 3900L 1800W 2600H</p>	
BCEE 77	Scaffold & Platform	<p><u>Standard</u></p> <p>BS 1139-2.1:1991</p> <p><u>Specification</u></p> <p>Material: aluminum</p> <p>Diameter: +/- 48.3mm</p> <p>Overall height: 6.55m</p> <p>Wooden platform boards: 600mmx2.50m</p>	

BCEE 78	Hoisting Equipment	<p>Use: for lifting or lowering a load</p> <p>(2 No.) 3 ton manual stacker, lifting height 2.5 meters, fork length 0.9m, fork width 200 to 600mm, double chain, reinforced fork, nylon wheel and pedal.</p> <p>(2 No.) 3 ton pallet truck, fork lifting height: 150mm, Fork width: 540mm, Fork length: 1150mm, 4mm steel thickness.</p>	
BCEE 79	Concrete Poker Vibrator	<p>Use: Compaction of concrete specimens; Alternative of tamping bar</p> <p><u>Standards:</u> EN 12390-2: ASTM C31, C192: AASHTO T126</p> <p><u>Specification</u> Drive: single cylinder 2-stroke & air cooled engine Recoil start unleaded gasoline Direct driven output Fuel Tank Volume +/- 1300ml Power: 4 kW/2800rpm Displacement: 63 cc Vibrate head: 28 mm x 3 meters</p>	
BCEE 80	Gauge Rods	<p>Use: To ensure that the courses are equal; Used in conjunction with the datum peg to assist the bricklayer in gauging all further courses of brickwork when setting up the corner of a building</p> <p>Constructed from aluminum Dimensions: 1 metre long and 50 x 25mm in size, The vertical spacing of the bricks marked along one edge</p>	
BCEE 81	Chapman Flask - % Voids In Aggregates	<p>Use: Apparent specific gravity of fine aggregates, Percentage of voids in fine aggregates and Surface moisture in fine aggregates</p> <p><u>Standards:</u> ASTM C70-06, AASHTO T142</p> <p><u>Specifications:</u></p>	

		<p>Graduations. 200 ml between bulbs; 375 to 450 ml in 1 ml divisions above second bulb. Capacity. 450 ml. Net weight : 500g Capacity 450ml n+ w+ 500g</p>	
BCEE 82	Coarse Aggregate Density Test Set	<p>Use: Density, Specific gravity and Balance supplied may also be used as a standard weighing device</p> <p><u>Standards:</u> EN 1097-6, 12697-6; ASTM C127; AASHTO T85</p> <p><u>Specifications:</u> Buoyancy Balance, of capacity 30000 g for aggregates between 63mm and 5mm 8" Stainless Steel Sieve no.4 Mesh 1 Pan, Stainless Steel Power 220vAC, 50/60H Density Basket: with dimensions 203 mm diameter x 203 mm deep, constructed of reinforced no. 8 wire mesh). Suspension hook Water tank with dimensions: 400x400x330 mm approx. (lwxh).</p>	
BCEE 83	Length Gauge	<p>Use: Used to classify aggregates as elongated when their length is more than 1.8 of their nominal size, the test is not applicable to material retained on a 63.0 mm BS test sieve. Test app to materials retained in 63mm BS seive</p> <p><u>Standard:</u> EN 933-1</p> <p><u>Construction:</u> Dimensions specified in BS 812. The thickness gauge is of galvanised sheet metal with clearly marked sieve fraction ranges for each slot The Length Gauge has steel pins set in a steel bar with</p>	

		<p>stamped sieve fraction ranges between pins. Weight approximately 1.1 kg Thickness gauge sheet metal with seved maked fraction weigh 1.1.14</p>	
BCEE 84	Drying Oven	<p>Use: Drying large quantities of aggregate samples; Also in drying large quantities of soil samples</p> <p>Interior body is made from stainless steel by argon-arc-welding technique.</p> <ul style="list-style-type: none"> - Exterior body is made of high-quality steel sheet with a novel appearance. - Temperature control protection. - Digital display - Microcomputer PID temperature controller with timer function to ensure precise & reliable temperature control. - Hot air circulation system is composed of blower fan and proper air channels. - Oven door with Silicon gasket & transparent thermal glass window for watching the samples under drying. - Can adjust blast and exhaust in control panel. <p><u>Specifications:</u> Capacity: 250 liters Temp. range: +50~300°C Time Locating Range: 1~9999Min Dimensions: 800x850x1040mm external, 570x560x800mm internal Temp. Fluctuation: ± 0.75 °C Temperature Resolution: ± 2°C Rated power heater elements: 2.5 KW Shelves: 3 Shelf positions; 3 Weight: 100 kg</p>	

BCEE 85	Deval Attrition Test Machine	<p>Use: Aggregate resistance to abrasion, Rotating frame is driven by a motor/speed reducer and an automatic counter is included to preset the required number of revolutions.</p> <p>Stored in enclosed area</p> <p><u>Standard:</u> NF P18-577 (1979)</p> <p><u>Specifications:</u> Two steel cylinders complete with covers and locking device. Rotating frame driven by a motor/speed reducer Automatic counter which can be to preset the required number of revolutions. Rotation speed: 33 rpm. Power 736 W Dimensions: 1175x450x1150 mm Weight approx.: 190 kg Specimen size 4"maxi load 0 to 56 KN. Accuracy +- 1%</p>	
BCEE86	Impact Testing Machine	<p>Aggregate impact value and Resistance of aggregate to shock or impact</p> <p>Placed on laboratory floor Resistance of aggre to shock impact tampering rod galvanized 75mm Diameter * 50mm</p>	
BCEE 87	Rebound Hammer	<p>Use: Hardness test (Packed in a carrying case and stores on shelves)</p> <p><u>Standards:</u> EN 12504-2; ASTM C805; BS1881:202; NF P18-417</p> <p><u>Specifications:</u> Capacity: compressive strength of 10 - 70N/mm² Impact energy: 2.207 Nm Dimensions with plastic case: 78mm dia. X 355mm</p>	

		<p>Weight approx: 1.5 kg (with case and grinding stone) To be supplied together with Plastic carrying case, Grinding/carborundum stone and Instruction manual.</p> <p><u>Accessories:</u> Calibration anvil. Used for calibration of concrete test hammers. Made of alloy steel. Dimensions 150 mm dia. x 230 mm height. Weight 16 kg approx.</p>	
BCEE 88	Pulse Velocity Measurement	<p>Use: Concrete uniformity, Check for imperfection in concrete, Concrete deterioration from fire or chemical attack, Layer thickness and modulus of elasticity, Concrete strength</p> <p><u>Standards:</u> BS 1881-203; EN 12504-4; ASTM C597</p> <p><u>Specifications:</u> Dimensions (l x w x h) 160 x 250 x 100 mm Time measurement 0 to 1999.9 μsec Ranges of 0 to 1999.9 μsec 1 to 3000 μsec Accuracy ± 0.1 m sec Transmitter, pulse 1.2 k V, 500 V or 250 V, 1.5 m sec Power supply Battery: Ni-Cad rechargeable Mains: 110 – 240 V AC, 50 – 60 Hz, 1 ph Display 128 x 128 dot LCD with back lighting Weight 0.9 kg Supplied together with Two 55 kHz transducers (transmitter and transducer) 3 m cable Coupling agent 259 cc bottle Nylon carrying case Instruction manual.</p>	
BCEE 89	Mortar Mixer	<p>Use: Mixing mortar</p> <p><u>Standards:</u></p>	

		<p>ASTM C305, AASHTO T162 and pr EN-ISO 679</p> <p><u>Specifications:</u> Capacity: 5 liters. Motor: 1/6 h.p.; 124 Watts. Power: 220 – 240 V AC, 50 - 60 Hz, 1 ph. Speeds: Low, and high; 140, 285. Mixing: Planetary action. Bowl: Stainless steel; with clearance adjustment bracket. Beater: Flat-type; stainless steel. Dimensions: 350 x 500 x 550 mm Weight: 45 kg (37 lbs).</p>	
BCEE 90	Test Bar Moulds	<p>Use: Expansion, Soundness</p> <p><u>Standard:</u> EN 12390-1</p> <p><u>Specifications:</u> Construction of Plated steel. Gauge Length: 254 mm (10") between inner ends of embedded contact points. Net weights: 9.1 kg (20 lbs) and 10 kg. (22 lbs). Two-Gang Mold: 25.4 x 25.4 x 254 mm (1" x 1" x 10") gauge length. Single Mold: 101.6 x 101.6 x 254 mm (4" x 4" x 10") gauge length. Contact Points: 6.3mm (1/4") diam. x 19mm (3/4") long in a pack of 100.</p>	
BCEE 91	Length Comparator	<p>Use: Length changes of cement paste</p> <p><u>Standard:</u> EN 1367-4</p> <p><u>Description:</u> Metal frame, double-post construction with rust resistant finish. Anvils: One movable and one stationary; shaped to receive contact points in sample bars.</p> <p><u>Specifications:</u></p>	

		<p>English dial Indicator: 5.000 mm x 0.001 mm divisions Reference Bar: Invar metal. Dimensions: 190 x 197 x 451 mm. (7-1/2" w. x 7-3/4" d. x 17-3/4" h). Net Weight: 6.1 kg (13-1/2 lbs)</p> <p>Accessory: Reference rod, 205 mm long to BS 1881 and BS 6073</p>	
BCEE 92	Blaine Fineness Apparatus	<p>Use: Fineness of cement</p> <p>Standards: EN 196-6, 459-2, 13286-44; BS 4359-2; ASTM C204</p> <p>Specifications: Stainless steel cell: 12.70 ± 0.10 mm inner diameter, 0.9 ± 0.1 mm thick disk with 30-40 one mm diam. holes. Stainless steel plunger. Net Weight: 2.8 kg. (6 lbs) Manometer: U-tube glass with ground joint, stop cock and rubber bulb assembly Filter Paper: 12.70 mm diam. Manometer liquid: Dibutylphthalate.</p>	
BCEE 93	Laboratory Concrete Mixer	<p>Use: To prepare concrete specimens and samples.</p> <p>The mixing blades and paddle made of steel to resist wear, and to ensure a fast and effective mixing operation. Pan capacity: 100 litres The mixing pan should be removable and tiltable for easy access to the pan and emptying on completion of the mixing operation. Mixing capacity: 56 litres Overall dimensions: 950x1000x1200 mm approx. Power: 380 V, 50-60 Hz, 3 ph Weight approx.: 245 kg</p>	
BCEE 94	Le Chatelier Flask	<p>Use: specific gravity of hydraulic cement, sand, stone and slag screening</p> <p><u>Standards:</u></p>	

		<p>EN 196-6, ASTM C188-9; AASHTO T133</p> <p><u>Specifications:</u> Flask made of glass Capacity: 250 ml Graduated neck from 0 to 1 ml and from 18 to 24 ml in 0.1 ml graduation Accuracy of 0.05 ml Net Weight: 500 g. (16 oz).</p> <p><u>Accessory:</u> Chattaway spatula 125 mm long Ground glass stopper to standards stated above.</p>	
BCEE 95	Shrinkage Mould	<p>Use: Linear shrinkage of cement mortar</p> <p><u>Standard:</u> EN 1367-4; ASTM C490</p> <p><u>Description:</u> Three gang mould supplied complete with 12 shrinkage plugs. Capacity: 40x40x160 mm mortar prisms</p>	
BCEE 96	Brass Ring Mould	<p>Use: Soundness of hydrated lime and gypsum plasters</p> <p><u>Standards:</u> EN 459-2</p> <p><u>Description:</u> Three moulds: dimensions 100mm dia. X 5 mm deep with an internal taper of 5° with complete glass plate.</p>	
BCEE 97	Standard Spatula	<p>Use: Casting cement briquette.</p> <p><u>Standard:</u> ISO 9002 standards in 2001, FEDERAL GGG-T-00671b</p> <p><u>Description:</u> Stainless steel blade 100mm to 200mm long A wooden handle fixed to the stem of blade. Weight approx. 340gms</p>	

BCEE 98	Gauging Trowel	<p>Use: Mortar mixing</p> <p>Standard: ASTM C 109, AASHTO T 106</p> <p>Description: Weight approximately 210gm. Hardwood handle Blade of length approx. 200mm.</p>	
BCEE 99	Ball Mill	<p>Use: Lime mortar grinding</p> <p>Welded 8mm thick steel plate construction, having an internal diameter of 305mm x 343mm long Drum with an opening of 21.6mm width along the full length of the drum. Air and water tight cover to close the opening after the specimen has been put inside the drum. Speed of rotation 31-33 r.p.m. A revolution counter for recording the revolutions of the mill fixed on the machine. Twelve 19mm dia steel balls 2.99 H.P. electric motor to operate on single phase 415 volts/3phase</p>	
BCEE 100	Vicat Apparatus	<p>Use: Consistency of cement and 'A' Class limes, Setting times of cement and 'A' Class limes, False set of cement and 'A' Class limes</p> <p>Standards: EN 196-3; ASTM C187, C191; AASHTO T129, T131; NF P15-414</p> <p>Specifications: Reversible plunger: 10 mm diam. at one end and 1 mm diam. needle at other end; combined weight 300 grams. Steel needle mounted in plunger; 1 mm diam. x 50 mm long. Graduated scale in millimeters. Mold: Hard rubber; 70 mm base diam. x 60 mm top diam. x 40 mm h. Net Weight: 4 kg. (8 lbs).</p>	

