

REPUBLIC OF KENYA



**MINISTRY OF LANDS, PUBLIC WORKS, HOUSING  
AND URBAN DEVELOPMENT**

**STATE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT**

**Tender Document**

**For**

**PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTERS, 14No. TWO  
BEDROOM AND 4No. THREE BEDROOM UNITS AT ADMINISTRATION POLICE TRAINING  
COLLEGE EMBAKASI, NAIROBI COUNTY.**

**TENDER NO. MLPWHUD/SDHUD/HD/148/2022-2023**

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# TABLE OF CONTENTS

INVITATION TO TENDER .....	V
<b><u>SECTION I - INSTRUCTIONS TO TENDERERS</u></b> .....	<b><u>1</u></b>
<b>A. General Provisions</b> .....	<b>1</b>
1. Scope of Tender .....	1
2. Fraud and Corruption .....	1
3. Eligible Tenderers .....	1
4. Eligible Goods, Equipment, and Services .....	3
5. Tenderer's Responsibilities .....	3
<b>B. Contents of Tender Documents</b> .....	<b>3</b>
6. Sections of Tender Document .....	3
7. Site visit .....	4
8. Pre-Tender Meeting .....	4
9. Clarification and amendment of Tender Documents .....	5
10. Amendment of Tender Documents .....	5
<b>C. Preparation of Tenders</b> .....	<b>5</b>
11. Cost of Tendering .....	5
12. Language of Tender .....	5
13. Documents Comprising the Tender .....	5
14. Form of Tender and Schedules .....	6
15. Alternative Tenders .....	6
16. Tender Prices and Discounts .....	6
17. Currencies of Tender and Payment .....	7
18. Documents Comprising the Technical Proposal .....	7
19. Documents Establishing the Eligibility and Qualifications of the Tenderer .....	7
20. Period of Validity of Tenders .....	8
21. Tender Security .....	8
22. Format and Signing of Tender .....	9
<b>D. Sealing and Marking of Tenders</b> .....	<b>9</b>
23. Sealing and Marking of Tenders .....	9
24. Deadline for Submission of Tenders .....	10
25. Late Tenders .....	10
26. Withdrawal, Substitution, and Modification of Tenders .....	10
27. Tender Opening .....	10
<b>E. Evaluation and Comparison of Tenders</b> .....	<b>11</b>
28. Confidentiality .....	11
29. Clarification of Tenders .....	11
30. Deviations, Reservations, and Omissions .....	12
31. Determination of Responsiveness .....	12
32. Non-material Non-conformities .....	12
33. Arithmetical Errors .....	12
34. Conversion to Single Currency .....	13
35. Margin of Preference and Reservations .....	13
36. Subcontractors .....	13
37. Evaluation of Tenders .....	13
38. Comparison of Tenders .....	14
39. Abnormally Low Tenders .....	14
40. Abnormally High Tenders .....	14
41. Unbalanced and/or Front-Loaded Tenders .....	14
42. Qualifications of the Tenderer .....	15
43. Best Evaluated Tender .....	15
44. Procuring Entity's Right to Accept Any Tender, and to Reject Any or All Tenders .....	15

<b>F.</b>	<b>Award of Contract.....</b>	<b>15</b>
45.	Award Criteria .....	15
46.	Notice of Intention to enter into a Contract.....	15
47.	Standstill Period .....	16
48.	Debriefing by the Procuring Entity .....	16
49.	Letter of Award.....	16
50.	Signing of Contract .....	16
51.	Appointment of Adjudicator.....	16
52.	Performance Security.....	16
53.	Publication of Procurement Contract.....	17
53.	Procurement Related Complaints.....	17
	<b>SECTION II-TENDER DATA SHEET(TDS).....</b>	<b>18</b>
	<b>SECTION III - EVALUATION AND QUALIFY ON CRITERIA.....</b>	<b>23</b>
1.	General Provisions .....	23
2.	Preliminary examination for Determination of Responsiveness .....	23
3.	Tender Evaluation (ITT 35).....	23
4.	Multiple Contracts.....	23
5.	Alternative Tenders (ITT 13.1).....	24
6.	Margin of Preference is not applicable.....	24
7.	Post qualification and Contract award (ITT 39), more specifically.....	24
	<b>SECTION IV – TENDERING FORMS .....</b>	<b>25</b>
	<b>QUALIFICATION FORMS.....</b>	<b>28</b>
1.	Form Equ. Equipment .....	28
2.	Form per-1.....	29
4.	FORM PER-2:.....	30
5.	<b>TENDERERS QUALIFICATION WITHOUT PRE-QUALIFICATION.....</b>	<b>32</b>
	FORM ELI -1.1 .....	32
	FORM ELI -1.2.....	33
	FORM CON – 2 .....	34
5.4	FORM FIN – 3.1: .....	36
5.5	FORM FIN – 3.2: .....	37
5.6	FORM FIN – 3.3: .....	38
5.7	FORM FIN – 3.4: .....	38
5.8	FORM EXP - 4.1.....	39
5.9	FORM EXP - 4.2(a) .....	40
5.11	FORM EXP - 4.2(b) .....	41
	<b>OTHER FORMS .....</b>	<b>42</b>
6.	<b>FORM OF TENDER.....</b>	<b>42</b>
a)	TENDERER'S ELIGIBILITY- CONFIDENTIAL BUSINESS QUESTIONNAIRE .....	45
b)	CERTIFICATE OF INDEPENDENT TENDER DETERMINATION .....	48
c)	SELF-DECLARATION FORM - SELF DECLARATION OF THE TENDERER.....	49
d)	APPENDIX 1- FRAUD AND CORRUPTION .....	52
7.	FORM OF TENDER SECURITY - DEMAND BANK GUARANTEE.....	54
8.	FORM OF TENDER SECURITY (INSURANCE GUARANTEE).....	55
9.	FORM OF TENDER-SECURING DECLARATION.....	56
10.	APPENDIX TO TENDER .....	57
	<b>PART II - WORK REQUIREMENTS.....</b>	<b>58</b>

SECTION V - DRAWINGS .....	58
SECTION VI - SPECIFICATIONS .....	58
SECTION VII - BILLS OF QUANTITIES.....	59
1. Objectives.....	59
2. Day work Schedule .....	59
3. Provisional Sums.....	59
4. The Bills of Quantities .....	59
<b>PART III-CONDITIONS OF CONTRACT AND CONTRACT FORMS.....</b>	<b>60</b>
SECTION VIII - GENERAL CONDITIONS OF CONTRACT .....	60
<b>A. General</b>	
1. Definitions .....	61
2. Interpretation .....	61
3. Language and Law .....	62
4. Project Manager's Decisions .....	63
5. Delegation .....	63
6. Communications.....	63
7. Subcontracting.....	63
8. Other Contractors .....	63
9. Personnel and Equipment.....	63
10. Procuring Entity's and Contractor's Risks .....	63
11. Procuring Entity's Risks .....	63
12. Contractor's Risks.....	64
13. Insurance .....	64
14. Site Data .....	64
15. Contractor to Construct the Works.....	64
16. The Works to Be Completed by the Intended Completion Date .....	64
17. Approval by the Project Manager.....	64
18. Safety.....	65
19. Discoveries .....	65
20. Possession of the Site .....	65
21. Access to the Site.....	65
22. Instructions, Inspections and Audits.....	65
23. Appointment of the Adjudicator .....	65
24. Settlement of Claims and Disputes.....	66
25. Fraud and Corruption .....	68
<b>B. Time Control .....</b>	<b>68</b>
1. Program .....	68
2. Extension of the Intended Completion Date.....	69
3. Acceleration.....	69
4. Delays Ordered by the Project Manager.....	69
5. Management Meetings .....	69
6. Early Warning .....	70



<b>C. Quality Control.....</b>	<b>69</b>
1. Identifying Defects .....	69
2. Tests.....	69
3. Correction of Defects .....	69
4. Uncorrected Defects .....	69
<b>D. Cost Control.....</b>	<b>70</b>
1. Contract Price.....	70
2. Changes in the Contract Price .....	70
3. Variations.....	71
4. Cash Flow Forecasts.....	72
5. Payment Certificates .....	72
6. Payments .....	72
7. Compensation Events .....	73
8. Tax .....	73
9. Currency y of Payment.....	73
10. Price Adjustment .....	73
11. Retention .....	74
12. Liquidated Damages.....	74
13. Bonus.....	74
14. Advance Payment.....	74
15. Securities .....	75
16. Dayworks .....	75
17. Cost of Repairs .....	75
<b>E. Finishing the Contract .....</b>	<b>75</b>
1. Completion .....	75
2. Taking Over .....	75
3. Final Account .....	75
4. Operating and Maintenance Manuals.....	75
5. Termination .....	76
6. Payment upon Termination .....	76
7. Property .....	76
8. Release from Performance .....	76
<b>SECTION IX - SPECIAL CONDITIONS OF CONTRACT .....</b>	<b>77</b>
<b>SECTION X - CONTRACT FORMS .....</b>	<b>88</b>
<b>FORM No. 1 - NOTIFICATION OF INTENTION TO AWARD.....</b>	<b>80</b>
<b>FORM No. 2 – REQUEST FOR REVIEW .....</b>	<b>83</b>
<b>FORM No. 3 - LETTER OF AWARD .....</b>	<b>83</b>
<b>FORM No. 4 - CONTRACT AGREEMENT .....</b>	<b>84</b>
<b>FORM No. 5 - PERFORMANCE SECURITY [Option 1 - Unconditional Demand Bank Guarantee].....</b>	<b>85</b>
<b>FORM No. 6- PERFORMANCE SECURITY [Option 2– Performance Bond] .....</b>	<b>86</b>
<b>FORM No. 7- ADVANCE PAYMENT SECURITY .....</b>	<b>88</b>
<b>FORM No. 8- RETENTION MONEY SECURITY .....</b>	<b>87</b>
<b>FORM No. 9- BENEFICIAL OWNERSHIP DISCLOSURE FORM .....</b>	<b>87</b>