BCEE 101	Flow Table	<p>Use: Flow of hydraulic mortars and cement</p> <p><u>Standard:</u> BS 4551-1, 3892-1; ASTM C230;EN 1015-3</p> <p><u>Specifications</u> Table: Cast-bronze; 254 mm (10") diam.; combined weight with shaft, 4.1 ±0.05 kg. (9 lbs. ±0.1 lb). Frame: Heavy-duty construction with cam; produces 12.7 mm (1/2") table drop. Overall Dimensions: 254 mm (10") diam. x approx. 254 mm (10") h. Flow Mold: Machined bronze; 69.8 mm (2-3/4") top inner diameter x 101.6 mm (4") height Base inner diameter: 50.8 mm (2"). Net weight: 10 kg. (22 lbs).</p>	
BCEE 102	Pipe Threading Tools	<p>Use: threading black gas or galvanized iron pipes</p> <p>Four Cast iron die heads with alloy steel dies, two-piece tubular steel handle Compact ratchet head. The compact ratchet head is suitable for working close to walls Packed in blow mould carrying case and display sleeve.</p>	
BCEE 103	Strap Wrench	<p>Use: The Mini Strap Wrench is ideal for use on decorative finishes, faucets, shower heads and objects with irregular shapes.</p> <p>For items up to 3" inch outer diameter. Fabric strap with rubber-textured grip. Strap width is 5/8" for tight spaces. High strength metal handle. For use on decorative finishes or objects with irregular shapes.</p>	

		Opens jars, lids and bottles with ease.	
BCEE 104	Pipe Bender	Maximum pressure: 9T Maximum stroke: 150mm Crimping range: 10 to 15mm Bending formers: 3/8, 1/2, 3/4 or 1 inches Wall thickness of pipe: 1.5 to 4.5mm Motorised	
BCEE 105	Power Driven Pipe Threading Machine	Use: threading Pipe Capacity: 1/4" - 2" (10mm-52mm) Motor: 0.75 HP , universal, reversible motor, single-phase, 25-60 Hz, 230V Switch: Heavy duty FOR/OFF/REV and integral foot switch Spindle Speed: 28 RPM Chuck: Egamaster speed chuck with replaceable rocker-action jaws. Use: for threading ms pipes Spindle System: 28 RPM Rear Centering Device: Cam-action turns with chuck Support Bar: Heavy-duty (2)	
BCEE 106	Die Stock	Adjustable drop head type 1/2" to the maximum size of 1 1/4 " " BSP Iso 5229:1993	
BCEE 107	Pipe Bending Machine	Use: bending mild steel pipes hydraulic press up to 15 ton for 1/2" to 1"	
BCEE 108	Guillotine Shears (Up To Gauge 16)	Use: cutting heavy gauge sheet metals, motor driven Motor driven plate guillotine shear with a cutting capacity of max. 3.0mm sheet thickness (related to 1500 mm working length). Computer optimized welded steel design of shear machine frame. The cutting bar driven by crank drive and a noiseless gear motor on each side of the machine. Along the machine table there are sheet support covers of	

		<p>stainless steel with a snap lock system. Between the sheet support covers there adjustable front support arms with T-slots, 1000 mm scales and gauge fingers for easy front gauging.</p> <p>On each side of the cutting table there are rectangular gauges with stainless steel scales of 1000 mm. During the cut a mechanical hold-down bar with non-skid ebonite lining holds the part.</p> <p>All bearings and guide ways are maintenance free.</p> <p>Upper and lower blades consist of high-quality steel with two edges.</p>	
BCEE 109	Arc Welding Transformers	<p>Use: arc welding</p> <p>ARC Welding Transformers From – 70 Amp to 330 Amps. The machines are 100% Copper Wound-moving Core type current control and have forced Air cooling</p>	
BCEE 110	Oxy-Acetylene Equipment	<p>Use: Welding, brazing and flame cutting of metals</p> <p><u>Standards:</u> BS EN 874:1995 Oxygen/fuel gas blowpipes (cutting machine type) of cylindrical barrel. conforming to IS:7653/1975(Reaffirmed 2003)</p> <p><u>Specifications:</u> complete with shank mixer, swaged detachable tips of various sizes and other specification as under general technical requirements Manual Blow Pipes for welding & cutting Types of Blow Pipes For Fuel For Oxidizing Gas pressure Gas Gas Welding Blow Pipe Acetylene Oxygen High Pressure</p>	

		<p>Welding Blow Pipe Acetylene Oxygen Low Pressure Cutting Blow Pipe Acetylene Oxygen High Pressure Cutting Blow Pipe Acetylene Oxygen Low Pressure Pressure Regulators for Gas cylinder use in welding, cutting & related Processes</p>	
BCEE 111	P.P.R Welding Machine	<p>Use: plastic pipe welding Size: 20mm to 63mm, Copper head, Temperature regulator to adjust the welding temp, Two heating switches.</p> <p>Includes: - Pipe cutter - Measuring tape - Allen key - Holding stand - Carrying metal case</p>	
BCEE 112	Rivet Gun (Different Sizes)	<p>Use: For riveting work</p> <p>Rivet diameter capacity 1/8" Alum, 3/32" Steel Accepts all rivet sets and dimple die sets with .187 shank dia. Rolling cam and wedge assembly develops 3,000 lb. compression force with 90-100 PSI input Easy changing of yokes and tooling One man operation Thumb trigger throttle - controls plunger speed for easy rivet setting Squeeze action - permits easy control, exceptional accuracy and uniformity High joint integrity - independent of operator skill level 1/4" NPT Swivel air inlet - aids manoeuvrability Quiet operation Tool steel set holder Weight 1.3Kg</p>	

		Length 10.83" (275 mm) 10.71" (272 mm) Height 8.94" (227 mm)	
BCEE 113	Nipple Chuck (13-38 Mm) For Making Nipples	<p>Use: making nipples</p> <p>Ridged Nipple Chuck Ridged Pipe and Tubing Tools include; Ridged pipe wrench, the most complete and premier line of threading and roll grooving equipment, best-in-class pipe and tubing cutters, bending and forming tools, and a variety of other pipe-working tools and accessories.</p> <p>Ridged 51005 NPT Nipple Chuck 1 1/2 - 2, No. 819 Features: Holds short or close nipples for threading. Holds studs for threading. For use with 300 Power Drive, 300 Compact, 535 and 1822 and 1224 threading Machines.</p> <p>Standard Nipple Chuck includes insert and 5 adapters: 1/2, 3/4, 1, 1 1/4 and 1 1/2.</p>	
BCEE 114	Guillotine Shears	<p>Use: cutting flat stock cleanly with a minimum of bending</p> <p>The shears to cut non-ferrous metals up to 2.4 mm (10 gauges) or mild steel up to 2.0 mm.</p> <p>High carbon steel blades precision ground and hardened- designed to make 10,000 cuts before sharpening is required.</p> <p>Exclusive lever-action locking bar holds the material securely for precision cuts.</p> <p>Lever-action locking bar also restricts the access to blades, reducing the risk of accidental injury.</p> <p>Easy to read, adjustable ruler with cutting guide</p> <p>Square work surface</p> <p>Open back designed with a convenient receiving table to catch cut metal and to allow for any length of sheet.</p>	

		All steel constructions, mount to any work surface. Feed tray, handle and cutting guide removable for storage.	
BCEE 115	Slip Roller Machine	Use: Folding sheet metal The rolls are turned, ground and polished, high carbon steel, providing rigidity and resistance to wear and abrasion Type Manual Electric Capacity, mild steel 1.5mm Maximum forming length 1270mm Diameter of rolls 75mm Minimum forming radius 30mm Roll speed +/- 22 RPM Motor-230, 1ph/1.5kw Weight 400kg	
BCEE 116	Heavy Duty Bench Vice	Use: For holding metals for heavy cutting and other operations Cast iron Hardened and knurled carbon steel jaws All Steel Bench Vice Swivel Base, standard models, Complying with various industrial standards	
BCEE 117	Arc Welding Shields	Use: arc welding <u>Standards:</u> BS EN 175:1997 and CE approved <u>Specifications:</u> Injection moulded polypropylene hand-held welding helmet with adjustable head band.	
BCEE 118	Centrifugal Pump	Use for pumping water Max flow 1.6L/sec, Typical head 35m, speed 1800rpm	
BCEE 119	Bath Tubs With Pillar Taps	Use: for installation practice for bathing BS 1390 , enamel steel	

BCEE 120	WC With Cisterns	Use: sanitary purpose practice pedestal with P traps, pedestal with "s" trap	
BCEE 121	Kitchen Sink	Use: kitchen ware, installation practice stainless steel	
BCEE 122	Basins With Pillar Taps	Use: sanitary installation practice lavatory wash hand	
BCEE 123	Hot Water Cylinder With Immersion Heater	Use: heating water using electric heater 100litres, domestic use	
BCEE 124	Woodworking Lathes	<p>Use: Wood turning & copying with roughing and finishing</p> <p>The machine using two cutting head (two knives) at the same time during the turning cycle (one for cutting & one for finishing and each knife has scale of the cutting depth.</p> <p>Max. distance between centers 1200mm Height of centers over bed 120mm Max. copying diameter 150 mm Max. diameter permitted by traveling steady 90 mm Connection for driving and tailstock centre CM 3 Saddle feed speed 0 ÷ 3 meter /min Saddle return speed 3 meter/min Spindle motor 2,9KW Variable Spindle speeds R.P.M. (900 - 1500 - 2200 – 3000) Motor power of hydraulic unit 0,75KW Installed power 3,75KW Operating pressure 25 ÷ 30 bar Oil tank 20Liter Overall dimensions: Length x Height x Width 2400 x 650 x 1540mm Weight 400KG</p>	

		<p>Sound pressure level at operator position 71 db</p> <p>The machine must includes: Work- piece centering device that Permits the rapid centering of work-pieces. Tool support rest for occasional hand turning finishes. Traveling steady rest (max. Ø 90 mm) with pre-cutting tool that has interchangeable knife inserts. For mass production runs a metal template should be used. A wooden sample can also be utilized for small batches. Copying saddle assembly with 2 dust extractions. Electrical control panel with hydraulic saddle speed regulator. Drive centre with 2 interchangeable heads 28 and 45 mm Ø Tailstock revolving centre 12 mm Ø Traveling steady rest max. Ø 90 mm (square 65 x 65 mm) with reduction bush 2 vertical gouges, radius 1,2 mm and 1 precutting tool Motor protection switch Emergency push-button Front sliding guard Service tools in toolbox Abrasive stone for cutting edge dressing.</p>	
BCEE 125	Surface Dust Chip Remover	<p>Use: Cleaning working surfaces</p> <p>Double nylon brushes equipped with suction fan Stainless steel dust hood outlet with reduced airflow resistance. Imported anti-skid conveyor belt to increase the friction of floor, effectively prevent the abnormal operation of floor due to the skid on conveyor belt.</p> <p>Working width: 1300mm Work piece thickness: 3-80mm</p>	

		Feeding speed: 20m/min Working height: 900 The length of conveyor belt: 2500mm Total motor power: 4kw Feeding motor: 0.75kw Brush motor: 1.5kw Blow dust motor: 0.25kw(4PCS) Work-piece length: 300mm Overall dimensions: 3000×1950×1300mm	
BCEE 126	Multipurpose Wood Working Machine	Use: Planning, Moulding Surface 250 mm Thickness 250 x 160 mm Circular Saw Dia 250mm Milling thickness 6-60mm Size 1060 x 1500 x 1080mm Power 2.2 KW 1440 RPM	
BCEE 127	Vertical Band Saw	Use: Cutting curves vertically Saw Wheel Diameter 600 mm, Table size 800 x 700 mm, cutting height 350 mm, cutting width 500mm, Blade speed 1800 RPM, Dust hood diameter Ø4", Motor 7kw	
BCEE 128	Shaper	Use: Making shapes and patterns Working table 1000x650 mm Cutting height 125mm Dimension of spindle 30mm Spindle rotation speeds 3000/4000/5000/6000/8000/10000 rpm Motor power 5.5kw Net weight 430kg Overall dimensions(LxWxH) 1750x1300x1100mm Working table 1000x650mm Dimension of spring catch 12.7mm	
BCEE 129	Tenoner	Use: Making Tenon joints Cutter tenon spindle diameter 152mm x 50mm. Cutter tenon spindle rotary speed 6000rpm. Saw blade size 110mm x 30mm. Saw blade speed 2800rpm.	

		<p>Working thickness 127mm. Working width 370mm. Adjustable cutting depth Control panel with selection of (Manual Mode & Automatic Mode). Emergency switch. Supplied with two pedal foot switch. Working air pressures 0.6 to 0.8 Mpa (pneumatic clamp). Hydraulic Pump controls the cutting table movement. Safety key to lock the machine. Machine dimension 1680x1840x1150mm. Total Installed power 8HP. Rated voltage 380V 50Hz 3ph.</p> <p>Included Accessories: Tool box with spanner key & Allen key set. Grease pump. Air hose. Air oil-filter. Air compressor with air tank (output pressure 8 bar) 4 pcs tenon cutters ; 1 pcs saw blade</p>	
BCEE 130	Pressure measurement bench	<p>The trainer should include Deadweight Tester enables students to visualize the Force/unit Area of pressure and to understand the way in which a known pressure is generated. The unit is mounted on a base and consists of an oil reservoir which feeds oil to the main control valve at the base of a piston barrel. The weight carrier and piston slides in the piston barrel and apply a known pressure onto a column of oil. This is connected to a pressure gauge carrier the combination of the weight carrier and standard weights supplied allows students to calibrate the pressure gauge up to 240kN/m² at regular increments.</p>	

		<p>Including Pressure Transducer and Digital Display allow students to calibrate an electronic transducer and relate the pressure points to the electronic signal.</p>	
BCEE 131	Training Equipment In Industrial Hydraulics	<p>Training Equipment in Industrial Hydraulics</p> <p>Universal Testing Frame constructed of a twinned steel channel frame fastened with high tensile fixings. This creates an overall structure size of 4.61m long, 2.53m high and 1.2m wide and a working space of 4.0m long x 1.6m high.</p> <p>The 0.60m spacing between the verticals allows for wide test specimens to be tested. The base feet distribute the self weight of about 1 tonne to four anti-vibration leveling feet. The top channel members are used to carry either a single or double acting hydraulic ram Carriage.</p> <p>Accessories to be included: load supports, reaction plates, clamps, dial gauge support bars, half round and full roundbearings, height spacing units and clamps.</p> <p>All these accessories enable specimens to be set up quickly and easily in a variety of arrangements.</p> <p>A set of hollow steel dial gauge support bars should also be included.</p> <p>The system should be supplied with:</p> <p>A 20 tonne double acting ram on a moveable carriage to fit the 300 kN Universal Testing Frame</p> <p>Ram operates from a hand pump mounted on a mobile table, with digital pressure indicator and integral shelf</p> <p>Two hoses with self sealing couplings to be included</p>	