## **INVITATION TO TENDER**

**TENDER NO: MLPWHUD/SDHUD/HD/148/2022-2023**

**TENDER NAME: PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTERS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT ADMINISTRATION POLICE TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY.**

1. The Principal Secretary, State Department for Housing and Urban Development invites sealed tenders for the **Proposed Completion of 3no. 4 Storey Blocks of 32no. Bedsitters, 14no. Two Bedroom and 4no. Three Bedroom Units at Administration Police Training College Embakasi, Nairobi County.**
2. Tendering will be conducted under open competitive method (National) using a standardized tender document. Tendering is open to Contractors Registered in the appropriate Category for Builders Works **NCA category 3 and above, NCA category 5** for electrical works and **NCA Category 6** for Mechanical Works.
3. Qualified and interested tenderers may obtain further information and inspect the Tender Documents during office hours between 0800hrs-0400hrs at the address given below.
4. A complete set of tender documents may be obtained by interested tenderers at tender's address given below.
5. Tender documents may be viewed and downloaded for free from the website [www.housingandurbandevelopment.go.ke](http://www.housingandurbandevelopment.go.ke) Tenderers who download the tender document must forward their particulars immediately to Principal Secretary State Department of Housing and Urban Development to facilitate any further clarification or addendum.
6. Tenders shall be quoted in Kenya Shillings and shall include all taxes. Tenders shall remain valid for 180 days from the date of opening of tenders.
7. Completed tenders should be submitted accompanied by a **Tender Security of Kenya Shillings One Million, Five Hundred Shillings only (Kshs.1,500,000) issued by a Reputable Bank or an Insurance Company approved by Insurance Regulatory Authority Valid for 150 days from the tender opening date.**
8. The Tenderer shall chronologically serialize all pages of the tender documents submitted. Tender Document must be tape bound and not Spiral bound. Spiral bound documents shall be automatically disqualified. In addition, bidders **MUST** submit a soft copy in PDF format during bid opening which is a replica of the Original bid document.
9. Completed tenders must be delivered to the address below on or before **2<sup>nd</sup> June ,2023 at 11:00am.** Electronic Tenders will not be permitted.
10. Tenders will be opened immediately after the deadline date and time specified above or any deadline date and time specified later. Tenders will be publicly opened in the presence of the Tenderers' designated representatives who choose to attend at the address below.
11. Late tenders will be rejected.
12. The addresses referred to above are

A. **Address for obtaining further information**

State Department for Housing and Urban Development  
Ardhi House, 6<sup>th</sup> Floor Room 606 B, 1<sup>st</sup> Ngong Avenue  
P.O. Box 30119 -00100 Nairobi

**B. Address for Submission of Tenders.**

State Department for Housing and Urban Development  
Ardhi House, 6<sup>th</sup> Floor, Tender Box, 1<sup>st</sup> Ngong Avenue  
P.O. Box 30119 -00100  
Nairobi

**C. Address for Opening of Tenders.**

State Department for Housing and Urban Development  
Ardhi House, 6<sup>th</sup> Floor, Boardroom, 1<sup>st</sup> Ngong Avenue  
P.O. Box 30119 -00100  
Nairobi

Head, Supply Chain Management Services  
**For: *PRINCIPAL SECRETARY***

**Date: 18<sup>th</sup> May 2023**



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# **PART 1 - TENDERING PROCEDURES**

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## SECTION I: INSTRUCTIONS TO TENDERERS

### A General Provisions

#### 1. Scope of Tender

- 1.1 The Procuring Entity as defined in the Appendix to Conditions of Contract invites tenders for Works Contract as described in the tender documents. The name, identification, and number of lots (contracts) of this Tender Document are **specified in the TDS**.

#### 2. Fraud and Corruption

- 2.1 The Procuring Entity requires compliance with the provisions of the Public Procurement and Asset Disposal Act, 2015, Section 62 “Declaration not to engage in corruption”. The tender submitted by a person shall include a declaration that the person shall not engage in any corrupt or fraudulent practice and a declaration that the person or his or her sub-contractors are not debarred from participating in public procurement proceedings.
- 2.2 The Procuring Entity requires compliance with the provisions of the Competition Act 2010, regarding collusive practices in contracting. Any tenderer found to have engaged in collusive conduct shall be disqualified and criminal and/or civil sanctions may be imposed. To this effect, Tenders shall be required to complete and sign the “Certificate of Independent Tender Determination” annexed to the Form of Tender.
- 2.3 Unfair Competitive Advantage - Fairness and transparency in the tender process require that the firms or their Affiliates competing for a specific assignment do not derive a competitive advantage from having provided consulting services related to this tender. To that end, the Procuring Entity shall indicate in the **Data Sheet** and make available to all the firms together with this tender document all information that would in that respect give such firm any unfair competitive advantage over competing firms.
- 2.4 Unfair Competitive Advantage -Fairness and transparency in the tender process require that the Firms or their Affiliates competing for a specific assignment do not derive a competitive advantage from having provided consulting services related to this tender being tendered for. The Procuring Entity shall indicate in the **TDS** firms (if any) that provided consulting services for the contract being tendered for. The Procuring Entity shall check whether the owners or controllers of the Tenderer are same as those that provided consulting services. The Procuring Entity shall, upon request, make available to any tenderer information that would give such firm unfair competitive advantage over competing firms.

#### 3. Eligible Tenderers

- 3.1 A Tenderer may be a firm that is a private entity, a state-owned enterprise or institution subject to ITT 3.7 or any combination of such entities in the form of a joint venture (JV) under an existing agreement or with the intent to enter into such an agreement supported by a letter of intent. Public employees and their close relatives (*spouses, children, brothers, sisters and uncles and aunts*) are not eligible to participate in the tender. In the case of a joint venture, all members shall be jointly and severally liable for the execution of the entire Contract in accordance with the Contract terms. The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the tendering process and, in the event the JV is awarded the Contract, during contract execution. The maximum number of JV members shall be specified in the **TDS**.
- 3.2 Public Officers of the Procuring Entity, their Spouses, Child, Parent, Brothers or Sister. Child, Parent, Brother or Sister of a Spouse, their business associates or agents and firms/organizations in which they have a substantial or controlling interest shall not be eligible to tender or be awarded a contract. Public Officers are also not allowed to participate in any procurement proceedings.
- 3.3 A Tenderer shall not have a conflict of interest. Any tenderer found to have a conflict of interest shall be disqualified. A tenderer may be considered to have a conflict of interest for the purpose of this tendering process, if the tenderer:
- Directly or indirectly controls, is controlled by or is under common control with another tenderer; or
  - Receives or has received any direct or indirect subsidy from another tenderer; or
  - Has the same legal representative as another tenderer; or
  - Has a relationship with another tenderer, directly or through common third parties, that puts it in a position

to influence the tender of another tenderer, or influence the decisions of the Procuring Entity regarding this tendering process; or

- e) Any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the tender; or
- f) any of its affiliates has been hired (or is proposed to be hired) by the Procuring Entity as Engineer 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 contract specified in this Tender Document or
- h) Has a close business or family relationship with a professional staff of the Procuring Entity who:
  - i) are directly or indirectly involved in the preparation of the Tender document or specifications of the Contract, and/or the Tender evaluation process of such contract; 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 Procuring Entity throughout the tendering process and execution of the Contract.

3.4 A tenderer shall not be involved in corrupt, coercive, obstructive, collusive or fraudulent practice. A tenderer that is proven to have been involved any of these practices shall be automatically disqualified.

3.5 A Tenderer (either individually or as a JV member) shall not participate in more than one Tender, except for permitted alternative tenders. This includes participation as a subcontractor in other Tenders. Such participation shall result in the disqualification of all Tenders in which the firm is involved. A firm that is not a tenderer or a JV member may participate as a subcontractor in more than one tender. Members of a joint venture may not also make an individual tender, be a subcontractor in a separate tender or be part of another joint venture for the purposes of the same Tender.

3.6 A Tenderer may have the nationality of any country, subject to the restrictions pursuant to ITT 4.8. A Tenderer shall be deemed to have the nationality of a country if the Tenderer 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 sub-consultants for any part of the Contract including related Services.

3.7 Tenderer that has been debarred from participating in public procurement shall be ineligible to tender or be awarded a contract. The list of debarred firms and individuals is available from the website of PPRA [www.ppra.go.ke](http://www.ppra.go.ke).

3.8 Tenderers that are state-owned enterprises or institutions may be eligible to compete and be awarded a Contract(s) only if they are accredited by PPRA to be (i) a legal public entity of the state Government and/or public administration, (ii) financially autonomous and not receiving any significant subsidies or budget support from any public entity or Government, and (iii) operating under commercial law and vested with legal rights and liabilities similar to any commercial enterprise to enable it compete with firms in the private sector on an equal basis.