		<p>To be used in conjunction with the 300 kN Universal Testing Frame and its standard set of accessories</p> <p>A 3.6 m lighting track supplied at 1 m from top edge of the frame</p> <p>Four flood lamps in fittings that slide in the track</p> <p>Single ram acting hydraulic piston stroke 250mm fitted with wheels to allow moving the piston freely along the frame operated with 700 bar hand pump and shut-off valve and pressure direction valve.</p> <p>Protective guard should be included with transparent 450 mm square shield & 5mm thick. Four Dial gauges with magnetic holders should be included (25mm x 0.01mm). Digital display unit should be included and connected with hydraulic pump pressure sensor</p> <p>Data acquisition unit should be included with designed interface to function with UTM experiments fitted with appropriate transducers. It has the facility to display, record, store and review parameters of strain, pressure, force and deflection and can be operated</p> <p>To be supplied with a mains connector and 6 m of cable</p>	
BCEE 132	Fluid Friction Measurement	<p>Fluid Friction Measurement: Airflow System has been specifically designed to allow students to investigate a wide range of and low speed air flow phenomena and fundamental aerodynamics. The base unit consists of a large capacity variable speed centrifugal fan with a separate aerodynamically designed plenum chamber containing multiple screens, flow straightener and acceleration section. The fan and plenum</p>	

		<p>chamber are connected by a length of flexible hose and this allows the two components to be arranged in a variety of convenient locations either at bench or floor level.</p> <p>A large number of optional ducts may be attached to the plenum discharge that allow investigation of airflow on the positive side of the fan. In addition there are optional items that attach to the suction or intake side of the fan. The ability to utilise both the intake and discharge sides of the fan. Learning capabilities: Bernoulli's equation, Drag forces on various shapes, Investigation of a turbulent jet, Investigation of boundary layer development, Pressure distribution of flow around a bend, Fan performance characteristics, Jet attachment Pressure distribution around a cylinder, Pressure distribution around an aerofoil, Flow visualisation studies, Air flow measurement methods. Plenum Discharge: 100mm x 50mm</p> <p>Including airflow module for friction loss in bends and pipe elements: 6-pipes and Bends supplied, 1 Orifice plate Variety of arrangements possible Bench mountable. The components allow students to quantitatively investigate pressure drops in pipe sections and bends and flow measurement using an orifice plate. The unit also allows students to utilise the flow measuring devices in conjunction with the fan throttle supplied in order to estimate the fan performance under a range of conditions. A series</p>	
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		<p>of straight pipe sections, bends and different air inlet shapes that are equipped with static pressure tapings to allow air pressure drops due to pipe friction to be measured at a range of air velocities. The air flow rate may be measured using a standard orifice using the differential pressure. Related Learning capabilities: Investigation of total pressure and pressure drop along a duct. The measurement of duct component loss, (or k) factor by experiment, Large diameter pipe and bend: 106mm Bore Small diameter pipe and bend: 82mm Bore Orifice Plate inlet diameter 0.071m Four tapping's in orifice plate</p> <p>Including multi-tube manometer with a common reservoir that may be used to give a graphic display of pressure distribution on multi-point pressure tapings. The device allows up to 16 pressures to be monitored simultaneously either relative to atmospheric pressure or another pressure, via the common reservoir. In order to increase the device</p> <p>Page 7 of 25</p> <p>sensitivity the device may be inclined at a known angle. Learning capabilities: g Acceleration due to gravity m/s^2 h Manometer liquid height mm p Gauge pressure kN/m^2 P Absolute pressure kN/m^2 Density of manometer fluid Kg/m^3 Effective Height, 16-Tubes Fluid density: 870 kg/m^3 Angular scale: 360°, 1°</p> <p>Including Round Turbulent Jet Investigation Module allow students to quantitatively</p>	
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		<p>investigate the shear and mixing regions of a submerged turbulent jet. A round parallel tube with a sharp edged discharge is used to create a turbulent jet using the air from the unit. A pitot tube is attached to a measuring frame that allows the device to be traversed horizontally and axially over the whole flow field. By this method the velocity profile at various axial distances from the jet, the pressure loss and entrained mass may be investigated. Learning capabilities: Investigate the Shear and mixing regions of a submerged turbulent jet</p> <p>Investigation of the velocity profile and decay of a round submerged turbulent jet</p> <p>Momentum Conservation in the Jet, Jet internal diameter: 50mm</p> <p>Pitot tube travel: Up to 550mm</p> <p>Measuring track with feet: 1000mm long</p> <p>Including Bernoulli's Equation investigation allows students to quantitatively investigate Bernoulli's equation relating total pressure and dynamic pressure in a stream. The unit also introduces students to the Pitot - static tube, an essential tool for aerodynamic investigation and velocity measurement. A convergent divergent duct section has a pitot-static tube that can be moved axially along the duct to allow students to measure the local variations in total and static pressure due to the variation in duct cross section. The measured pressure changes may be compared with the Bernoulli equation predictions. Learning capabilities: Investigation of Bernoulli's</p>	
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		Equation, The use of the Pitot-Static tube for Air Velocity Measurement ,Duct Depth: 50mm Duct Throat Height: 44mm Pitot-Static Tube travel: 310	
BCEE 133a	Flow Meter Demonstration	<p>Flow meter demonstration: Flow meter module complete with Transducer set to allow the flow meter to be data logged. This module allows students to determine the flow rate of any optional system that is attached to the base unit. The flow meter is of the variable area design. It connects to the base unit through the supplied piping and can accurately measure the flow rate between 5 and 60 l/min, Determination of flow rate with any attached Hydraulic Bench system, The Water Flow sensor produces 330 pulses /liter (nominal), U-Bend flow-meter blank, Tank return assembly.</p> <p>Including Pressure and Throttle module allows the pressure change resulting from throttling of the flow from the pump to be measured. The addition of the flowmeter allows the flow and pressure characteristics of the standard pump to be investigated. Investigating the pressure characteristics of the standard pump. With the addition of this option the pressure and flow characteristics of the standard pump may be investigated. With the addition of series & parallel pump the pressure and flow characteristics may be</p> <p>Page 8 of 25</p> <p>investigated. Ball valve pressure gauge 32mm, Maximum working pressure 16 bar</p>	

		<p>Including Series and parallel pump module allows students to examine the performance of water pumps when operating in different configurations (series or parallel). Increasing the range of flow rates and pressures available to other experiments. Comparison of flow and pressure performance of a series/parallel pump, Single phase, 230V AC pump supplied as standard, (Single Pump): approximately 30 L/min</p> <p>Including hydraulics bench mounted on lockable castor wheels and is constructed around a sturdy framework onto which all elements of the hydraulics bench are mounted. The main water storage tank from which the electrically operated external pump takes its water is situated on the framework. An on/off control on the front of the frame, together with a safety cut out controls the pump, Storage tank capacity: 75 liters, Centrifugal pump: 0.365kw, Single phase, 230V AC pump supplied as standard, Single Pump: approx. 30L/m, Safety cut out, On/off switch, Lockable castor wheels, Twin 240V waterproof electrical output, Includes 21 channel data logger with 48 screw terminals, push-on edge connection and 20 external channels, 1 internal channel (mains Voltage). USB cable to PC USB port. Can be used via a USB splitter with up to 3 loggers. Utilizes HDL software has a curve-fitting Calibrate facility that allows manual input of the desired display value followed by a Read button to record the transducer output. Two</p>	
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		<p>such pairs will produce a linear fit or four pairs, a polynomial fit. The result is stored in memory automatically; Characteristic curves for Type K and Type T thermocouples are resident in memory. Each temperature channel can be modified. Hydraulics Bench for supply of water to a wide range of modules. Self-contained floor standing bench fitted with lockable castor wheels. Closed system for re-use of water.</p>	
BCEE 133b	Flow Meter Demonstration	PC-KIT	
BCEE 134	Flow In Pipe Network Apparatus	<p>Flow In Pipe Network Apparatus demonstrates the pressure losses that can occur in different types of pipes and plumbing arrangements. The unit comprises of 6 different horizontal sections, different diameter, roughness and material pipes, along with long and short radius bends, parallel sections and constrictions. The unit also has an expandable top section for different available designs. 90° Elbow, Parallel pipes, 45° swept tee, Long elbow, Short elbows, Sudden constriction, ½" dia copper pipe, 20mm dia PVC pipe, 32mm dia rough bore PVC pipe, 32mm dia smooth bore PVC pipe, 10 valves, 22 pressure tapping points, Expandable top section with 3 separating modules.</p> <p>Including hydraulics bench mounted on lockable castor wheels and is constructed around a sturdy framework onto which all elements of the hydraulics bench are mounted. The</p>	

		<p>main water storage tank from which the electrically operated external pump takes its water is situated on the framework. An on/off control on the front of the frame, together with a safety cut out controls the pump, Storage tank capacity: 75 liters, Centrifugal</p> <p>Page 9 of 25</p> <p>pump: 0.365kw, Single phase, 230V AC pump supplied as standard, Single Pump: approx. 30L/m, Safety cut out, On/off switch, Lockable castor wheels, Twin 240V waterproof electrical output, Includes 21 channel data logger with 48 screw terminals, push-on edge connection and 20 external channels, 1 internal channel (mains Voltage). USB cable to PC USB port. Can be used via a USB splitter with up to 3 loggers. Utilizes HDL software has a curve-fitting Calibrate facility that allows manual input of the desired display value followed by a Read button to record the transducer output. Two such pairs will produce a linear fit or four pairs, a polynomial fit. The result is stored in memory automatically; Characteristic curves for Type K and Type T thermocouples are resident in memory. Each temperature channel can be modified. Hydraulics Bench for supply of water to a wide range of modules. Self-contained floor standing bench fitted with lockable castor wheels. Closed system for re-use of water.</p>	
BCEE 135	Compressible flow range with reaction turbine	Compressible flow range Computer Linked: The phenomenon of compressible flow, sonic	

		<p>velocity and supersonic flow is possibly one of the most demanding areas of study for many students. The Base Unit consists of an instrumentation and control console that supplies a variable flow of compressed air to the range of optional modules, Brake Load Indicator: 0.01N resolution, Temperature Selector Switch, Thermocouple sockets: Six, Digital Tachometer Indicator, Return Air Flow meter: 0..12 g/s, Gauge Pressure: 0...1100 kN/m², Includes 21 channel data logger</p> <p>With HDL software, 48 screw terminals, push-on edge connection, 20 external channels, 1 internal channel (mains Voltage), USB cable to PC USB port can be used via a USB splitter with up to 3 loggers. Utilizes HDL software</p> <p>Including Nozzle Pressure Distribution Module: Two convergent-divergent nozzles of with the same throat diameter but different discharge area and a single convergent nozzle having the same diameter are supplied and fit in the common test section. All three nozzles have axial static pressure tapings allowing the approach, throat and divergent section pressures to be measured. The variation of pressure ratio and mass flow may be investigated for all three nozzles.</p> <p>Standard unit includes convergent – divergent ducts designed to produce Mach 1.0 at the throat and supersonic velocities downstream. 2 x Convergent-Divergent, 1 x</p>	
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		<p>Convergent, 1 x Back Pressure, Gauge: 0...1100kN/m², 8 x Nozzle Pressure Gauge, 2 x Thermocouples</p> <p>Including Experimental reaction turbine computer linked:</p> <p>The Reaction Turbine Module turbine is a single stage, radial flow, two jet reaction machine, operating on air. With a throttle valve and belt brake dynamometer, inlet and outlet air temperatures are recorded allowing the temperature drop due to work output to be measured. Investigation of torque/speed and power/speed characteristics of a single stage reaction turbine. Production of torque/speed and power/speed curves from a no load speed of approximately 35,000 rev/min to stall and at a range of inlet pressures. Determination of the isentropic efficiency of a turbine. Construction of retardation curve and from this the estimation of the effect of resistances due to mechanical and fluid friction. Turbine Speed: 35,000 rpm (continuous), Turbine Speed: 40,000 rpm (short periods only), Pressure Relief valve setting: 100kN/m².</p>	
BCEE 136	Compressible flow range with impulse turbine	Compressible flow range computer linked. The phenomenon of compressible flow, sonic velocity and supersonic flow is possibly one of the most demanding areas of study for many students. The Base Unit consists of an instrumentation and control console that	

		<p>supplies a variable flow of compressed air to the range of optional modules, Brake Load Indicator: 0.01N resolution, Temperature Selector Switch, Thermocouple sockets: Six, Digital Tachometer Indicator, Return Air Flow meter: 0..12 g/s, Gauge Pressure: 0...1100 kN/m², Includes 21 channel data logger With HDL software, 48 screw terminals, push-on edge connection, 20 external channels, 1 internal channel (mains Voltage), USB cable to PC USB port can be used via a USB splitter with up to 3 loggers. Utilizes HDL software</p> <p>Including Nozzle performance test module: A series of convergent and convergent-divergent nozzles may be installed in one of two locations in a high pressure measuring chamber. A pressure regulator, throttle valve and back pressure valve allow the air flow rate, inlet and discharge (or back) pressure to be varied. Standard unit includes convergent – divergent ducts designed to produce Mach 1.0 at the throat and supersonic velocities downstream. 4 x Convergent-Divergent, 1 x Micro- meter Adjustment, 1 x Weight Carrier, 1 x 0.5N, 1 x 1N, 1 x 2N, 1 x Drain Valve key 1 x Exhaust coupling assembly.</p> <p>Including Experimental impulse turbine computer linked: The Impulse Turbine Module is a single stage, axial flow impulse machine, operating on air, for experimental and teaching purposes. An impulse turbine with 4 separate</p>	
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		<p>nozzles and control valves, a throttle valve and belt brake dynamometer. Inlet and outlet air temperatures are recorded allowing the temperature drop due to work output to be measured. 2 x Thermocouples, 10N Load Cell maximum capacity, Turbine Speed: 35,000 rpm (continuous), Turbine Speed: 40,000 rpm (short periods only), Pressure Relief valve setting: 100kN/m²., Investigation of torque/speed and power/speed characteristics of a single stage impulse turbine. Application of the First Law of Thermodynamics to a simple open system undergoing a steady flow process. Determination of the isentropic efficiency of a turbine. Construction of retardation curve and from this the estimation of the effect of resistances due to mechanical and fluid friction.</p>	
BCEE 137	Cavitation Demonstration	<p>Polari-scope Demonstration: bench top mounted frame which allows the study of stress patterns and photo elasticity resulting from geometrical changes in loaded mechanical models, The frame has integral slots along its lengths into which can fit quarter wave plates and polarization filters. The frame has both polarization filters and quarter wave plates mounted in to a rotational mechanism that allows independent angular adjustment and hence vary the colorization seen by the user. A light box provides monochromatic</p> <p>Page 11 of 25</p>	

		<p>or white light to pass through the specimens when loaded. The light box is mounted vertically to suit the frame. Specimens are made from CR39 photo elastic material which is a highly specialized reactive plastic polymer commonly used in lens manufacture.</p> <p>Easy to rotate quarter wave plates and polarization filters to vary stress coloration, Compact bench-top design with rubber feet for stability, Quick and Precise Loading of Specimens, in tension, using screw jack, loading spring and dial gauge mechanism Dial Gauge mechanism allows the calculation of the applied force, Standard set of two (2) specimens provided, The light box measures 210mm x 297mm with an overall working area of 357mm x 270mm. The color temperature is 9,000 - 10,000 kelvin and the light intensity is 1,500 - 1,800 lux. The light source is LED and has an estimated life span of around 30,000 hours and gives even light output over the illuminated surface. There is an on/off front mounted switch fitted on the light box.</p> <p>Bench top unit for teaching of Photo elastic principles, supplied with quarter wave plates and polarisation filters, Wave plates and filters to easily slide in frame assembly and rotate independently, Fine tuning loading mechanism using loading spring, dial gauge and screw-jack, To load the specimen in tension & compression.</p> <p>Learning capabilities: Photo elastic analysis of standard mechanical models, Variation</p>	
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		of stress colourisation, Rotational position of wave plate and filters.	
BCEE 138	21 st century learning system for: building, civil, electrical, electronics and green energy	<p>CMS should support additional apps which are able to be purchased directly from the website provider administrator. While, not a comprehensive platform, these apps help educators who want to bring specific 21stCentury Elements into the classroom.</p> <p>Examples of these apps are: -</p> <p>Polling: Using any device, teachers will be able to immediately poll their students to get real time responses and assessment. - Digital Whiteboard Feature: Teachers can use their device to replicate many of the same features as a digital whiteboard at a fraction of the cost. Now a teacher can use ICT in their demonstrations with minimal infrastructure. - Exam Creation: Teachers can build exams for students using exam authoring tools - Exam Dissemination: Teachers can digitally disseminate exams to their students and retrieve them for automatic scoring.</p> <p>Compatibility: - Windows 10 - Local- Not online & No Server Needed</p> <p>Devices Control Features: Learner Monitoring Features, Device Sharing Features Utility Features, Learner Features Summary, Administration, Differentiated Instruction</p> <p>IT Equipment Supplied complete with Hardware of 1 number Server Computer of specifications: Intel i7, 3.1 Ghz, 8Gb Ram, 1Tb Hard-disk, complete with Keyboard Mouse and 17" Display with Windows 10.</p>	

		Supplied complete with 20 student PC's with Minimum specifications: Intel i7, 17 inch Display, 8Gb Ram Memory, 1Tb hard-disk With Windows 10 and Office Student.	
BCEE 139	Furniture, workbenches, cabinets, storage equipment and IT equipment Bidders are required to offer for all items requested the relevant and required; Furniture, workbenches, cabinets, storage equipment and IT equipment. This in order to ensure that fully functioning labs will be provided.		
BCEE 139a	IT package consisting of:		
	Teacher PC Kit	PC, i5-6500 3.2G, 8GB DDR4, 500GB 7200 rpm, keyboard, mouse, Windows 10, supermulti DVDRW, Office Home/Student 2016 Monitor display 21,5", black, full HD, 1920x1080 resolution, 8 ms response time USB business speaker set Headset	
	Classroom / Workshop	PC, i5-6500 3.2G, 8GB DDR4, 500GB 7200 rpm, keyboard, mouse, Windows 10, supermulti DVDRW, Office Home/Student 2016 Monitor display 21,5", black, full HD, 1920x1080 resolution, 8 ms response time USB business speaker set Headset	
	Digital Whiteboard	Projector kit professional complete consisting of: Projector, short throw, finger touch, 3300 lumen, WXGA, 2 pens, wall mounting bracket Document camera, USB, 15fps, 4x digital zoom Active speaker set 2x40W, stereo, incl. wall mounting brackets Projection board, image 16:10, dimension 2014x1285mm, special strip for touch sensor Cabling kit; 10 mtr VGA, 10 mtr, USB with booster for PC connection	
	Whiteboard	Standard white board Dimensions (w*h): 180*120cm	

	Printer	<p>Color laser printer complete with set of toner cartridges (4), USB print cable Height 280 mm Width 423mm Depth 289 mm Weight 14.8 kg Printing specifications Draft mode resolution: 300 x 300 dots per inch (dpi) Normal mode resolution: 600 x 600 dpi Plain-Best mode resolution: Up to 2400 dpi Input sensor resolution: 1200 x 1200 dpi Device languages: PCL3 GUI Up to 20 prints per minute in black and white Up to 16 prints per minute in color Scanning specifications Resolution: up to 1200 x 1200 ppi optical Scan speed: Up to 7 ppm (b&w), up to 5 ppm (color) Color: 24-bit color, 8-bit grayscale (256 levels of gray) Maximum scan size from glass: 21.6 x 29.7 cm (8.5 x 11.7 inches)</p> <p>Copying specifications Copy speeds (default mode)*: Up to 20 copies per minute (cpm) First copy out: As fast as 15 seconds Resolution (text and graphics): Up to 600 x 600 dpi Digital image processing</p> <p>*Copy speeds vary according to the printer model and the complexity of the document.</p>	
BCEE 139b	Teacher and student furniture kit consisting of:		
	Teacher furniture kit	<p>1 No.) Teacher desk rectangular shape size 180 x80 cm Built with a sturdy steel frame with square legs Tabletop thickness: 25mm</p>	

		<p>Mobile drawer block, 2 drawers, colour light grey RAL 7035, Melamine top Central cilinder lock, provided with two keys Scratch-proof epoxycoat Provided with 4 wheels, 2 of which can be locked in position Total weight 28 kg</p> <p>Teacher chair, NEN-EN 1335, adjustable arm rests, cross leg black, upholstery black, low backrest Sitting height: 44-58cm Adjustable sitting angle Padded seat and backrest</p> <p>Teacher cabinet 92x42x195cm Colour light grey RAL 7035, lockable, 5x shelves, segregation panel, 4x clothes hanger</p>	
	Student furniture kit	<p>20pcs Student chairs, chrome frame, strong PP seat, stackable to up to 35 chairs, colours; red, black, green and blue Sitting height: 44,5cm</p> <p>8pcs Student desk , 4 legs, colour light grey RAL 7035, melamine top, dimensions (w*d*h): 80x80x75cm. Built with a sturdy steel frame with square legs Tabletop thickness: 25mm</p> <p>(8 No.) Student desk rectangular shape 180 x80 cm for student's computers. Built with a sturdy steel frame with square legs Tabletop thickness: 25mm</p> <p>(8 No.) Student's desk rectangular shape 80x60 cm x H 90cm with adjustable angle of the top board to be used for drawing courses. Central cilinder lock, provided with two keys Scratch-proof epoxycoat Provided with 4 wheels, 2 of which can be locked in position Total weight 28 kg</p> <p>Student lockers, 3 rows of 4 lockers per unit</p>	

BCEE 139c	Storage cabinets and equipment consisting of:		
	Storage cabinets open front	Storage cabinet colour light grey RAL 7035, 92.5x42x195cm, open front, 4 shelves	
	Storage cabinets lockable	Storage cabinets 90x40x180cm, with 4 shelves, lockable	
	Storage rack	Storage rack 6 mtr, 2 mtr high, with 5 arms of different length	
	Storage shelves	Storage shelves, heavy duty with 5 shelves dimension 1216x460x1828mm	
	Tool board	Tool board with hooks 198 x 95cm	
	Parts storage	Parts storage system with 100 bins	
BCEE 139d	Workbenches complete	Workbench 2150x950x865 mm, 40 mm thick plywood worktop, sheet steel top, 1 drawer Bench vice 150mm with swivel base Bench brush	
BCEE 139e	Student tool kits	Professional toolkit <ul style="list-style-type: none"> - safety spectacles - brick bolster - junior hacksaw with spare blades - trimming knife - insulation tape - cold chisel - flat wood bit set - claw hammer - holesaw kit - HSS drill bit set 10mm - masonry drill bit set 10mm - hacksaw 300mm with spare blades - ratchet crimping tool - cable terminal assortment - precision screwdriver set - VDE plier set - VDE screwdriver set - adjustable wrench - club hammer 100gr - 7,5 mtr measuring tape 	

		<ul style="list-style-type: none"> - assortment cable ties - VDE approved mains tester - socket and bit set - digital multimeter - combined voltage, metal and stud detector - head lamp - floor board saw - pocket knife - VDE wire stripping plier - VDE waterpump plier - mini saw - spirit level - soldering kit - rubber torch - bevel edge wood chisels - file set - awl - draw-in tape 20 mtr - bending springs <p>toolbox</p>	
BCEE 139f	General workshop tools & equipment	<ul style="list-style-type: none"> - hole saw kit 19-57 mm - circular saw machine, complete with accessories - jig saw machine, complete with accessories - reciprocating saw machine, complete with accessories - wall chaser with diamond saw, complete with accessories - angle grinder 125mm, complete with accessories - angle grinder 230mm, complete with accessories - electric hand drill, 13 mm, complete with accessories - electric pneumatic hammer drill, 24 mm, complete with accessories - battery operated drill/driver 18v battery, complete with accessories - soldering iron 40/80w 	

		<ul style="list-style-type: none"> - soldering gun 30W, kit in box - tinman's steel square, 600x400 mm - folding square 600x400mm - combination square 300mm - divider, spring type, 150 mm - steel rule, 600 mm - steel rule, 1000 mm - tinmans shears, straight, 250 mm - tinmans shears, aviation 250 mm - hand nibbler 250mm - riveting hammer, 500 gr. - claw hammer 450 gr. - rubber mallet 410 gr. - club hammer, 1,0 kg - quick action cramps 300mm - outside calliper, 150 mm - inside calliper, 150 mm - steel square 150mm - tape rule, 5 mtr - steel measuring tape, metric, 30 m - plumb bob, brass, 100 g - chalk line - plumb and spirit level, 600 mm - plumb and spirit level, 1200 mm - open end spanners 6-32mm - combination spanners 6-32mm - ring spanners 6-32mm - socket set 1/4 complete - socket set 3/8" complete 6-24 mm, 41 pcs - socket set 1/2" complete 10-32mm, 31 pcs - vice grip plier curved jaws - vice grip plier long nose jaws - bending spring 5/8" - bending spring 3/4" 	
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		<ul style="list-style-type: none"> - bending spring 1" - EMT conduit bender - taps and dies set M3 to M20 - compass saw + 3 blades 200 mm - professional handsaw 550 mm - carpenters pencil, 174mm, set of 3 - set of VDE 3 pliers, 160 mm - VDE wire strip plier - VDE waterpump plier 300 mm - VDE cable knife - allen key set 1,5 - 22 mm - punch and chisel set, 12 pcs - VDE screwdriver set flat & philips - bevel edge chisel, 4 pcs, 6,12,20,26 mm - crow bar 600mm - engineers hammer 500 gr, - filecard cleaning brush - flat file, second cut, 250 mm - hand file, second cut, 250 mm - halfround file, second cut, 250 mm - round file, second cut, 250 mm - file handle, 110 mm - dust bins 120 ltr with wheels and lid - ladder - step ladder - first aid kits 25 persons - fire extinhuishers 6kg ABC - buckets - brick bolster flat - brick bolster pointed - draw-in tape nylon 20 mtr - draw-in tape metal 20 mtr - hacksaw 300mm - junior hacksaw - ratchet crimping tool with cable lugs - riveter set with rivets 	
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		<ul style="list-style-type: none"> - plastic pipe cutters - digital mutimeter 1000/700V complete kit - digital clamp meter 1000/750V complet kit - AC/DC voltage tester - VDE mains tester - non contact voltage tester - cable tracer optical and acoustic - extension cables 25 mtr ion reel - extension cords 10 mtr - extension cord 6 way surge protected 2 mtr test leads set of 10 types in different lengths and colours 	
BCEE 139g	Tool trolleys empty	<ul style="list-style-type: none"> - Tool trolley empty - 7 Drawer with Ball Bearing Slides - Features smooth 25mm ball bearing drawer slides, side handle, cylinder lock and, for additional security, rear locking bars to secure drawers when not in use. <p>Supplied with two keys.</p>	
BCEE 139h	Demo tables	Demo tables for benchtop equipment 180x80cm	

4. Drawings

This bidding document includes **NO** drawings.