3.9 A Firms and individuals may be ineligible if their countries of origin (a) as a matter of law or official regulations, Kenya prohibits commercial relations with that country, or (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, Kenya 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. A tenderer shall provide such documentary evidence of eligibility satisfactory to the Procuring Entity, as the Procuring Entity shall reasonably request.

3.10 Foreign tenderers are required to source at least forty (40%) percent of their contract inputs (in supplies, subcontracts and labor) from national suppliers and contractors. To this end, a foreign tenderer shall provide in its tender documentary evidence that this requirement is met. Foreign tenderers not meeting this criterion will be automatically disqualified. Information required to enable the Procuring Entity determine if this condition is met shall be provided in for this purpose is be provided in “*SECTION III - EVALUATION AND QUALIFICATION CRITERIA, Item 9*”.

3.11 Pursuant to the eligibility requirements of ITT 4.10, a tender is considered a foreign tenderer, if the tenderer is not registered in Kenya or if the tenderer is registered in Kenya and has less than 51 percent ownership by Kenyan

Citizens. JVs are considered as foreign tenderers if the individual member firms are not registered in Kenya or if are registered in Kenya and have less than 51 percent ownership by Kenyan citizens. The JV shall not subcontract to foreign firms more than 10 percent of the contract price, excluding provisional sums.

- 3.12 The National Construction Authority Act of Kenya requires that all local and foreign contractors be registered with the National Construction Authority and be issued with a Registration Certificate before they can undertake any construction works in Kenya. Registration shall not be a condition for tender, but it shall be a condition of contract award and signature. A selected tenderer shall be given opportunity to register before such award and signature of contract. Application for registration with National Construction Authority may be accessed from the website [www.nca.go.ke](http://www.nca.go.ke).
- 3.13 The Competition Act of Kenya requires that firms wishing to tender as Joint Venture undertakings which may prevent, distort or lessen competition in provision of services are prohibited unless they are exempt in accordance with the provisions of Section 25 of the Competition Act, 2010. JVs will be required to seek for exemption from the Competition Authority. Exemption shall not be a condition for tender, but it shall be a condition of contract award and signature. A JV tenderer shall be given opportunity to seek such exemption as a condition of award and signature of contract. Application for exemption from the Competition Authority of Kenya may be accessed from the website [www.cak.go.ke](http://www.cak.go.ke)
- 3.14 A Kenyan tenderer shall provide evidence of having fulfilled his/her tax obligations by producing a valid tax clearance certificate or tax exemption certificate issued by the Kenya Revenue Authority.

#### **4. Eligible Goods, Equipment, and Services**

- 4.1 Goods, equipment and services to be supplied under the Contract may have their origin in any country that is not eligible under ITT 3.9. At the Procuring Entity's request, Tenderers may be required to provide evidence of the origin of Goods, equipment and services.
- 4.2 Any goods, works and production processes with characteristics that have been declared by the relevant national environmental protection agency or by other competent authority as harmful to human beings and to the environment shall not be eligible for procurement.

#### **5. Tenderer's Responsibilities**

- 5.1 The tenderer shall bear all costs associated with the preparation and submission of his/her tender, and the Procuring Entity will in no case be responsible or liable for those costs.
- 5.2 The tenderer, at the tenderer's own responsibility and risk, is encouraged to visit and examine the Site of the Works and its surroundings, and obtain all information that may be necessary for preparing the tender and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the tenderer's own expense.
- 5.3 The Tenderer and any of its personnel or agents will be granted permission by the Procuring Entity to enter upon its premises and lands for the purpose of such visit. The Tenderer shall indemnify the Procuring Entity against all liability arising from death or personal injury, loss of or damage to property, and any other losses and expenses incurred as a result of the inspection.
- 5.4 The tenderer shall provide in the Form of Tender and Qualification Information, a preliminary description of the proposed work method and schedule, including charts, as necessary or required.

#### **B. Contents of Tender Documents**

#### **6. Sections of Tender Document**

- 6.1 The tender document consists of Parts 1, 2, and 3, which includes all the sections specified below, and which should be read in conjunction with any Addenda issued in accordance with ITT 8.

## **PART 1 Tendering Procedures**

- i) Section I - Instructions to Tenderers (ITT)
- ii) Section II - Tender Data Sheet (TDS)
- iii) Section III - Evaluation and Qualification Criteria
- iv) Section IV - Tendering Forms

## **PART 2 Works Requirements**

- i) Section V - Drawings
- ii) Section VI - Specifications
- iii) Section VII - Bills of Quantities

## **PART 3 Conditions of Contract and Contract Forms**

- i) Section VIII - General Conditions of Contract (GCC)
- ii) Section IX - Special Conditions of Contract (SC)
- iii) Section X - Contract Forms

6.2 The Invitation to Tender Document (ITT) issued by the Procuring Entity is not part of the Contract documents.

6.3 Unless obtained directly from the Procuring Entity, the Procuring Entity is not responsible for the completeness of the Tender document, responses to requests for clarification, the minutes of the pre-Tender meeting (if any), or Addenda to the Tender document in accordance with ITT 8. In case of any contradiction, documents obtained directly from the Procuring Entity shall prevail.

The Tenderer is expected to examine all instructions, forms, terms, and specifications in the Tender Document and to furnish with its Tender all information and documentation as is required by the Tender document.

## **7. Site Visit**

7.1 The Tenderer, at the Tenderer's own responsibility and risk, is encouraged to visit and examine and inspect the Site of the Required Services and its surroundings and obtain all information that may be necessary for preparing the Tender and entering into a contract for the Services. The costs of visiting the Site shall be at the Tenderer's own expense.

## **8. Pre-Tender Meeting**

8.1 The Procuring Entity shall specify in the **TDS** if a pre-tender meeting will be held, when and where. The Procuring Entity shall also specify in the **TDS** if a pre-arranged pretender site visit will be held and when. The Tenderer's designated representative is invited to attend a pre-arranged pretender visit of the site of the works. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

8.2 The Tenderer is requested to submit any questions in writing, to reach the Procuring Entity not later than the period specified in the **TDS** before the meeting.

8.3 Minutes of the pre-Tender meeting and the pre-arranged pretender site visit of the site of the works, if applicable, including the text of the questions asked by Tenderers and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Tenderers who have acquired the Tender Documents in accordance with ITT 6.3. Minutes shall not identify the source of the questions asked.

8.4 The Procuring Entity shall also promptly publish anonym zed (*no names*) Minutes of the pre-Tender meeting and the pre-arranged pretender visit of the site of the works at the web page identified in the **TDS**. Any modification to the Tender Documents that may become necessary as a result of the pre-tender meeting and the pre-arranged pretender site visit, shall be made by the Procuring Entity exclusively through the issue of an Addendum pursuant to ITT 8 and not through the minutes of the pre-Tender meeting. Nonattendance at the pre-Tender meeting will not be a cause for disqualification of a Tenderer.

## **9. Clarification and amendments of Tender Documents**

9.1 A Tenderer requiring any clarification of the Tender Document shall contact the Procuring Entity in writing at the Procuring Entity's address specified in the **TDS** or raise its enquiries during the pre-Tender meeting and the pre-

arranged pretender visit of the site of the works if provided for in accordance with ITT 8.4. The Procuring Entity will respond in writing to any request for clarification, provided that such request is received no later than the period specified in the **TDS** prior to the deadline for submission of tenders. The Procuring Entity shall forward copies of its response to all tenderers who have acquired the Tender Documents in accordance with ITT 6.3, including a description of the inquiry but without identifying its source. If specified in the **TDS**, the Procuring Entity shall also promptly publish its response at the web page identified in the **TDS**. Should the clarification result in changes to the essential elements of the Tender Documents, the Procuring Entity shall amend the Tender Documents appropriately following the procedure under ITT 8.4.

## **10. Amendment of Tendering Document**

- 10.1 At any time prior to the deadline for submission of Tenders, the Procuring Entity may amend the Tendering document by issuing addenda.
- 10.2 Any addendum issued shall be part of the tendering document and shall be communicated in writing to all who have obtained the tendering document from the Procuring Entity in accordance with ITT 6.3. The Procuring Entity shall also promptly publish the addendum on the Procuring Entity's web page in accordance with ITT 8.4.
- 10.3 To give prospective Tenderers reasonable time in which to take an addendum into account in preparing their Tenders, the Procuring Entity shall extend, as necessary, the deadline for submission of Tenders, in accordance with ITT 25.2 below.

## **C. Preparation of Tenders**

### **11. Cost of Tendering**

- 11.1 The Tenderer shall bear all costs associated with the preparation and submission of its Tender, and the Procuring Entity shall not be responsible or liable for those costs, regardless of the conduct or outcome of the tendering process.

### **12. Language of Tender**

- 12.1 The Tender, as well as all correspondence and documents relating to the tender exchanged by the tenderer and the Procuring Entity, shall be written in the English Language. Supporting documents and printed literature that are part of the Tender may be in another language provided they are accompanied by an accurate and notarized translation of the relevant passages into the English Language, in which case, for purposes of interpretation of the Tender, such translation shall govern.

### **13. Documents Comprising the Tender**

- 13.1 The Tender shall comprise the following:
- a) Form of Tender prepared in accordance with ITT 14;
  - b) Schedules including priced Bill of Quantities, completed in accordance with ITT 14 and ITT 16;
  - c) Tender Security or Tender-Securing Declaration, in accordance with ITT 21.1;
  - d) Alternative Tender, if permissible, in accordance with ITT 15;
  - e) Authorization: written confirmation authorizing the signatory of the Tender to commit the Tenderer, in accordance with ITT 22.3;
  - f) Qualifications: documentary evidence in accordance with ITT 19 establishing the Tenderer's qualifications to perform the Contract if its Tender is accepted;
  - g) Conformity: a technical proposal in accordance with ITT 18;
  - h) Any other document required in the **TDS**.
- 13.2 In addition to the requirements under ITT 11.1, Tenders 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 Tender shall be signed by all members and submitted with the Tender,



together with a copy of the proposed Agreement. The Tenderer shall chronologically serialize pages of all tender documents submitted.

13.3 The Tenderer shall furnish in the Form of Tender information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Tender.

#### **14. Form of Tender and Schedules**

14.1 The Form of Tender and Schedules, including the Bill of Quantities, shall be prepared using the relevant forms furnished in Section IV, Tendering Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITT 20.3. All blank spaces shall be filled in with the information requested.

#### **15. Alternative Tenders**

15.1 Unless otherwise specified in the **TDS**, alternative Tenders shall not be considered.

15.2 When alternative times for completion are explicitly invited, a statement to that effect will be included in the **TDS**, and the method of evaluating different alternative times for completion will be described in Section III, Evaluation and Qualification Criteria.

15.3 Except as provided under ITT 13.4 below, Tenderers wishing to offer technical alternatives to the requirements of the Tender Documents must first price the Procuring Entity's design as described in the Tender Documents and shall further provide all information necessary for a complete evaluation of the alternative by the Procuring Entity, including drawings, design calculations, technical specifications, breakdown of prices, and proposed construction methodology and other relevant details. Only the technical alternatives, if any, of the Tenderer with the Winning Tender conforming to the basic technical requirements shall be considered by the Procuring Entity. When specified in the **TDS**, Tenderers are permitted to submit alternative technical solutions for specified parts of the Works, and such parts will be identified in the **TDS**, as will the method for their evaluating, and described in Section VII, Works' Requirements.

#### **16. Tender Prices and Discounts**

16.1 The prices and discounts (including any price reduction) quoted by the Tenderer in the Form of Tender and in the Bill of Quantities shall conform to the requirements specified below.

16.2 The Tenderer shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by the Tenderer shall be deemed covered by the rates for other items in the Bill of Quantities and will not be paid for separately by the Procuring Entity. An item not listed in the priced Bill of Quantities shall be assumed to be not included in the Tender, and provided that the Tender is determined substantially responsive notwithstanding this omission, the average price of the item quoted by substantially responsive Tenderers will be added to the Tender price and the equivalent total cost of the Tender so determined will be used for price comparison.

16.3 The price to be quoted in the Form of Tender, in accordance with ITT 14.1, shall be the total price of the Tender, including any discounts offered.

16.4 The Tenderer shall quote any discounts and the methodology for their application in the Form of Tender, in accordance with ITT 14.1.

16.5 It will be specified in the **TDS** if the rates and prices quoted by the Tenderer are or are not subject to adjustment during the performance of the Contract in accordance with the provisions of the Conditions of Contract, except in cases where the contract is subject to fluctuations and adjustments, not fixed price. In such a case, the Tenderer shall furnish the indices and weightings for the price adjustment formulae in the Schedule of Adjustment Data and the Procuring Entity may require the Tenderer to justify its proposed indices and weightings.

16.6 Where tenders are being invited for individual lots (contracts) or for any combination of lots (packages), tenderers wishing to offer discounts for the award of more than one Contract shall specify in their Tender the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Discounts shall be submitted in accordance with ITT 16.4, provided the Tenders for all lots (contracts) are opened at the same time.



16.7 All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, as of the date 30 days prior to the deadline for submission of Tenders, shall be included in the rates and prices and the total Tender Price submitted by the Tenderer.

## **17. Currencies of Tender and Payment**

17.1 Tenderers shall quote entirely in Kenya Shillings. The unit rates and the prices shall be quoted by the Tenderer in the Bill of Quantities, entirely in Kenya shillings. A Tenderer expecting to incur expenditures in other currencies for inputs to the Works supplied from outside Kenya shall device own ways of getting foreign currency to meet those expenditures.

## **18. Documents Comprising the Technical Proposal**

18.1 The Tenderer shall furnish a technical proposal including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in Section IV, Tender Forms, in sufficient detail to demonstrate the adequacy of the Tenderer's proposal to meet the work's requirements and the completion time.

## **19. Documents Establishing the Eligibility and Qualifications of the Tenderer**

19.1 Tenderers shall complete the Form of Tender, included in Section IV, Tender Forms, to establish Tenderer's eligibility in accordance with ITT 4.

19.2 In accordance with Section III, Evaluation and Qualification Criteria, to establish its qualifications to perform the Contract the Tenderer shall provide the information requested in the corresponding information sheets included in Section IV, Tender Forms.

19.3 A margin of preference will not be allowed. Preference and reservations will be allowed, individually or in joint ventures. Applying for eligibility for Preference and reservations shall supply all information required to satisfy the criteria for eligibility specified in accordance with ITT 33.1.

19.4 Tenderers shall be asked to provide, as part of the data for qualification, such information, including details of ownership, as shall be required to determine whether, according to the classification established by the Procuring Entity, a contractor or group of contractors qualifies for a margin of preference. Further the information will enable the Procuring Entity identify any actual or potential conflict of interest in relation to the procurement and/or contract management processes, or a possibility of collusion between tenderers, and thereby help to prevent any corrupt influence in relation to the procurement process or contract management.

19.5 The purpose of the information described in ITT 19.4 above overrides any claims to confidentiality which a tenderer may have. There can be no circumstances in which it would be justified for a tenderer to keep information relating to its ownership and control confidential where it is tendering to undertake public sector work and receive public sector funds. Thus, confidentiality will not be accepted by the Procuring Entity as a justification for a Tenderer's failure to disclose, or failure to provide required information on its ownership and control.

19.6 The Tenderer shall provide further documentary proof, information or authorizations that the Procuring Entity may request in relation to ownership and control which information on any changes to the information which was provided by the tenderer under ITT 6.3. The obligations to require this information shall continue for the duration of the procurement process and contract performance and after completion of the contract, if any change to the information previously provided may reveal a conflict of interest in relation to the award or management of the contract.

19.7 All information provided by the tenderer pursuant to these requirements must be complete, current and accurate as at the date of provision to the Procuring Entity. In submitting the information required pursuant to these requirements, the Tenderer shall warrant that the information submitted is complete, current and accurate as at the date of submission to the Procuring Entity.

19.8 If a tenderer fails to submit the information required by these requirements, its tender will be rejected. Similarly, if the Procuring Entity is unable, after taking reasonable steps, to verify to a reasonable degree the information submitted by a tenderer pursuant to these requirements, then the tender will be rejected.

19.9 If information submitted by a tenderer pursuant to these requirements, or obtained by the Procuring Entity (whether through its own enquiries, through notification by the public or otherwise), shows any conflict of

interest which could materially and improperly benefit the tenderer in relation to the procurement or contract management process, then:

- i) if the procurement process is still ongoing, the tenderer will be disqualified from the procurement process,
- ii) if the contract has been awarded to that tenderer, the contract award will be set aside,
- iii) the tenderer will be referred to the relevant law enforcement authorities for investigation of whether the tenderer or any other persons have committed any criminal offence.

19.10 If a tenderer submits information pursuant to these requirements that is incomplete, inaccurate or out-of-date, or attempts to obstruct the verification process, then the consequences ITT 6.7 will ensue unless the tenderer can show to the reasonable satisfaction of the Procuring Entity that any such act was not material, or was due to genuine error which was not attributable to the intentional act, negligence or recklessness of the tenderer.

## 20. Period of Validity of Tenders

20.1 Tenders shall remain valid for the Tender Validity period specified in the **TDS**. The Tender Validity period starts from the date fixed for the Tender submission deadline (as prescribed by the Procuring Entity in accordance with ITT 24). A Tender valid for a shorter period shall be rejected by the Procuring Entity as non-responsive.

20.2 In exceptional circumstances, prior to the expiration of the Tender validity period, the Procuring Entity may request Tenderers to extend the period of validity of their Tenders. The request and the responses shall be made in writing. If a Tender Security is requested in accordance with ITT 21.1, it shall also be extended for thirty (30) days beyond the deadline of the extended validity period. A Tenderer may refuse the request without forfeiting its Tender security. A Tenderer granting the request shall not be required or permitted to modify its Tender, except as provided in ITT 20.3.

20.3 If the award is delayed by a period exceeding the number of days to be specified in the **TDS** days beyond the expiry of the initial tender validity period, the Contract price shall be determined as follows:

- a) in the case of **fixed price** contracts, the Contract price shall be the tender price adjusted by the factor specified in the **TDS**;
- b) in the case of **adjustable price** contracts, no adjustment shall be made; or in any case, tender evaluation shall be based on the tender price without taking into consideration the applicable correction from those indicated above.

## 21. Tender Security

21.1 The Tenderer shall furnish as part of its Tender, either a Tender-Securing Declaration or a Tender Security as specified in the **TDS**, in original form and, in the case of a Tender Security, in the amount and currency specified in the **TDS**. A Tender-Securing Declaration shall use the form included in Section IV, Tender Forms.