[If documents shall be included, insert the following List of Drawings]

List of Drawings		
Drawing Nr.	Drawing Name	Purpose

5. Inspections and Tests

The following inspections and tests shall be performed:

- i. certificate of origin**
- ii. Inspection certificate by the Government Agent**
- iii. Goods received in good order**
- iv. Pre-Shipment Inspection by the Purchaser.**
- v. Final Inspection by the Purchaser.**



Part 3 – Contract

Section VIII - General Conditions of Contract

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Section VIII - General Conditions of Contract

1. Definitions

- 1.1 The following words and expressions shall have the meanings hereby assigned to them:
- (a) "Bank" means the financing institution named in the Special Conditions of Contract (SCC).
 - (b) "Borrower" means the entity named as the Borrower in the SCC.
 - (c) "Contract" means the Contract Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.
 - (d) "Contract Documents" means the documents listed in the Contract Agreement, including any amendments thereto.
 - (e) "Contract Price" means the price payable to the Supplier as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions therefrom, as may be made pursuant to the Contract.
 - (f) "Letter of Bid" means the document entitled letter of bid, which was completed by the Supplier and includes the signed offer to the Purchaser for the Goods.
 - (g) "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 Goods.
 - (h) "Drawings" means the drawings of the Goods, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) the Purchaser in accordance with the Contract.
 - (i) "Schedules" means the document(s) entitled schedules, completed by the Supplier 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.

- (j) "Bid" means the Letter of Bid and all other documents which the Supplier submitted with the Letter of Bid, as included in the Contract.
- (k) "Day" means calendar day.
- (l) "Completion" means the fulfillment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract.
- (m) "GCC" means the General Conditions of Contract.
- (n) "Goods" means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract.
- (o) "Purchaser's Country" is the country specified in the **Special Conditions of Contract (SCC)**.
- (p) "Purchaser" means the entity purchasing the Goods and Related Services, as **specified in the SCC**.
- (q) "Related Services" means the services incidental to the supply of the goods, such as insurance, installation, training and initial maintenance and other such obligations of the Supplier under the Contract.
- (r) "SCC" means the Special Conditions of Contract.
- (s) "Subcontractor" means any person, private or government entity, or a combination of the above, to whom any part of the Goods to be supplied or execution of any part of the Related Services is subcontracted by the Supplier.
- (t) "Supplier" means the person, private or government entity, or a combination of the above, whose Bid to perform the Contract has been accepted by the Purchaser and is named as such in the Contract Agreement.
- (u) "The Project Site," where applicable, means the place named in the **SCC**.

- (v) "Party" means the Purchaser or the Supplier as the context requires.
- (w) "Change Order" or "Change" is defined in Clause 33 [Change Orders and Contract Amendments.]
- (x) Bank Procurement Framework is defined as Procurement Framework for Goods, Works, Non-Consulting and Consulting Services under "Bank Financing" as defined under Procurement Policy for Bank Group funded operations.

2. Contract Documents

- 2.1 Subject to the order of precedence set forth in the Contract Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory. The Contract Agreement shall be read as a whole.

3. Fraud and Corruption

- 3.1 The Bank requires compliance with the Integrity Framework comprising the African Development Bank Group's Sanctions Procedures, the Bank's Whistleblowing and Complaints Policy, the Bank's Procurement Policy under the Procurement Framework and any other applicable Policies and Procedures including their updates, as set forth in Appendix 1 to the GCC.
- 3.2 The Purchaser requires the Supplier to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the Bidding process or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee.

4. Interpretation

- 4.1 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 vice-versa;

- (c) provisions including the word “agree”, “agreed” or “agreement” requires 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”;
- (f) The marginal words and other headings shall not be taken into consideration in the interpretation of these Conditions.

4.2 Incoterms

- (a) Unless inconsistent with any provision of the Contract, the meaning of any trade term and the rights and obligations of parties thereunder shall be as prescribed by Incoterms **specified in the SCC**.
- (b) The terms EXW, CIP, FCA, CFR and other similar terms, when used, shall be governed by the rules prescribed in the current edition of Incoterms specified in the **SCC** and published by the International Chamber of Commerce in Paris, France.

4.3 Entire Agreement

The Contract constitutes the entire agreement between the Purchaser and the Supplier and supersedes all communications, negotiations and agreements (whether written or oral) of the parties with respect thereto made prior to the date of Contract.

4.4 Amendment

No amendment or other variation of the Contract shall be valid unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party thereto.

4.5 Nonwaiver

- (a) Subject to GCC Sub-Clause 4.5(b) below, no relaxation, forbearance, delay, or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect, or restrict the rights of that party under the Contract, neither shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.
- (b) Any waiver of a party's rights, powers, or remedies under the Contract must be in writing, dated, and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.

4.6 Severability

If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.

5. Language

- 5.1 The Contract as well as all correspondence and documents relating to the Contract exchanged by the Supplier and the Purchaser, shall be written in the language specified in the **SCC**. 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.
- 5.2 The Supplier shall bear all costs of translation to the governing language and all risks of the accuracy of such translation, for documents provided by the Supplier.

6. **Joint Venture, Consortium or Association, Subcontractors**
- 6.1 Unless otherwise specified in SCC, if the Supplier is a joint venture, consortium, or association (JV), all of the parties shall be jointly and severally liable to the Purchaser for the fulfillment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the joint venture, consortium, or association. The composition or the constitution of the joint venture, consortium, or association shall not be altered without the prior consent of the Purchaser. Any limit on the maximum number of members in the Joint Venture, Consortium or Association shall be as specified in SCC. Minimum Share of a Member of the JV shall be as specified in SCC.
7. **Eligibility**
- 7.1 The Supplier and its Subcontractors shall have the nationality of an eligible country of the Bank in accordance with the Bank's Procurement Policy for the Bank Group Funded Operation described under the Bank's Procurement Framework, and as listed in Section V, Eligible Countries under Appendix 2 to General Conditions. A Supplier or Subcontractor shall be deemed to have the nationality of a country if it is a citizen or constituted, incorporated, or registered, and operates in conformity with the provisions of the laws of that country.
- 7.2 All Goods and Related Services to be supplied under the Contract and financed by the Bank shall have their origin in Eligible Countries of the Bank in accordance with the Bank's Procurement Policy for the Bank Group Funded Operation described under the Bank's Procurement Framework, and as listed in Section V, Eligible Countries. For the purpose of this Clause, origin means the country where the goods have been grown, mined, cultivated, produced, manufactured, or processed; or through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its components.
8. **Notices**
- 8.1 Any notice given by one party to the other pursuant to the Contract shall be in writing to the address

specified in the **SCC**. The term “in writing” means communicated in written form with proof of receipt.

8.2 A notice shall be effective when delivered or on the notice’s effective date, whichever is later.

9. **Governing Law**

9.1 The Contract shall be governed by and interpreted in accordance with the laws of the Purchaser’s Country, unless otherwise specified in the **SCC**.

9.2 Throughout the execution of the Contract, the Supplier shall comply with the import of goods and services prohibitions in the Purchaser’s Country when

(a) as a matter of law or official regulations, the Borrower’s country prohibits commercial relations with that country; or

9.2 (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower’s Country prohibits any import of goods from that country or any payments to any country, person, or entity in that country.

10. **Settlement of Disputes**

10.1 The Purchaser and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.

10.2 If, after twenty-eight (28) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract. Arbitration proceedings shall

be conducted in accordance with the rules of procedure specified in the **SCC**.

10.3 Notwithstanding any reference to arbitration herein,

(a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and

(b) the Purchaser shall pay the Supplier any monies due the Supplier.

11. Inspections and Audit by the Bank

11.1 The Supplier shall keep, and shall make all reasonable efforts to cause its Subcontractors to keep, accurate and systematic accounts and records in respect of the Goods in such form and details as will clearly identify relevant time changes and costs.

11.2 Pursuant to paragraph 2.2 e. of Appendix 1 to the General Conditions the Supplier shall permit and shall cause its subcontractors and subconsultants to permit, the Bank and/or persons appointed by the Bank to inspect the Site and/or the accounts and records relating to the procurement process, selection and/or contract execution, and to have such accounts and records audited by auditors appointed by the Bank if requested by the Bank. The Supplier's and its Subcontractors' and subconsultants' attention is drawn to Sub-Clause 3.1 which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Bank's prevailing sanctions procedures).

12. Scope of Supply

12.1 The Goods and Related Services to be supplied shall be as specified in the Schedule of Requirements.

13. Delivery and Documents

13.1 Subject to GCC Sub-Clause 33.1, the Delivery of the Goods and Completion of the Related Services shall be in accordance with the Delivery and Completion Schedule specified in the Schedule of Requirements.

The details of shipping and other documents to be furnished by the Supplier are specified in the **SCC**.

14. Supplier's Responsibilities

14.1 The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with GCC Clause 12, and the Delivery and Completion Schedule, as per GCC Clause 13.

15. Contract Price

15.1 Prices charged by the Supplier for the Goods supplied and the Related Services performed under the Contract shall not vary from the prices quoted by the Supplier in its Bid, with the exception of any price adjustments authorized in the **SCC**.

16. Terms of Payment

16.1 The Contract Price, including any Advance Payments, if applicable, shall be paid as specified in the **SCC**.

16.2 The Supplier's request for payment shall be made to the Purchaser in writing, accompanied by invoices describing, as appropriate, the Goods delivered and Related Services performed, and by the documents submitted pursuant to GCC Clause 13 and upon fulfillment of all other obligations stipulated in the Contract.

16.3 Payments shall be made promptly by the Purchaser, but in no case later than sixty (60) days after submission of an invoice or request for payment by the Supplier, and after the Purchaser has accepted it.

16.4 The currencies in which payments shall be made to the Supplier under this Contract shall be those in which the Bid price is expressed.

16.5 In the event that the Purchaser fails to pay the Supplier any payment by its due date or within the period set forth in the **SCC**, the Purchaser shall pay to the Supplier interest on the amount of such delayed payment at the rate shown in the **SCC**, for the period of delay until payment has been made in full, whether before or after judgment or arbitrage award.

17. Taxes and Duties

17.1 For goods manufactured outside the Purchaser's Country, the Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the Purchaser's Country.

17.2 For goods Manufactured within the Purchaser's Country, the Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser.

17.3 If any tax exemptions, reductions, allowances or privileges may be available to the Supplier in the Purchaser's Country, the Purchaser shall use its best efforts to enable the Supplier to benefit from any such tax savings to the maximum allowable extent.

18. Performance Security

18.1 If required as specified in the SCC, the Supplier shall, within twenty-eight (28) days of the notification of contract award, provide a performance security for the performance of the Contract in the amount specified in the **SCC**.

18.2 The proceeds of the Performance Security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

18.3 As specified in the SCC, the Performance Security, if required, shall be denominated in the currency(ies) of the Contract, or in a freely convertible currency acceptable to the Purchaser; and shall be in one of the format stipulated by the Purchaser in the SCC, or in another format acceptable to the Purchaser.

18.4 The Performance Security shall be discharged by the Purchaser and returned to the Supplier not later than twenty-eight (28) days following the date of Completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in the **SCC**.

19. Copyright

19.1 The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein shall remain vested in the Supplier, or, if they are furnished to the Purchaser directly or through the Supplier by any

third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party

20. Confidential Information

20.1 The Purchaser and the Supplier shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data, or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following completion or termination of the Contract. Notwithstanding the above, the Supplier may furnish to its Subcontractor such documents, data, and other information it receives from the Purchaser to the extent required for the Subcontractor to perform its work under the Contract, in which event the Supplier shall obtain from such Subcontractor an undertaking of confidentiality similar to that imposed on the Supplier under GCC Clause 20.

20.2 The Purchaser shall not use such documents, data, and other information received from the Supplier for any purposes unrelated to the contract. Similarly, the Supplier shall not use such documents, data, and other information received from the Purchaser for any purpose other than the performance of the Contract.

20.3 The obligation of a party under GCC Sub-Clauses 20.1 and 20.2 above, however, shall not apply to information that:

- (a) the Purchaser or Supplier need to share with the Bank or other institutions participating in the financing of the Contract;
- (b) now or hereafter enters the public domain through no fault of that party;
- (c) can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party; or

- (d) otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.

20.4 The above provisions of GCC Clause 20 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the Contract in respect of the Supply or any part thereof.

20.5 The provisions of GCC Clause 20 shall survive completion or termination, for whatever reason, of the Contract.

21. Subcontracting 21.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under the Contract if not already specified in the Bid. Such notification, in the original Bid or later shall not relieve the Supplier from any of its obligations, duties, responsibilities, or liability under the Contract.

21.2 Subcontracts shall comply with the provisions of GCC Clauses 3 and 7.

22. Specifications and Standards 22.1 Technical Specifications and Drawings

- (a) The Goods and Related Services supplied under this Contract shall conform to the technical specifications and standards mentioned in Section VI, Schedule of Requirements and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the Goods' country of origin.
- (b) The Supplier shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof provided or designed by or on behalf of the Purchaser, by giving a notice of such disclaimer to the Purchaser.
- (c) Wherever references are made in the Contract to codes and standards in accordance with which it shall be executed, the edition or the revised version of such codes

and standards shall be those specified in the Schedule of Requirements. During Contract execution, any changes in any such codes and standards shall be applied only after approval by the Purchaser and shall be treated in accordance with GCC Clause 33.

23. Packing and Documents

23.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.

23.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified in the SCC, and in any other instructions ordered by the Purchaser.

24. Insurance

24.1 Unless otherwise specified in the **SCC**, the Goods supplied under the Contract shall be fully insured—in a freely convertible currency from an eligible country—against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery, in accordance with the applicable Incoterms or in the manner specified in the **SCC**.

25. Transportation and Related Services

25.1 Unless otherwise specified in the **SCC**, responsibility for arranging transportation of the Goods shall be in accordance with the specified Incoterms.

25.2 The Supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:

- (a) performance or supervision of on-site assembly and/or start-up of the supplied Goods;
- (b) furnishing of tools required for assembly and/or maintenance of the supplied Goods;
- (c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods;
- (d) performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and
- (e) training of the Purchaser's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods.

25.3 Prices charged by the Supplier for related services, if not included in the Contract Price for the Goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services

26. Inspections and Tests

26.1 The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and Related Services as are specified in the **SCC**.

26.2 The inspections and tests may be conducted on the premises of the Supplier or its Subcontractor, at point of delivery, and/or at the Goods' final destination, or in another place in the Purchaser's Country as specified in the **SCC**. Subject to GCC Sub-Clause 26.3, if conducted on the premises of the Supplier or its Subcontractor, all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Purchaser.