21.2 If a Tender Security is specified pursuant to ITT 19.1, the Tender Security shall be a demand guarantee in any of the following forms at the Tenderer's option:

- a) an unconditional Bank Guarantee issued by reputable commercial bank); or
- b) an irrevocable letter of credit;
- c) a Banker's cheque issued by a reputable commercial bank; or
- d) another security specified **in the TDS**,

21.3 If an unconditional bank guarantee is issued by a bank located outside Kenya, the issuing bank shall have a correspondent bank located in Kenya to make it enforceable. The Tender Security shall be valid for thirty (30) days beyond the original validity period of the Tender, or beyond any period of extension if requested under ITT 20.2.

21.4 If a Tender Security or Tender-Securing Declaration is specified pursuant to ITT 19.1, any Tender not accompanied by a substantially responsive Tender Security or Tender-Securing Declaration shall be rejected by the Procuring Entity as non-responsive.

21.5 If a Tender Security is specified pursuant to ITT 21.1, the Tender Security of unsuccessful Tenderers shall be returned as promptly as possible upon the successful Tenderer's signing the Contract and furnishing the Performance Security and any other documents required in the **TDS**. The Procuring Entity shall also promptly return the tender security to the tenderers where the procurement proceedings are terminated, all tenders were

determined nonresponsive or a bidder declines to extend tender validity period.

21.6 The Tender Security of the successful Tenderer shall be returned as promptly as possible once the successful Tenderer has signed the Contract and furnished the required Performance Security, and any other documents required in the **TDS**.

21.7 The Tender Security may be forfeited or the Tender-Securing Declaration executed:

- e) if a Tenderer withdraws its Tender during the period of Tender validity specified by the Tenderer on the Form of Tender, or any extension thereto provided by the Tenderer; or
- f) if the successful Tenderer fails to:
  - i) sign the Contract in accordance with ITT 50; or
  - ii) furnish a Performance Security and if required in the **TDS**, and any other documents required in the **TDS**.

21.8 Where tender securing declaration is executed, the Procuring Entity shall recommend to the PPRA that PPRA debars the Tenderer from participating in public procurement as provided in the law.

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

21.10A tenderer shall not issue a tender security to guarantee itself.

## **22. Format and Signing of Tender**

22.1 The Tenderer shall prepare one original of the documents comprising the Tender as described in ITT 13 and clearly mark it "ORIGINAL." Alternative Tenders, if permitted in accordance with ITT 15, shall be clearly marked "ALTERNATIVE." In addition, the Tenderer shall submit copies of the Tender, in the number specified in the **TDS** and clearly mark them "COPY." In the event of any discrepancy between the original and the copies, the original shall prevail.

22.2 Tenderers shall mark as "CONFIDENTIAL" all information in their Tenders which is confidential to their business. This may include proprietary information, trade secrets, or commercial or financially sensitive information.

22.3 The original and all copies of the Tender shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Tenderer. This authorization shall consist of a written confirmation as specified in the **TDS** and shall be attached to the Tender. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the Tender where entries or amendments have been made shall be signed or initialed by the person signing the Tender.

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

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

## **D. Submission and Opening of Tenders**

### **23. Sealing and Marking of Tenders**

23.1 Depending on the sizes or quantities or weight of the tender documents, a tenderer may use an envelope, package or container. The Tenderer shall deliver the Tender in a single sealed envelope, or in a single sealed package, or in a single sealed container bearing the name and Reference number of the Tender, addressed to the Procuring Entity and a warning not to open before the time and date for Tender opening date. Within the single envelope, package or container, the Tenderer shall place the following separate, sealed envelopes:

- a) in an envelope or package or container marked "ORIGINAL", all documents comprising the Tender, as described in ITT 11; and

- b) in an envelope or package or container marked “COPIES”, all required copies of the Tender; and
- c) if alternative Tenders are permitted in accordance with ITT 15, and if relevant:
  - i) in an envelope or package or container marked “ORIGINAL –ALTERNATIVE TENDER”, the alternative Tender; and
  - ii) in the envelope or package or container marked “COPIES- ALTERNATIVE TENDER”, all required copies of the alternative Tender.

The inner envelopes or packages or containers shall:

- a) bear the name and address of the Procuring Entity.
- b) bear the name and address of the Tenderer; and
- c) bear the name and Reference number of the Tender.

23.2 If an envelope or package or container is not sealed and marked as required, the *Procuring Entity* will assume no responsibility for the misplacement or premature opening of the Tender. Tenders that are misplaced or opened prematurely will not be accepted.

#### **24. Deadline for Submission of Tenders**

24.1 Tenders must be received by the Procuring Entity at the address specified in the **TDS** and no later than the date and time also specified in the **TDS**. When so specified in the **TDS**, Tenderers shall have the option of submitting their Tenders electronically. Tenderers submitting Tenders electronically shall follow the electronic Tender submission procedures specified in the **TDS**.

24.2 The Procuring Entity may, at its discretion, extend the deadline for the submission of Tenders by amending the Tender Documents in accordance with ITT 8, in which case all rights and obligations of the Procuring Entity and Tenderers previously subject to the deadline shall thereafter be subject to the deadline as extended.

#### **25. Late Tenders**

25.1 The Procuring Entity shall not consider any Tender that arrives after the deadline for submission of tenders, in accordance with ITT 24. Any Tender received by the Procuring Entity after the deadline for submission of Tenders shall be declared late, rejected, and returned unopened to the Tenderer.

#### **26. Withdrawal, Substitution, and Modification of Tenders**

26.1 A Tenderer may withdraw, substitute, or modify its Tender after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITT 22.3, (except that withdrawal notices do not require copies). The corresponding substitution or modification of the Tender must accompany the respective written notice. All notices must be:

- a) prepared and submitted in accordance with ITT 22 and ITT 23 (except that withdrawals notices do not require copies), and in addition, the respective envelopes shall be clearly marked “WITHDRAWAL,” “SUBSTITUTION,” “MODIFICATION;” and
- b) received by the Procuring Entity prior to the deadline prescribed for submission of Tenders, in accordance with ITT 24.

26.2 Tenders requested to be withdrawn in accordance with ITT 26.1 shall be returned unopened to the Tenderers.

26.3 No Tender may be withdrawn, substituted, or modified in the interval between the deadline for submission of Tenders and the expiration of the period of Tender validity specified by the Tenderer on the Form of Tender or any extension thereof.

#### **27. Tender Opening**

27.1 Except in the cases specified in ITT 23 and ITT 26.2, the Procuring Entity shall publicly open and read out all Tenders received by the deadline, at the date, time and place specified in the **TDS**, in the presence of Tenderers' designated representatives who chooses to attend. Any specific electronic Tender opening procedures required if electronic Tendering is permitted in accordance with ITT 24.1, shall be as specified in the **TDS**.

27.2 First, envelopes marked “WITHDRAWAL” shall be opened and read out and the envelopes with the corresponding Tender shall not be opened, but returned to the Tenderer. No Tender withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal

and is read out at Tender opening.

- 27.3 Next, envelopes marked “SUBSTITUTION” shall be opened and read out and exchanged with the corresponding Tender being substituted, and the substituted Tender shall not be opened, but returned to the Tenderer. No Tender substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at Tender opening.
- 27.4 Next, envelopes marked “MODIFICATION” shall be opened and read out with the corresponding Tender. No Tender modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Tender opening.
- 27.5 Next, all remaining envelopes shall be opened one at a time, reading out: the name of the Tenderer and whether there is a modification; the total Tender Price, per lot (contract) if applicable, including any discounts and alternative Tenders; the presence or absence of a Tender Security or Tender-Securing Declaration, if required; and any other details as the Procuring Entity may consider appropriate.
- 27.6 Only Tenders, alternative Tenders and discounts that are opened and read out at Tender opening shall be considered further for evaluation. The Form of Tender and pages of the Bills of Quantities are to be initialed by the members of the tender opening committee attending the opening. The number of representatives of the Procuring Entity to sign shall be specified in the **TDS**.
- 27.7 At the Tender Opening, the Procuring Entity shall neither discuss the merits of any Tender nor reject any Tender (except for late Tenders, in accordance with ITT 25.1).
- 27.8 The Procuring **Entity shall prepare minutes of the Tender Opening that shall include, as a minimum:**
- a) the name of the Tenderer and whether there is a withdrawal, substitution, or modification;
  - b) the Tender Price, per lot (contract) if applicable, including any discounts;
  - c) any alternative Tenders;
  - d) the presence or absence of a Tender Security, if one was required.
  - e) number of pages of each tender document submitted.
- 27.9 The Tenderers' representatives who are present shall be requested to sign the minutes. The omission of a Tenderer's signature on the minutes shall not invalidate the contents and effect of the minutes. A copy of the tender opening register shall be distributed to all Tenderers upon request.

## **E. Evaluation and Comparison of Tenders**

### **28. Confidentiality**

- 28.1 Information relating to the evaluation of Tenders and recommendation of contract award shall not be disclosed to Tenderers or any other persons not officially concerned with the Tender process until information on Intention to Award the Contract is transmitted to all Tenderers in accordance with ITT 46.
- 28.2 Any effort by a Tenderer to influence the Procuring Entity in the evaluation of the Tenders or Contract award decisions may result in the rejection of its tender.
- 28.3 Notwithstanding ITT 28.2, from the time of tender opening to the time of contract award, if a tenderer wishes to contact the Procuring Entity on any **matter related to the tendering process, it shall do so in writing.**

### **29. Clarification of Tenders**

- 29.1 To assist in the examination, evaluation, and comparison of the tenders, and qualification of the tenderers, the Procuring Entity may, at its discretion, ask any tenderer for a clarification of its tender, given a reasonable time for a response. Any clarification submitted by a tenderer that is not in response to a request by the Procuring Entity shall not be considered. The Procuring Entity'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 tender shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Procuring Entity in the evaluation of the tenders, in accordance with ITT 33.
- 29.2 If a tenderer does not provide clarifications of its tender by the date and time set in the Procuring Entity's request for clarification, its Tender may be rejected.