26.3 The Purchaser or its designated representative shall be entitled to attend the tests and/or inspections referred to in GCC Sub-Clause 26.2, provided that the Purchaser bear all of its own costs and expenses

incurred in connection with such attendance including, but not limited to, all traveling and board and lodging expenses.

26.4 Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection.

26.5 The Purchaser may require the Supplier to carry out any test and/or inspection not required by the Contract but deemed necessary to verify that the characteristics and performance of the Goods comply with the technical specifications codes and standards under the Contract, provided that the Supplier's reasonable costs and expenses incurred in the carrying out of such test and/or inspection shall be added to the Contract Price. Further, if such test and/or inspection impedes the progress of manufacturing and/or the Supplier's performance of its other obligations under the Contract, due allowance will be made in respect of the Delivery Dates and Completion Dates and the other obligations so affected.

26.6 The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.

26.7 The Purchaser may reject any Goods or any part thereof that fail to pass any test and/or inspection or do not conform to the specifications. The Supplier shall either rectify or replace such rejected Goods or parts thereof or make alterations necessary to meet the specifications at no cost to the Purchaser, and shall repeat the test and/or inspection, at no cost to the Purchaser, upon giving a notice pursuant to GCC Sub-Clause 26.4.

26.8 The Supplier agrees that neither the execution of a test and/or inspection of the Goods or any part thereof, nor the attendance by the Purchaser or its representative, nor the issue of any report pursuant to GCC Sub-Clause 26.6, shall release the Supplier

from any warranties or other obligations under the Contract.

27. Liquidated Damages

27.1 Except as provided under GCC Clause 32, if the Supplier fails to deliver any or all of the Goods by the Date(s) of delivery or perform the Related Services within the period specified in the Contract, the Purchaser may without prejudice to all its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in the **SCC** of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in those **SCC**. Once the maximum is reached, the Purchaser may terminate the Contract pursuant to GCC Clause 35.

28. Warranty

28.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.

28.2 Subject to GCC Sub-Clause 22.1(b), the Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination.

28.3 Unless otherwise specified in the **SCC**, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the **SCC**, or for eighteen (18) months after the date of shipment from the port or place of loading in the country of origin, whichever period concludes earlier.

28.4 The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all

reasonable opportunity for the Supplier to inspect such defects.

28.5 Upon receipt of such notice, the Supplier shall, within the period specified in the **SCC**, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.

28.6 If having been notified, the Supplier fails to remedy the defect within the period specified in the **SCC**, the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.

29. **Patent Indemnity**

29.1 The Supplier shall, subject to the Purchaser's compliance with GCC Sub-Clause 29.2, indemnify and hold harmless the Purchaser and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of:

- (a) the installation of the Goods by the Supplier or the use of the Goods in the country where the Site is located; and
- (b) the sale in any country of the products produced by the Goods.

Such indemnity shall not cover any use of the Goods or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, neither any infringement resulting from the use of the Goods or any part thereof, or any products produced thereby in association or combination with any other equipment, plant, or materials not supplied by the Supplier, pursuant to the Contract.

29.2 If any proceedings are brought or any claim is made against the Purchaser arising out of the matters referred to in GCC Sub-Clause 29.1, the Purchaser shall promptly give the Supplier a notice thereof, and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.

29.3 If the Supplier fails to notify the Purchaser within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Purchaser shall be free to conduct the same on its own behalf.

29.4 The Purchaser shall, at the Supplier's request, afford all available assistance to the Supplier in conducting such proceedings or claim, and shall be reimbursed by the Supplier for all reasonable expenses incurred in so doing.

29.5 The Purchaser shall indemnify and hold harmless the Supplier and its employees, officers, and Subcontractors from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Supplier may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract arising out of or in connection with any design, data, drawing, specification, or other documents or materials provided or designed by or on behalf of the Purchaser.

30. Limitation of Liability

30.1 Except in cases of criminal negligence or willful misconduct,

- (a) the Supplier shall not be liable to the Purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall

not apply to any obligation of the Supplier to pay liquidated damages to the Purchaser and

- (b) the aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the supplier to indemnify the Purchaser with respect to patent infringement

**31. Change in
Laws and
Regulations**

31.1 Unless otherwise specified in the Contract, if after the date of 28 days prior to date of Bid submission, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed in the place of the Purchaser's Country where the Site is located (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Delivery Date and/or the Contract Price, then such Delivery Date and/or Contract Price shall be correspondingly increased or decreased, to the extent that the Supplier has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with GCC Clause 15.

**32. Force
Majeure**

32.1 The Supplier shall not be liable for forfeiture of its Performance Security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

32.2 For purposes of this Clause, "Force Majeure" means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in its

sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

32.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

**33. Change
Orders and
Contract
Amendments**

33.1 The Purchaser may at any time order the Supplier through notice in accordance GCC Clause 8, to make changes within the general scope of the Contract in any one or more of the following:

- (a) drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
- (b) the method of shipment or packing;
- (c) the place of delivery; and
- (d) the Related Services to be provided by the Supplier.

33.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or in the Delivery/Completion Schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this Clause must be asserted within twenty-eight (28) days from the date of the Supplier's receipt of the Purchaser's change order.

33.3 Prices to be charged by the Supplier for any Related Services that might be needed but which were not included in the Contract shall be agreed upon in advance by the parties and shall not exceed the

prevailing rates charged to other parties by the Supplier for similar services.

33.4 Subject to the above, no variation in, or modification of, the terms of the Contract shall be made except by written agreement signed by the parties.

34. Extensions of Time

34.1 If at any time during performance of the Contract, the Supplier or its subcontractors should encounter conditions impeding timely delivery of the Goods or completion of Related Services pursuant to GCC Clause 13, the Supplier shall promptly notify the Purchaser in writing of the delay, its likely duration, and its cause. As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may at its discretion extend the Supplier's time for performance, in which case the extension shall be ratified by the parties by amendment of the Contract.

34.2 Except in case of Force Majeure, as provided under GCC Clause 32, a delay by the Supplier in the performance of its Delivery and Completion obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 26, unless an extension of time is agreed upon, pursuant to GCC Sub-Clause 34.1.

35. Termination

35.1 Termination for Default

- (a) The Purchaser, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate the Contract in whole or in part:
 - (i) if the Supplier fails to deliver any or all of the Goods within the period specified in the Contract, or within any extension thereof granted by the Purchaser pursuant to GCC Clause 34;
 - (ii) if the Supplier fails to perform any other obligation under the Contract; or
 - (iii) if the Supplier, in the judgment of the Purchaser has engaged in Fraud and Corruption, as defined in paragraph 2.2

a of the Appendix 1 to the GCC, in competing for or in executing the Contract.

- (b) In the event the Purchaser terminates the Contract in whole or in part, pursuant to GCC Clause 35.1(a), the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or Related Services similar to those undelivered or not performed, and the Supplier shall be liable to the Purchaser for any additional costs for such similar Goods or Related Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

35.2 Termination for Insolvency.

- (a) The Purchaser may at any time terminate the Contract by giving notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the Purchaser

35.3 Termination for Convenience.

- (a) The Purchaser, by notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.
- (b) The Goods that are complete and ready for shipment within twenty-eight (28) days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:

- (i) to have any portion completed and delivered at the Contract terms and prices; and/or
- (ii) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Related Services and for materials and parts previously procured by the Supplier.

35.4 Anytime the contract is terminated for any reason indicated under clause 35, the advance payments made, if any, on the undelivered Goods and Related Services, if not already recovered from the Supplier shall become payable to the Purchaser which the Supplier shall pay to the Purchaser within 15 days from the date of receipt of notice of such termination failing which the amount will be recovered as demand by calling the advance payment Bank Guarantee provided under the contract.

36. Assignment

36.1 Neither the Purchaser nor the Supplier shall assign, in whole or in part, their obligations under this Contract, except with prior written consent of the other party.

37. Export Restriction

37.1 Notwithstanding any obligation under the Contract to complete all export formalities, any export restrictions attributable to the Purchaser, to the country of the Purchaser, or to the use of the products/goods, systems or services to be supplied, which arise from trade regulations from a country supplying those products/goods, systems or services, and which substantially impede the Supplier from meeting its obligations under the Contract, shall release the Supplier from the obligation to provide deliveries or services, always provided, however, that the Supplier can demonstrate to the satisfaction of the Purchaser and of the Bank that it has completed all formalities in a timely manner, including applying for permits, authorizations and licenses necessary for the export of the products/goods, systems or services under the terms

of the Contract. Termination of the Contract on this basis shall be for the Purchaser's convenience pursuant to Sub-Clause 35.3.

APPENDIX 1 TO GENERAL CONDITIONS

Fraud and Corruption

1. Purpose

1.1 The Bank's Integrity Framework and this annex apply with respect to procurement under Bank Investment Project Financing operations.

2. Requirements

2.1 The Bank requires that Borrowers (including beneficiaries of Bank financing); bidders (applicants), consultants, contractors and suppliers; any sub-contractors, sub-consultants, service providers or suppliers; any agents (whether declared or not); and any of their personnel, observe the highest standard of ethics during the procurement process, selection and contract execution of Bank-financed contracts, and refrain from Fraud and Corruption¹¹.

2.2 To this end, the Bank:

a. Defines, for the purposes of this provision, the terms set forth below as follows:

- i. "corrupt practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party¹²;
- ii. "fraudulent practice" is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party¹³ to obtain financial or other benefit or to avoid an obligation;
- iii. "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- iv. "coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
- v. "obstructive practice" is:
 - (a) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to

¹¹ In this context, any action to influence the procurement process or contract execution for undue advantage is improper.

¹² For the purpose of this sub-paragraph, "another party" refers to a public official acting in relation to the procurement process or contract execution, including Bank staff and employees of other organizations taking or reviewing procurement decisions.

¹³ For the purpose of this sub-paragraph, "party" refers to a public official, including Bank staff and employees of other organizations taking or reviewing procurement decisions.; the terms "benefit" and "obligation" relate to the procurement process or contract execution; and the "act or omission" is intended to influence the procurement process or contract execution."

materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive, or collusive practice; and/or threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

- (b) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under paragraph 2.2 e. below.
- b. Rejects a proposal for award if the Bank determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
- c. In addition to the legal remedies set out in the relevant Legal Agreement, may take other appropriate actions, including declaring misprocurement, if the Bank determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement process, selection and/or execution of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;
- d. Pursuant to the Bank's Integrity Framework and in accordance with the Bank's prevailing sanctions policies and procedures, may sanction a firm or individual, either indefinitely or for a stated period of time, including by publicly declaring such firm or individual ineligible (i) to be awarded or otherwise benefit from a Bank-financed contract, financially or in any other manner;¹⁴ (ii) to be a nominated¹⁵ sub-contractor, consultant, manufacturer or supplier, or service provider of an otherwise eligible firm being awarded a Bank-financed contract; and (iii) to receive the proceeds of any loan made by the Bank or otherwise to

¹⁴ For the avoidance of doubt, a sanctioned party's ineligibility to be awarded a contract shall include, without limitation, (i) applying for pre-qualification, expressing interest in a consultancy, and bidding, either directly or as a nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider, in respect of such contract, and (ii) entering into an addendum or amendment introducing a material modification to any existing contract.

¹⁵ A nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider (different names are used depending on the particular bidding document) is one which has been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.

participate further in the preparation or implementation of any Bank-financed project;

- e. Requires that a clause be included in bidding documents and in contracts financed by a Bank loan, requiring (i) bidders (applicants), consultants, contractors, and suppliers, and their sub-contractors, sub-consultants, service providers, suppliers, agents personnel, permit the Bank to inspect¹⁶ all accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have them audited by auditors appointed by the Bank.

¹⁶ Inspections in this context usually are investigative (i.e., forensic) in nature. They involve fact-finding activities undertaken by the Bank or persons appointed by the Bank to address specific matters related to investigations/audits, such as evaluating the veracity of an allegation of possible Fraud and Corruption, through the appropriate mechanisms. Such activity includes but is not limited to: accessing and examining a firm's or individual's financial records and information, and making copies thereof as relevant; accessing and examining any other documents, data and information (whether in hard copy or electronic format) deemed relevant for the investigation/audit, and making copies thereof as relevant; interviewing staff and other relevant individuals; performing physical inspections and site visits; and obtaining third party verification of information.

APPENDIX 2 TO GENERAL CONDITIONS

Eligible Countries

Eligibility for the Provision of Goods, Works and Services in Bank Group Financed Procurement

A. Provisions under Section 5 “Eligibility” of the Procurement Policy for Bank Group Funded Operations and Chapter A2 of the Operations Procurement Manual under Procurement Framework of the African Development Bank

1. The African Development Fund (ADF) permits firms and individuals from all countries to offer goods, works and services for ADF funded projects.

However, the proceeds of any Financing undertaken in the operations of the African Development Bank (ADB) and the Nigeria Trust Fund (NTF) shall be used for procurement of goods and works, including the related services, provided by bidders from Eligible¹⁷ Countries.¹⁸ Any conditions for participation shall be limited to those that are essential to ensure the firm's capability to fulfill the contract in question. In the case of ADB and NTF, bidders from non-Member Countries offering goods, works and related services (including transportation and insurance) are not eligible even if they offer these from Eligible Member Countries. Any waiver to this rule will be in accordance with the Articles 17(1) (d) of the Agreement Establishing the African Development Bank and 4.1 of the Agreement Establishing the Nigeria Trust Fund.

B. Rules and Procedures for Procurement of Goods and Works

Overview

1. The eligibility criteria for participation in the supply of goods, works and related services, to be procured through the ADB and NTF Financing, derive from the requirements of the Agreement Establishing the African Development Bank, Article 17.1.d, and the Agreement Establishing the Nigeria Trust Fund, Article 4.1. The foregoing requirements basically prescribe two types of eligibility criteria:

¹⁷ Refer to Bank Framework for additional information on Eligibility.