### 30. Deviations, Reservations, and Omissions

30.1 During the evaluation of tenders, the following definitions apply:

- a) "Deviation" is a departure from the requirements specified in the tender document;
- b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the tender document; and
- c) "Omission" is the failure to submit part or all of the information or documentation required in the Tender document.

### 31. Determination of Responsiveness

31.1 The Procuring Entity's determination of a Tender's responsiveness is to be based on the contents of the tender itself, as defined in ITT 13.

31.2 A substantially responsive Tender is one that meets the requirements of the Tender document without material deviation, **reservation, or omission. A material deviation, reservation, or omission is one that, if accepted, would:**

- a) affect in any substantial way the scope, quality, or performance of the Works specified in the Contract; or
- b) limit in any substantial way, inconsistent with the tender document, the Procuring Entity's rights or the tenderer's obligations under the proposed contract; or
- c) if rectified, would unfairly affect the competitive position of other tenderers presenting substantially responsive tenders.

31.3 The Procuring Entity shall examine the technical aspects of the tender submitted in accordance with ITT 18, to confirm that all requirements of Section VII, Works' Requirements have been met without any material deviation, reservation or omission.

31.4 If a tender is not substantially responsive to the requirements of the tender document, it shall be rejected by the Procuring Entity and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

### 32. Non-material Non-conformities

32.1 Provided that a tender is substantially responsive, the Procuring Entity may waive any non-conformities in the tender.

32.2 Provided that a Tender is substantially responsive, the Procuring Entity may request that the tenderer submit the necessary information or documentation, within a reasonable period, to rectify nonmaterial non-conformities in the tender related to documentation requirements. Requesting information or documentation on such non-conformities shall not be related to any aspect of the price of the tender. Failure of the tenderer to comply with the request may result in the rejection of its tender.

32.3 Provided that a tender is substantially responsive, the Procuring Entity shall rectify quantifiable nonmaterial non-conformities related to the Tender Price. To this effect, the Tender Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component in the manner specified in the **TDS**.

### 33. Arithmetical Errors

33.1 The tender sum as submitted and read out during the tender opening shall be absolute and final and shall not be the subject of correction, adjustment or amendment in any way by any person or entity.

33.2 Provided that the Tender is substantially responsive, the Procuring Entity shall handle errors on the following basis:

- a) Any error detected if considered a major deviation that affects the substance of the tender, shall lead to disqualification of the tender as non-responsive.
- b) Any errors in the submitted tender arising from a miscalculation of unit price, quantity, and subtotal and total bid price shall be considered as a major deviation that affects the substance of the tender and shall lead to disqualification of the tender as non-responsive. and
- c) if there is a discrepancy between words and figures, the amount in words shall prevail

33.3 Tenderers shall be notified of any error detected in their bid during the notification of a ward.

#### **34. Currency provisions**

34.1 Tenders will be priced in Kenya Shillings only. Tenderers quoting in currencies other than in Kenya shillings will be determined non-responsive and rejected.

#### **35. Margin of Preference and Reservations**

35.1 No margin of preference shall be allowed on contracts for small works.

35.2 Where it is intended to reserve the contract to specific groups under Small and Medium Enterprises, or enterprise of women, youth and/or persons living with disability, who are appropriately registered as such by the authority to be specified in the **TDS**, a procuring entity shall ensure that the invitation to tender specifically indicates that only businesses/firms belonging to those specified groups are the only ones eligible to tender. Otherwise if no so stated, the invitation will be open to all tenderers.

#### **36. Nominated Subcontractors**

36.1 Unless otherwise stated in the **TDS**, the Procuring Entity does not intend to execute any specific elements of the Works by subcontractors selected in advance by the Procuring Entity.

36.2 Tenderers may propose subcontracting up to the percentage of total value of contracts or the volume of works as specified in the **TDS**. Subcontractors proposed by the Tenderer shall be fully qualified for their parts of the Works.

36.3 The subcontractor's qualifications shall not be used by the Tenderer to qualify for the Works unless their specialized parts of the Works were previously designated by the Procuring Entity in the **TDS** as can be met by subcontractors referred to hereafter as 'Specialized Subcontractors', in which case, the qualifications of the Specialized Subcontractors proposed by the Tenderer may be added to the qualifications of the Tenderer.

#### **37. Evaluation of Tenders**

37.1 The Procuring Entity shall use the criteria and methodologies listed in this ITT and Section III, Evaluation and Qualification Criteria. No other evaluation criteria or methodologies shall be permitted. By applying the criteria and methodologies the Procuring Entity shall determine the Best Evaluated Tender in accordance with ITT 40.

37.2 To evaluate a Tender, the Procuring Entity shall consider the following:

- a) price adjustment due to discounts offered in accordance with ITT 16;
- b) converting the amount resulting from applying (a) and (b) above, if relevant, to a single currency in accordance with ITT 39;
- c) price adjustment due to quantifiable nonmaterial non-conformities in accordance with ITT 30.3; and
- d) any additional evaluation factors specified in the **TDS** and Section III, Evaluation and Qualification Criteria.

37.3 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 considered in Tender evaluation.

37.4 In the case of multiple contracts or lots, Tenderers shall be allowed to tender for one or more lots and the methodology to determine the lowest evaluated cost of the lot (contract) combinations, including any discounts offered in the **Form of Tender, is specified in Section III, Evaluation and Qualification Criteria.**

#### **38. Comparison of Tenders**

38.1 The Procuring Entity shall compare the evaluated costs of all substantially responsive Tenders established in accordance with ITT 38.2 to determine the Tender that has the lowest evaluated cost.

#### **39. Abnormally Low Tenders**

39.1 An Abnormally Low Tender is one where the Tender price, in combination with other elements of the Tender, appears so low that it raises material concerns as to the capability of the Tenderer in regards to the Tenderer's ability to perform the Contract for the offered Tender Price or that genuine competition between Tenderers is compromised.

39.2 In the event of identification of a potentially Abnormally Low Tender, the Procuring Entity shall seek written clarifications from the Tenderer, including detailed price analyses of its Tender price in relation to the subject matter of the contract, scope, proposed methodology, schedule, allocation of risks and responsibilities and any other requirements of the Tender document.

39.3 After evaluation of the price analyses, in the event that the Procuring Entity determines that the Tenderer has failed to demonstrate its capability to perform the Contract for the offered Tender Price, the Procuring Entity shall reject the Tender.

#### **40. Abnormally High Tenders**

40.1 An abnormally high price is one where the tender price, in combination with other constituent elements of the Tender, appears unreasonably too high to the extent that the Procuring Entity is concerned that it (the Procuring Entity) may not be getting value for money or it may be paying too high a price for the contract compared with market prices or that genuine competition between Tenderers is compromised.

40.2 In case of an abnormally high tender price, the Procuring Entity shall make a survey of the market prices, check if the estimated cost of the contract is correct and review the Tender Documents to check if the specifications, scope of work and conditions of contract are contributory to the abnormally high tenders. The Procuring Entity may also seek written clarification from the tenderer on the reason for the high tender price. The Procuring Entity shall proceed as follows:

- i) If the tender price is abnormally high based on wrong estimated cost of the contract, the Procuring Entity may accept or not accept the tender depending on the Procuring Entity's budget considerations.
- ii) If specifications, scope of work and/or conditions of contract are contributory to the abnormally high tender prices, the Procuring Entity shall reject all tenders and may retender for the contract based on revised estimates, specifications, scope of work and conditions of contract, as the case may be.

40.3 If the Procuring Entity determines that the Tender Price is abnormally too high because genuine competition between tenderers is compromised (*often due to collusion, corruption or other manipulations*), the Procuring Entity shall reject all Tenders and shall institute or cause competent Government Agencies to institute an investigation on the cause of the compromise, before retendering.

#### **41. Unbalanced and/or Front-Loaded Tenders**

41.1 If in the Procuring Entity's opinion, the Tender that is evaluated as the lowest evaluated price is seriously unbalanced and/or front loaded, the Procuring Entity may require the Tenderer to provide written clarifications. Clarifications may include detailed price analyses to demonstrate the consistency of the tender prices with the scope of works, proposed methodology, schedule and any other requirements of the Tender document.

41.2 After the evaluation of the information and detailed price analyses presented by the Tenderer, the Procuring Entity may as appropriate:

- a) accept the Tender; or
- b) require that the total amount of the Performance Security be increased at the expense of the Tenderer to a level not exceeding a 30% of the Contract Price; or
- c) agree on a payment mode that eliminates the inherent risk of the Procuring Entity paying too much for undelivered works; or
- d) reject the Tender,

#### **42. Qualifications of the Tenderer**

42.1 The Procuring Entity shall determine to its satisfaction whether the eligible Tenderer that is selected as having submitted the lowest evaluated cost and substantially responsive Tender, meets the qualifying criteria specified in Section III, Evaluation and Qualification Criteria.

42.2 The determination shall be based upon an examination of the documentary evidence of the Tenderer's qualifications submitted by the Tenderer, pursuant to ITT 19. The determination shall not take into consideration the qualifications of other firms such as the Tenderer's subsidiaries, parent entities, affiliates, subcontractors (other than Specialized Subcontractors if permitted in the Tender document), or any other firm(s) different from the Tenderer.

42.3 An affirmative determination shall be a prerequisite for award of the Contract to the Tenderer. A negative



determination shall result in disqualification of the Tender, in which event the Procuring Entity shall proceed to the Tenderer who offers a substantially responsive Tender with the next lowest evaluated price to make a similar determination of that Tenderer's qualifications to perform satisfactorily.

42.4 An Abnormally Low Tender is one where the Tender price, in combination with other elements of the Tender, appears so low that it raises material concerns as to the capability of the Tenderer in regards to the Tenderer's ability to perform the Contract for the offered Tender Price.

42.5 In the event of identification of a potentially Abnormally Low Tender, the Procuring Entity shall seek written clarifications from the Tenderer, including detailed price analyses of its Tender price in relation to the subject matter of the contract, scope, proposed methodology, schedule, allocation of risks and responsibilities and any other requirements of the Tender document.

42.6 After evaluation of the price analyses, if the Procuring Entity determines that the Tenderer has failed to demonstrate its capability to perform the Contract for the offered Tender Price, the Procuring Entity shall reject the Tender.

#### **43. Best Evaluated Tender**

43.1 Having compared the evaluated prices of Tenders, the Procuring Entity shall determine the Best Evaluated Tender. The Best Evaluated Tender is the Tender of the Tenderer that meets the Qualification Criteria and whose Tender has been determined to be:

- a) Most responsive to the Tender document; and
- b) the lowest evaluated price.

#### **44. Procuring Entity's Right to Accept Any Tender, and to Reject Any or All Tenders.**

44.1 The Procuring Entity reserves the right to accept or reject any Tender and to annul the Tender process and reject all Tenders at any time prior to Contract Award, without thereby incurring any liability to Tenderers. In case of annulment, all Tenderers shall be notified with reasons and all Tenders submitted and specifically, Tender securities, shall be promptly returned to the Tenderers.

### **F. Award of Contract**

#### **45. Award Criteria**

45.1 The Procuring Entity shall award the Contract to the successful tenderer whose tender has been determined to be the Lowest Evaluated Tender.

#### **46. Notice of Intention to enter into a Contract**

46.1 Upon award of the contract and Prior to the expiry of the Tender Validity Period the Procuring Entity shall issue a Notification of Intention to Enter into a Contract / Notification of award to all tenderers which shall contain, at a minimum, the following information:

- a) the name and address of the Tenderer submitting the successful tender;
- b) the Contract price of the successful tender;
- c) a statement of the reason(s) the tender of the unsuccessful tenderer to whom the letter is addressed was unsuccessful, unless the price information in (c) above already reveals the reason;
- d) the expiry date of the Standstill Period; and
- e) instructions on how to request a debriefing and/or submit a complaint during the standstill period;

#### **47. Standstill Period**

47.1 The Contract shall not be signed earlier than the expiry of a Standstill Period of 14 days to allow any dissatisfied tender to launch a complaint. Where only one Tender is submitted, the Standstill Period shall not apply.

47.2 Where a Standstill Period applies, it shall commence when the Procuring Entity has transmitted to each Tenderer the Notification of Intention to Enter **into a Contract with the successful Tenderer.**

## **48. Debriefing by the Procuring Entity**

- 48.1 On receipt of the Procuring Entity's Notification of Intention to Enter into a Contract referred to in ITT 46, an unsuccessful tenderer may make a written request to the Procuring Entity for a debriefing on specific issues or concerns regarding their tender. The Procuring Entity shall provide the debriefing within five days of receipt of the request.
- 48.2 Debriefings of unsuccessful Tenderers may be done in writing or verbally. The Tenderer shall bear its own costs of attending **such a debriefing meeting**.

## **49. Letter of Award**

- 49.1 Prior to the expiry of the Tender Validity Period and upon expiry of the Standstill Period specified in ITT 42.1, upon addressing a complaint that has been filed within the Standstill Period, the Procuring Entity shall transmit the Letter of Award to the successful Tenderer. The letter of award shall request the successful tenderer to furnish the Performance Security within 21 days of the date of the letter.

## **50. Signing of Contract**

- 50.1 Upon the expiry of the fourteen days of the Notification of Intention to enter into contract and upon the parties meeting their respective statutory requirements, the Procuring Entity shall send the successful Tenderer the Contract Agreement.
- 50.2 Within fourteen (14) days of receipt of the Contract Agreement, the successful Tenderer shall sign, date, and return it to the Procuring Entity.
- 50.3 The written contract shall be entered into within the period specified in the notification of award and before expiry of the tender validity period

## **51. Appointment of Adjudicator**

- 51.1 The Procuring Entity proposes the person named in the **TDS** to be appointed as Adjudicator under the Contract, at the hourly fee specified in the **TDS**, plus reimbursable expenses. If the Tenderer disagrees with this proposal, the Tenderer should so state in his Tender. If, in the Letter of Acceptance, the Procuring Entity does not agree on the appointment of the Adjudicator, the Procuring Entity will request the Appointing Authority designated in the Special Conditions of Contract (SCC) pursuant to Clause 23.1 of the General Conditions of Contract (GCC), to appoint the Adjudicator.

## **52. Performance Security**

- 52.1 Within twenty-one (21) days of the receipt of the Letter of Acceptance from the Procuring Entity, the successful Tenderer shall furnish the Performance Security and, any other documents required in the **TDS**, in accordance with the General Conditions of Contract, subject to ITT 40.2 (b), using the Performance Security and other Forms included in Section X, Contract Forms, or another form acceptable to the Procuring Entity. A foreign institution providing a bank guarantee shall have a correspondent financial institution located in Kenya, unless the Procuring Entity has agreed in writing that a correspondent bank is not required.
- 52.2 Failure of the successful Tenderer to submit the above-mentioned Performance Security and other documents required in the **TDS**, or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Tender Security. In that event the Procuring Entity may award the Contract to the Tenderer offering the next Best Evaluated Tender.
- 52.3 Performance security shall not be required for contracts estimated to cost less than Kenya shillings five million shillings.

## **53. Publication of Procurement Contract**

- 53.1 Within fourteen days after signing the contract, the Procuring Entity shall publish the awarded contract at its notice boards and websites; and on the Website of the Authority. At the minimum, the notice shall contain the following information:
- a) name and address of the Procuring Entity;
  - b) name and reference number of the contract being awarded, a summary of its scope and the selection

- method used;
- c) the name of the successful Tenderer, the final total contract price, the contract duration.
- d) dates of signature, commencement and completion of contract;
- e) names of all Tenderers that submitted Tenders, and their Tender prices as read out at Tender opening.

#### **54. Procurement Related Complaints and Administrative Review**

54.1 The procedures for making Procurement-related Complaints are as specified in the **TDS**.

54.2 A request for administrative review shall be made in the form provided under contract forms.

## Section II - Tender Data Sheet (TDS)

The following specific data shall complement, supplement, or amend the provisions in the Instructions to Tenderers (ITT). Whenever there is a conflict, the provisions herein shall prevail over those in ITT.

ITT Reference	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	<b>A. General</b>
ITT 1.1	The name of the contract is <b>PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTERS, 14No.TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT ADMINISTRATION POLICE TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY.</b>  The reference number of the Contract is:  <b>TENDER No: MLPWHUD/SDHUD/HD/148/2022-2023</b>
<b>B. Contents of Tender Document</b>	
ITT 8.1	Pre-tender meeting will not be held.  A pre-arranged pretender site visit: as communicated in the advertisement notice
ITT 8.2	The Tenderer will submit any questions in writing, to reach the Procuring Entity <b>7 days</b> before the date of tender opening.
ITT 9.1	For Clarification of Tender purposes, for obtaining further information and for purchasing tender documents, the Procuring Entity's address is:  (1) Name of Procuring Entity: <b>State Department of Housing and Urban Development</b>  (2) Physical address for hand Courier Delivery to an office:  <b>1<sup>st</sup> Ngong avenue, Ardhi House, 6<sup>th</sup> Floor Room 606 B</b>  (3) Postal Address; P.O. Box 30119-00100 Nairobi  (4) officer to be contacted: - <b>Head, Supply Chain Management</b>  Email: procurementhousingandurban@go.ke
<b>C. Preparation of Tenders</b>	
ITT 15.1	Alternative Tenders <i>shall not be</i> considered.
ITT 15.2	Alternative times for completion <i>shall not be</i> permitted.
ITT 20.1	The Tender validity period shall be 120days.
ITT 21.1	A Tender Security <i>shall be</i> required. The said Tender Security shall be <b>Kenya Shillings One Million, Five Hundred Thousand (Kshs.1,500,000)</b> issued by a <b>Reputable Bank or an Insurance Company approved by Insurance Regulatory Authority Valid for 150 days from the tender opening date.</b>
ITT 22.1	In addition to the original of the Tender, the number of copies is: <b>One soft copy in PDF</b>
ITT 22.3	The written confirmation of authorization to sign on behalf of the Tenderer shall consist of: <i>Power of Attorney</i>
<b>D. Submission and Opening of Tenders</b>	
ITT 24.1	(A) For <u>Tender submission purposes</u> only, the Procuring Entity's address is:  (1) Name of Procuring Entity: <b>State Department of Housing and Urban</b>