¹⁸ “Eligible Countries” shall mean: (a) in the case of the African Development Bank (ADB) and the Nigeria Trust Fund (NTF), the Member Countries of the ADB; and (b) in the case of the African Development Fund, any country.

- i) The eligibility of the bidder;
- ii) The eligibility of the goods, works and related services.

Eligibility of the Bidder Under the ADB & NTF Financing

2. The eligibility of the bidder shall be based on nationality, in accordance with the following rules:
 - (a) Natural Persons: A natural person is eligible if he or she is a national of a Member Country of the ADB. Where a person has more than one nationality, such a person shall be eligible if the nationality indicated in his or her bid is that of a Member Country of ADB.
 - (b) Corporations: A corporation is eligible if it satisfies the following criteria:
 - i) it is incorporated in a country that is a Member of the ADB;
 - ii) it is a national of a country that is a Member of the ADB, as determined by the law of its place of incorporation; and
 - iii) it has its principal place of business in a country that is a Member of the ADB.
 - (c) Joint Ventures and Associations: An unincorporated joint venture, partnership, or association, shall be eligible if more than 50% of the value of its works and/or services is executed by its members satisfying the eligibility requirements for individuals or corporations.

Eligibility of the Goods, Works and Related Services

3. In order to be eligible, the goods to be procured must have been mined, grown, or produced, in the form in which they are purchased, in an Eligible Member Country.
4. For works contracts, which may include civil works, plant construction, or turnkey contracts, the contractor must satisfy the nationality criteria of eligibility, either as a natural person, or corporation, or joint venture and association. Labour, equipment, and materials needed for carrying out the works contract, shall be supplied from Eligible Member Countries.
5. For contracts, which have been awarded on the basis of Cost, Insurance and Freight (CIF), or Carriage and Insurance Paid (CIP), bidders shall be free to arrange for ocean and other transportation, and the related insurance, from any Eligible Member Country. On the other hand, where goods are shipped on FOB basis, and the Bank has agreed to finance transportation and insurance separately, which are arranged by the purchaser, under a separate contract, the Bank shall be satisfied that the services are supplied from Eligible Member Countries.

List of Eligible Countries

6. List of Eligible countries can be found in African Development Bank's website:

<https://www.afdb.org/en/about-us/corporate-information/members/>

Ineligible Countries in reference to ITB 4.8 and ITB 5.1

7. In reference to ITB 4.8 and ITB 5.1, for the information of the Bidders, at the present time firms, goods and services from the following countries are excluded from this Bidding process:

Under ITB 4.8(a) and ITB 5.1: *[insert a list of the countries following approval by the Bank to apply the restriction or state "none"]*.

Under ITB 4.8(b) and ITB 5.1: *[insert a list of the countries following approval by the Bank to apply the restriction or state "none"]*

Section IX - Special Conditions of Contract

The following Special Conditions of Contract (SCC) shall supplement and / or amend the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

GCC 1.1 (a)	The Financing Institution is African Development Fund
GCC 1.1 (b)	The Borrower is Government of Kenya
GCC 1.1(o)	The Purchaser's Country is: Kenya
GCC 1.1(p)	The Purchaser is: Ministry of Education State Department for Technical, Vocational Education and Training
GCC 1.1 (u)	The Project Site(s)/Final Destination(s) is/are: Siaya Institute of Technology – Siaya County
GCC 4.2 (a)	The meaning of the trade terms shall be as prescribed by Incoterms.
GCC 4.2 (b)	The version edition of Incoterms shall be Incoterms 2010 published by the International Chamber of commerce
GCC 5.1	The language shall be: English
GCC 8.1	For <u>notices</u> , the Purchaser's address shall be: The Project Coordinator Teleposta Towers, Kenyatta Avenue 24th floor, room 2412 P.O Box 9583-00200 NAIROBI, KENYA +254 020 2217210/1/2/4/6/8/9 procurement.afdb@education.go.ke
GCC 9.1	The governing law shall be the law of: The Republic of Kenya

GCC 10.2	<p>The rules of procedure for arbitration proceedings pursuant to GCC Clause 10.2 shall be as follows:</p> <p>(a) Contract with foreign Supplier:</p> <p>GCC 10.2 (a)—Any dispute, controversy or claim arising out of or relating to this Contract, or breach, termination or invalidity thereof, shall be settled by arbitration in accordance with the UNCITRAL Arbitration Rules as at present in force.</p> <p>.</p> <p>(b) Contracts with Supplier national of the Purchaser's Country:</p> <p>In the case of a dispute between the Purchaser and a Supplier who is a national of the Purchaser's Country, the dispute shall be referred to adjudication or arbitration in accordance with the laws of the Purchaser's Country.</p>
GCC 13.1	<p>Details of Shipping and other Documents to be furnished by the Supplier are</p> <ul style="list-style-type: none"> • Supplier invoice showing goods description, quality, unit price and total amount- Original/Certified copy. • Bill of Lading/AirWay Bill –Original/Copy • Packing list identifying content of each package. • Insurance Certificate. • Manufacturers' or Suppliers warranty Certificate. • Certificate of Origin. • Inspection Certificate by a Government Agent. • Pre-Shipment Inspection Report by the Purchaser. <p>The above documents shall be received by the Purchaser before arrival of the Goods and, if not received, the Supplier will be responsible for any consequent expenses.</p>

GCC 15.1	The prices charged for the Goods supplied and the related Services performed Shall not be adjustable.
GCC 16.1	<p>GCC 16.1—The method and conditions of payment to be made to the Supplier under this Contract shall be as follows:</p> <p>Payment for Goods supplied from abroad:</p> <p>Payment of foreign currency portion shall be made in currency of bid in the following manner:</p> <p>(i) Advance Payment: The supplier may apply for the advance payment of Ten (10) percent of the Contract Price within Thirty (30) days of signing of the Contract, and upon submission of claim and a bank guarantee for equivalent amount valid until the Goods are delivered and, in the form, provided in the bidding document or another form acceptable to the Purchaser. Where the supplier does not apply for advance payment, the equivalent shall be payable on acceptance of the goods.</p> <p>Note: The advance payment guarantee shall be from a commercial bank supervised by the Central Bank of Kenya.</p> <p>(ii) On Shipment: Forty (40) percent of the Contract Price of the Goods shipped shall be paid upon submission of documents specified in GCC Clause 13.</p> <ul style="list-style-type: none"> ➤ Supplier invoice showing goods description, quantity, unit price and total amount- Original or a certified copy ➤ Bill of Lading/ Airway Bill –Original or a certified copy ➤ Packing list identifying content of each package- Original or a certified copy ➤ Insurance Certificate - Original or a certified copy ➤ Manufacturers' or Suppliers warranty Certificate - Original or a certified copy ➤ Pre - inspection report by the Purchaser <p>(iii) (a) On delivery, installation, calibration, commissioning, training and final inspection at the project site for a firm that received advance payment: Fifty (50) percent of the Contract Price of Goods received shall be paid within Sixty (60) days of receipt of the Goods upon submission of claim supported by</p>

the acceptance certificate issued by the Purchaser having carried out Installation, testing, training and commissioning of the equipment.

(b) On delivery, installation, calibration, commissioning, training and final inspection at the project site for a firm that did not receive advance payment: Sixty (60) percent of the Contract Price of Goods received shall be paid within Sixty (60) days of receipt of the Goods upon submission of claim supported by the acceptance report issued by the Purchaser having carried out Installation, testing, training and commissioning of the equipment.

Payment for Goods and Services supplied from within the Purchaser's Country:

Payment for Goods and Services supplied from within the Purchaser's Country shall be made in **Kenya Shillings** as follows:

- (i) **Advance Payment:** The supplier may apply for the advance payment of **Ten (10)** percent of the Contract Price shall be paid within Thirty (30) days of signing of the Contract, and upon submission of claim and a bank guarantee for equivalent amount valid until the Goods are delivered and, in the form, provided in the bidding document or another form acceptable to the Purchaser. Where the supplier does not apply for advance payment, the equivalent shall be payable on acceptance of the goods.
- (ii) **(a) On delivery, installation, calibration, commissioning, training and final inspection at the project site for a firm that received advance payment:** Ninety (90) percent of the Contract Price shall be paid on receipt of the Goods and upon submission of the documents specified in GCC Clause 13.
 - **Supplier invoice showing goods description, quantity, unit price and total amount- Original or a certified copy**
 - **Packing list identifying content of each package- Original or a certified copy**
 - **Insurance Certificate - Original or a certified copy**
 - **Manufacturers' or Suppliers warranty Certificate - Original or a certified copy**
 - **Certificate of origin or a certified copy**

	<p>➤ Inspection certificate by the Government Agent or a certified copy of the certificate</p> <p>(b) On delivery, installation, calibration, commissioning, training and final inspection at the project site for a firm that did not received advance payment One Hundred (100) percent of the Contract Price of Goods received shall be paid within Sixty (60) days of receipt of the Goods upon submission of claim supported by the acceptance certificate issued by the Purchaser having carried out Installation, testing, training and commissioning of the equipment and upon submission of the document stated below:</p> <ul style="list-style-type: none"> ➤ Supplier invoice showing goods description, quality, unit price and total amount – original or a certified copy ➤ packing list identifying content of each package – Original or a certified copy ➤ Insurance certificate or a certified copy ➤ Manufactures' or suppliers warranty certificate or a certified copy ➤ Certificate of origin or a certified copy ➤ Inspection certificate by the Government Agent or Kenya Bureau of standards certificate or a certified copy
GCC 16.5	<p>The payment-delay period after which the Purchaser shall pay interest to the supplier shall be determined at the stage of the contract.</p> <p>The interest rate that shall be applied is determined at the stage of the contract.</p>
GCC 18.1	<p>A Performance Security shall be required. The amount shall be: 10% of the contract value</p>

GCC 18.3	<p>The Performance Security shall be in the form of:</p> <p>Performance Guarantee from a reputable commercial bank supervised by the Central bank of Kenya. For foreign firms the performance Security from a foreign bank shall be confirmed by a reputable correspondent bank in Kenya supervised by the Central Bank of Kenya</p> <p>If required, the Performance security shall be denominated in:</p> <p>The currencies of payment of the Contract or a freely convertible currency acceptable to the Purchaser</p>
GCC 18.4	<p>Discharge of the Performance Security shall take place: not later than 60 days after completion of the supplier's performance obligations</p>
GCC 23.2	<p>The packing, marking and documentation within and outside the packages shall be:</p> <p>GOVERNMENT OF KENYA (GOK)</p> <p>PURCHASER: MINISTRY OF EDUCATION, STATE DEPARTMENT FOR TECHNICAL, VOCATIONAL EDUCATION AND TRAINING</p> <p>BID NO: OCBI/TVETE PHASE III/EQUIP/47/24-25</p> <p>SUPPLIER.....</p> <p>GROSS WEIGHT.....</p> <p>PACKAGE NO.....</p> <p>In addition to the above marking, all delivered equipment must be branded: -</p> <p>"GOK/AfDB SUPPORT FOR TVET PROJECT- SIAYA INSTITUTE OF TECHNOLOGY"</p>
GCC 24.1	<p>The insurance coverage shall be as specified in the Incoterms i.e in an amount equal to 110 percent of the CIP value of the goods from warehouse to warehouse on ALL risks basis including war risks and strikes</p>
GCC 25.1	<p>Responsibility for transportation of the Goods shall be as specified in the Incoterms.</p>

GCC 25.2	<p>Related services to be provided are:</p> <p>1. Equipment pre-inspection:</p> <p>The supplier shall organize pre-inspection of equipment in the country of origin before shipping into the country</p> <p>2. Training and Services Related to Equipment/Machines Supplied should include:</p> <p>i. Training of members of the teaching staff and technicians on Major and Routine Maintenance of equipment/ Machines,</p> <p>ii. Training members of the teaching staff and technicians on Use of the machines/equipment (i.e the total scope of use equipment/machines and experiments they can perform)</p> <p>3. Training manuals:</p> <p>Bidders must provide hard copies and soft copies of Training manuals in English for the range of experiments/operation for each equipment/machines supplied</p> <p>4. Installation, testing and commissioning of equipment/ machines:</p> <p>Bidders must install, test, calibrate and commission the equipment supplied</p> <p>5. Branding of equipment:</p> <p>i. Each piece of equipment should be branded/tagged as follows: "GoK/AfDB TVETE III-SIT ...";followed by a serial number</p> <p>ii. The branding/tagging words should be permanent and will be either engraved on a small metallic plate and riveted on metallic machines/equipment or engraved on the item.</p>
GCC 26.1	<p>The inspections and tests shall be:</p> <p>i. certificate of origin</p> <p>ii. Inspection certificate by the Government Agent</p> <p>iii. Goods received in good order</p> <p>iv. Pre-Shipment Inspection by the Purchaser.</p> <p>v. Final Inspection by the Purchaser.</p>

GCC 26.2	The final Inspections and tests shall be conducted at: the points of delivery which is: Siaya Institute of Technology – Siaya County
GCC 27.1	The liquidated damage shall be: To be determined at the stage of the contracts.
GCC 27.1	The maximum amount of liquidated damages shall be: To be determined at the stage of contract.
GCC 28.3	The period of validity of the Warranty shall be: 24 months from the date of completion of the contract. For purposes of the Warranty, the place(s) of final destination(s) shall be: Siaya Institute of Technology – Siaya County
GCC 28.5, GCC 28.6	The period for repair or replacement shall be: Thirty (30) days.

Attachment: Price Adjustment Formula

If in accordance with GCC 15.1, prices shall be adjustable, the following method shall be used to calculate the price adjustment:

- 15.1 Prices payable to the Supplier, as stated in the Contract, shall be subject to adjustment during performance of the Contract to reflect changes in the cost of labor and material components in accordance with the formula:

$$P_1 = P_0 \left[a + \frac{bL_1}{L_0} + \frac{cM_1}{M_0} \right] - P_0$$

$$a+b+c = 1$$

in which:

- P_1 = adjustment amount.
 P_0 = Contract Price (base price).

- a = fixed element representing profits and overheads included in the Contract Price and generally in the range of five (5) to fifteen (15) percent.
- b = estimated percentage of labor component in the Contract Price.
- c = estimated percentage of material component in the Contract Price.
- L_0, L_1 = *labor indices applicable to the appropriate industry in the country of origin on the base date and date for adjustment, respectively.
- M_0, M_1 = *material indices for the major raw material on the base date and date for adjustment, respectively, in the country of origin.

The Bidder shall indicate the source of the indices, and the source of exchange rate (if applicable) and the base date indices in its Bid.

The coefficients a, b, and c as specified by the Purchaser are as follows:

a = *[insert value of coefficient]*

b = *[insert value of coefficient]*

c = *[insert value of coefficient]*

Base date = thirty (30) days prior to the deadline for submission of the Bids.

Date of adjustment = *[insert number of weeks]* weeks prior to date of shipment (representing the mid-point of the period of manufacture).

The above price adjustment formula shall be invoked by either party subject to the following further conditions:

- (a) No price adjustment shall be allowed beyond the original delivery dates. As a rule, no price adjustment shall be allowed for periods of delay for which the Supplier is entirely responsible. The Purchaser will, however, be entitled to any decrease in the prices of the Goods and Services subject to adjustment.
- (b) If the currency in which the Contract Price P_0 is expressed is different from the currency of origin of the labor and material indices, a correction factor will be applied to avoid incorrect adjustments of the Contract Price. The correction factor shall be: Z_0 / Z_1 , where,

Z_0 = the number of units of currency of the origin of the indices which equal to one unit of the currency of the Contract Price P_0 on the Base date, and

Z_1 = the number of units of currency of the origin of the indices which equal to one unit of the currency of the Contract Price P_0 on the Date of Adjustment.

- (c) No price adjustment shall be payable on the portion of the Contract Price paid to the Supplier as advance payment.

Section X - Contract Forms

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Notification of Intention to Award

[Send this Notification to the Bidder's Authorized Representative named in the Bidder Information Form]

For the attention of Bidder's Authorized Representative

Name: *[insert Authorized Representative's name]*

Address: *[insert Authorized Representative's Address]*

Telephone/Fax numbers: *[insert Authorized Representative's telephone/fax numbers]*

Email Address: *[insert Authorized Representative's email address]*

DATE OF TRANSMISSION: This Notification is sent by: *[email/fax]* on *[date]* (local time)

Notification of Intention to Award

Purchaser: *[insert the name of the Purchaser]*

Project: *[insert name of project]*

Contract title: *[insert the name of the contract]*

Country: *[insert country where IFB is issued]*

Loan No. /Credit No. / Grant No.: *[insert reference number for loan/credit/grant]*

OCBI / LCB No: *[insert OCBI 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:

- a) request a debriefing in relation to the evaluation of your Bid, and/or
- b) submit a Procurement-related Complaint in relation to the decision to award the contract.

1. The successful Bidder

Name:	<i>[insert name of successful Bidder]</i>
Address:	<i>[insert address of the successful Bidder]</i>

Contract price:	<i>[insert contract price of the successful Bid]</i>
------------------------	--

2. Other Bidders

Name of Bidder	Bid price	Evaluated Bid price (if applicable)
<i>[insert name]</i>	<i>[insert Bid price]</i>	<i>[insert evaluated price]</i>
<i>[insert name]</i>	<i>[insert Bid price]</i>	<i>[insert evaluated price]</i>
<i>[insert name]</i>	<i>[insert Bid price]</i>	<i>[insert evaluated price]</i>
<i>[insert name]</i>	<i>[insert Bid price]</i>	<i>[insert evaluated price]</i>
<i>[insert name]</i>	<i>[insert Bid price]</i>	<i>[insert evaluated price]</i>

3. Reason/s why your Bid was unsuccessful

[INSTRUCTIONS: State the reason/s why this Bidder's Bid was unsuccessful. Do NOT include: (a) a point by point comparison with another Bidder's Bid or (b) information that is marked confidential by the Bidder in its Bid.]

4. How to request a debriefing

DEADLINE: The deadline to request a debriefing expires at midnight on *[insert date]* (local time).

You may request a debriefing in relation to the results of the evaluation of your Bid. If you decide to request a debriefing your written request must be made within three (3) Business Days of receipt of this Notification of Intention to Award.

Provide the contract name, reference number, name of the Bidder, contact details; and address the request for debriefing as follows:

Attention: *[insert full name of person, if applicable]*

Title/position: *[insert title/position]*

Agency: *[insert name of Purchaser]*

Email address: *[insert email address]*

Fax number: *[insert fax number]* **delete if not used**

If your request for a debriefing is received within the 3 Business Days deadline, we will provide the debriefing within five (5) 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 (5) Business 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.

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.

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) Business Days from the date of publication of the Contract Award Notice.

5. How to make a complaint

Period: Procurement-related Complaint challenging the decision to award shall be submitted by midnight, *[insert date]* (local time).

Provide the contract name, reference number, name of the Bidder, contact details; and address the Procurement-related Complaint as follows:

Attention: *[insert full name of person, if applicable]*

Title/position: *[insert title/position]*

Agency: *[insert name of Purchaser]*

Email address: *[insert email address]*

Fax number: *[insert fax number]* **delete if not used**

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.

Further information:

For more information see the Bank's Procurement Framework

In summary, there are four essential requirements:

1. You must be an 'interested party'. In this case, that means a Bidder who submitted a Bid in this bidding process, and is the recipient of a Notification of Intention to Award.
2. The complaint can only challenge the decision to award the contract.
3. You must submit the complaint within the period stated above.
4. You must include, in your complaint, all of the information required by the Procurement Framework.

6. Standstill Period

DEADLINE: The Standstill Period is due to end at midnight on [insert date] (local time).

The Standstill Period lasts ten (10) Business Days after the date of transmission of this Notification of Intention to Award.

The Standstill Period may be extended as stated in Section 4 above.

If you have any questions regarding this Notification please do not hesitate to contact us.

On behalf of the Purchaser:

Signature: _____

Name: _____

Title/position: _____

Telephone: _____

Email: _____

Beneficial Ownership Disclosure Form

INSTRUCTIONS TO BIDDERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE FORM

This Beneficial Ownership Disclosure Form ("Form") is to be completed by the successful Bidder. In case of joint venture, the Bidder 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 Bidder is any natural person who ultimately owns or controls the Bidder by meeting one or more of the following conditions:

*directly or indirectly holding 25% or more of the shares
directly or indirectly holding 25% or more of the voting rights
directly or indirectly having the right to appoint a majority of the board
of directors or equivalent governing body of the Bidder*

OCBI / LCB No.: [insert number of bidding process.]

Invitation for Bid No.: [insert identification]

To: [insert complete name of Purchaser]

In response to your request in the Letter of Acceptance dated [insert date of letter of Acceptance] to furnish additional information on beneficial ownership: [select one option as applicable and delete the options that are not applicable]

(i) we hereby provide the following beneficial ownership information.

Details of beneficial ownership

Identity of Beneficial Owner	Directly or indirectly holding 25% or more of the shares (Yes / No)	Directly or indirectly holding 25 % or more of the Voting Rights (Yes / No)	Directly or indirectly having the right to appoint a majority of the board of the directors or an equivalent

			governing body of the Bidder (Yes / No)
[include full name (last, middle, first), nationality, country of residence]			

OR

(ii) We declare that there is no Beneficial Owner meeting one or more of the following conditions:

- directly or indirectly holding 25% or more of the shares
- directly or indirectly holding 25% or more of the voting rights
- directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder

OR

(iii) We declare that we are unable to identify any Beneficial Owner meeting one or more of the following conditions. [If this option is selected, the Bidder shall provide explanation on why it is unable to identify any Beneficial Owner]

- directly or indirectly holding 25% or more of the shares
- directly or indirectly holding 25% or more of the voting rights
- directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder]"

Name of the Bidder: *[insert complete name of the Bidder]

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

Title of the person signing the Bid: [insert complete title of the person signing the Bid]

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]

* In the case of the Bid submitted by a Joint Venture specify the name of the Joint Venture as Bidder. In the event that the Bidder is a joint venture, each reference to

"Bidder" in the Beneficial Ownership Disclosure Form (including this Introduction thereto) shall be read to refer to the joint venture member.

- ** Person signing the Bid shall have the power of attorney given by the Bidder. The power of attorney shall be attached with the Bid Schedules.

Letter of Acceptance

[use letterhead paper of the Purchaser]

[date]

To: *[name and address of the Supplier]*

Subject: **Notification of Award Contract No.**

This is to notify you that your Bid dated ***[insert date]*** for execution of the ***[insert name of the contract and identification number, as given in the SCC]*** for the Accepted Contract Amount of ***[insert amount in numbers and words and name of currency]***, as corrected and modified in accordance with the Instructions to Bidders is hereby accepted by our Agency.

You are requested to furnish (i) the Performance Security within 28 days in accordance with the Conditions of Contract, using for that purpose one of the Performance Security Forms and (ii) the additional information on beneficial ownership in accordance with BDS ITB 45.1 within eight (8) Business days using the Beneficial Ownership Disclosure Form, included in Section X, - Contract Forms, of the Bidding Document.

Authorized Signature:

Name and Title of Signatory:

Name of Agency:

Attachment: Contract Agreement

Contract Agreement

[The successful Bidder shall fill in this form in accordance with the instructions indicated]

THIS AGREEMENT made the *[insert: **number**]* day of *[insert: **month**]*, *[insert: **year**]*.

BETWEEN

- (1) *[insert complete name of Purchaser]*, a *[insert description of type of legal entity, for example, an agency of the Ministry of ... of the Government of {insert name of Country of Purchaser}, or corporation incorporated under the laws of {insert name of Country of Purchaser}]* and having its principal place of business at *[insert address of Purchaser]* (hereinafter called "the Purchaser"), of the one part, and
- (2) *[insert name of Supplier]*, a corporation incorporated under the laws of *[insert: country of Supplier]* and having its principal place of business at *[insert: address of Supplier]* (hereinafter called "the Supplier"), of the other part:

WHEREAS the Purchaser invited Bids for certain Goods and ancillary services, viz., *[insert brief description of Goods and Services]* and has accepted a Bid by the Supplier for the supply of those Goods and Services

The Purchaser and the Supplier agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other contract documents.
 - (a) the Letter of Acceptance
 - (b) the Letter of Bid
 - (c) the Addenda Nos. _____ (if any)
 - (d) Special Conditions of Contract
 - (e) General Conditions of Contract
 - (f) the Specification (including Schedule of Requirements and Technical Specifications)
 - (g) the drawings

- (h) the completed Schedules (including Price Schedules)
 - (i) any other document listed in GCC as forming part of the Contract
3. In consideration of the payments to be made by the Purchaser to the Supplier as specified in this Agreement, the Supplier hereby covenants with the Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services 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 *[insert the name of the Contract governing law country]* on the day, month and year indicated above.

For and on behalf of the Purchaser

Signed: *[insert signature]* _____
in the capacity of *[insert title or other appropriate designation]*
In the presence of *[insert identification of official witness]*

For and on behalf of the Supplier

Signed: *[insert signature of authorized representative(s) of the Supplier]*

in the capacity of *[insert title or other appropriate designation]*
in the presence of *[insert identification of official witness]*

Performance Security

Option 1: (Bank Guarantee)

[The bank, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated]

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: *[insert name and Address of Purchaser]*

Date: *[Insert date of issue]*

PERFORMANCE GUARANTEE No.: *[Insert guarantee reference number]*

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

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

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

At the request of the Applicant to issue this guarantee, 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]*,¹⁹¹ such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the Day of, 2...²⁰², and any demand for payment under it must be received by us at this office indicated above on or before that date.

¹⁹¹ The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, and denominated either in the currency (ies) of the Contract or a freely convertible currency acceptable to the Beneficiary.

²⁰² Insert the date twenty-eight days after the expected completion date as described in GC Clause 18.4. The Purchaser should note that in the event of an extension of this date for completion of the Contract, the Purchaser would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made

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

[signature(s)]

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

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

Option 2: Performance Bond

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

WHEREAS the Supplier has entered into a written Agreement with the Purchaser dated the _____ day of , 20 __, for *[name of contract and brief description of Goods and related Services]* 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.

NOW, THEREFORE, the Condition of this Obligation is such that, if the Supplier 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 Supplier shall be, and declared by the Purchaser to be, in default under the Contract, the Purchaser having performed the Purchaser'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 Bid or Bids from qualified Bidders for submission to the Purchaser for completing the Contract in accordance with its terms and conditions, and upon determination by the Purchaser and the Surety of the lowest responsive Bidder, arrange for a Contract between such Bidder and Purchaser and make available as supply 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 specified penal sum 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 Purchaser to Supplier

under the Contract, less the amount properly paid by Purchaser to the Supplier; or

- (3) pay the Purchaser the amount required by Purchaser to complete the Contract in accordance with its terms and conditions up to a total not exceeding the specified penal sum of this Bond.

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

Any suit under this Bond must be instituted before the expiration of one year from the date of completion of the contract.

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

In testimony whereof, the Supplier 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 _____

Advance Payment Security

Demand Guarantee

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: *[Insert name and Address of Purchaser]*

Date: *[Insert date of issue]*

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

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

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

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

At the request of the Applicant to issue this guarantee, 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]*²¹¹ upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating either that the Applicant:

- (d) has used the advance payment for purposes other than toward delivery of Goods; or
- (e) has failed to repay the advance payment in accordance with the Contract conditions, specifying the amount which the Applicant has failed to repay.

²¹¹ The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency(ies) of the advance payment as specified in the Contract, or in a freely convertible currency acceptable to the Purchaser.

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

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Applicant as specified in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that ninety (90) percent of the Accepted Contract Amount, has been certified for payment, or on the *[insert day]* day of *[insert month]*, 2 *[insert year]*, whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

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

[signature(s)]