ITT Reference	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	<p style="text-align: center;"><b>Development</b></p> <p>(2) Postal Address <b>Principal Secretary, State Department of Housing and Urban Development P.O. Box 30119-00100 Nairobi</b></p> <p>(3) Physical address for hand Courier Delivery to an office or Tender Box <b>1<sup>st</sup> Ngong avenue, Ardhi House, 6<sup>th</sup> Floor, Tender box</b></p> <p>(4) Date and time for submission of Tenders: <b>2<sup>nd</sup> June 2023 at 11.00 a.m.</b></p> <p>(5) Tenders <b>shall not submit</b> tenders electronically.</p>
ITT 27.1	<p>The Tender opening shall take place at the time and the address for Opening of Tenders provided below:</p> <p>(1) Name of Procuring Entity: <b>State Department of Housing and Urban Development</b></p> <p>(2) Physical address for the location <b>1<sup>st</sup> Ngong avenue, Ardhi House, 6<sup>th</sup> Floor, Boardroom</b></p> <p>(3) State date and time of tender opening: <b>2<sup>nd</sup> June 2023 at 11.00 a.m.</b></p>
ITT 27.6	<p>The number of representatives of the Procuring Entity to sign is: <b>as guided by the Public Procurement and Asset Disposal Act, 2015 and attendant Regulations.</b></p>
<b>E. Evaluation, and Comparison of Tenders</b>	
ITT 32.3	<p>The adjustment shall be based on the <i>highest</i> price of the item or component as quoted in other substantially responsive Tenders. If the price of the item or component cannot be derived from the price of other substantially responsive Tenders, the Procuring Entity shall use its best estimate.</p>
ITT 36.1	<p>The Procuring Entity does not intend to execute certain specific parts of the Works by subcontractors selected in advance.</p>
ITT 36.2	<p>The Tenderer may propose subcontracting: Maximum percentage of subcontracting is 10% of the total contract amount. Subcontractors proposed by the Tenderer shall be fully qualified for their parts of the Works.</p>
ITT 36.3	<p>The parts of the works for which the Procuring Entity permits Tenderers to propose Specialized Subcontractors are designated as follows:</p> <ul style="list-style-type: none"> <li>a. Electrical Works</li> <li>b. Mechanical Works</li> </ul> <p>For the above- designated parts of the works that may require Specialized subcontractors, the relevant qualifications of the proposed Specialized subcontractors will be added to the qualifications of the Tenderer for the purpose of evaluation.</p>
ITT 37.2 (d)	<p>Additional requirements apply. These are detailed in the evaluation criteria in Section III, Evaluation and Qualification Criteria.</p>
ITT 51.1	<p>The person named to be appointed as Adjudicator is <b>Nairobi Centre for International Arbitration</b> at an hourly fee to be determined guided by fees guidelines.</p>
ITT 52.2	<p>Other documents required are : <b>None</b></p>
ITT 54.1	<p>The procedures for making a Procurement-related Complaints are detailed in the “Regulations” available from the PPRA Website <a href="http://www.ppra.go.ke">www.ppra.go.ke</a> or email</p>

ITT Reference	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	<p data-bbox="419 129 1382 264"><a href="mailto:complaints@ppra.go.ke">complaints@ppra.go.ke</a>. If a Tenderer wishes to make a Procurement-related Complaint, the Tenderer should submit its complaint following these procedures, in writing (by the quickest means available, that is either by hand delivery or email to:</p> <p data-bbox="419 293 847 322">For the attention: <b>Director General</b></p> <p data-bbox="419 351 815 380">Title/position: <b>Director General</b></p> <p data-bbox="419 409 1166 439">Procuring Entity: <b>Public Procurement Regulatory Authority</b></p> <p data-bbox="419 468 882 497">Email address: <a href="mailto:complaints@ppra.go.ke">complaints@ppra.go.ke</a></p> <p data-bbox="419 526 1275 591">In summary, a Procurement-related Complaint may challenge any of the following:</p> <ul data-bbox="419 620 1094 703" style="list-style-type: none"> <li data-bbox="419 620 932 649">(i) the terms of the Tender Documents; and</li> <li data-bbox="419 678 1094 707">(ii) the Procuring Entity’s decision to award the contract.</li> </ul>

## **SECTION III - EVALUATION AND QUALIFICATION CRITERIA**

### **1. General Provisions**

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

#### **Evaluation and contract award Criteria**

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

### **2. Preliminary examination for Determination of Responsiveness**

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

*The following mandatory requirements shall be used for determination of Responsiveness at the preliminary evaluation*

1. Valid Registration/Incorporation Certificate
2. Valid Tax Compliance Certificate
3. CR12 issued within the last 12 months or National Identity Card (s) for Sole Proprietorship/Partnership
4. Valid National Construction Authority (NCA) Registration category 3 and above for Building Works, **Category 5** for electrical works and **Category 6** for Mechanical Works. This shall be verified online
5. Current annual practicing license from the NCA for Main Contractor and Sub contractors
6. Audited accounts for each of the last three years (i.e. 2020,2021,2022)
7. Dully Filled, signed and stamped form of Tender
8. Bidders shall chronologically and sequentially serialize their bid document from cover page including all attachments in numerical format. Tender Document must be tape bound and not Spiral bound. Spiral bound documents shall be automatically disqualified. In addition, bidders **MUST** submit a soft copy in PDF format during bid opening which is a replica of the Original bid document.
9. Dully Filled, signed and stamped Business Questionnaire
10. Tender security of **Kenya Shillings One Million, Five Hundred Thousand (Kshs.1,500,000)** issued by a **Reputable Bank or an Insurance Company approved by Insurance Regulatory Authority Valid for 150 days from the tender opening date.**
11. Pre-contract agreement between main contractor and the sub-contractors signed and stamped by commissioner of Oaths.

**3. Margin of Preference** is not applicable

**4. Post qualification and Contract award (ITT 39), more specifically,**

- a) In case the tender was subject to post-qualification, the contract shall be awarded to the lowest evaluated tenderer, subject to confirmation of pre-qualification data, if so required.
- b) In case the tender was not subject to post-qualification, the tender that has been determined to be the lowest evaluated tenderer shall be considered for contract award, subject to meeting each of the following conditions.
- i) The Tenderer shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the construction cash flow of **Kenya Shillings Thirty million (Kshs.30,000,000)**
  - ii) Minimum average annual construction turnover of **Kenya Shillings One Hundred and Fifty Million (Kshs.150,000,000)**, equivalent calculated as total certified payments received for contracts in progress and/or completed within the last three (3) years.
  - iii) At least **Three (3)** of contract(s) of a similar nature executed within Kenya, or the East African Community or abroad, that have been satisfactorily and substantially completed as a prime contractor, or joint venture member or sub-contractor each of minimum value **Kenya shillings Eighty Million (Kshs.80,000,000) equivalent**.
  - iv) Key Personnel which are specified as:

**a. Main Contractor**

No.	Position	Total Work Experience (years)	Experience In Similar Works (years)
1	Project Manager (Bachelor of Architecture OR Bachelor of Quantity Surveying OR Bsc. Civil Engineering OR BSc. Construction Management, all registered with relevant professional bodies)	8	5
2	Site Agent (Bachelor of Architecture OR Bachelor of Quantity Surveying OR Bsc. Civil Engineering OR BSc. Construction Management, all registered with relevant professional bodies)	7	5
3	General Foreman (Diploma in Building Construction OR Construction Management OR Contract Management OR Civil Engineering)	7	5
4	<b>Occupational Health and Safety Personnel</b> (Certificate in Occupational Safety and Health)	5	3

**b. Electrical Works Subcontractor**

No.	Key Personnel	Experience (years)
1	At least 1 No. degree/diploma holder of key personnel in relevant field	10
2	At least 1 No. Certificate holder of key personnel in relevant field	10
3	At least 2 No. artisan (trade test certificate in relevant field)	10



**c. Mechanical Works Subcontractor**

No.	Position	Experience (years)
1	Project Manager (Bachelor of Mechanical Engineering and registered with relevant professional body)	5
2	At least 3 No. Artisans (Holder of at least a certificate in relevant field)	5

- v) Contractors key equipment listed on the table “Contractor's Equipment” below and more specifically listed as:

No.	Equipment Type and Characteristics	Minimum Number required	Remarks
<b>Main Contractor</b>			
1	Concrete Mixer Type 5/3.5	3	<ul style="list-style-type: none"> <li>• If the equipment is owned, must provide clear copies of logbook or proof of ownership</li> <li>• If equipment is hired or leased, provide a commitment letter from the lessor of the equipment addressed to the Principal Secretary, SDHUD indicating that the lessor shall avail the equipment upon award of the tender and submit a copy of a written lease agreement between lessee and lessor indicating list of equipment and their corresponding copies of logbooks or proof of ownership by lessor.</li> <li>• The equipment listed shall be available on site when required</li> </ul>
2	Concrete dumper 0.5 cu.m	3	
3	Concrete vibrator poker type N.D. 50 mm	1	
4	Tipper Truck 15 ton.	2	
5	Compactor	1	
6	Excavator/Backhoe/Wheel Loader	1	
7	Water Bowser ( $\geq 7000$ Liters)	1	
8	Scaffolding	Assorted	
9	Transport Vehicle	1	
10	Dumpy level 1	1	
<b>Electrical works Subcontractor</b>			

1	Transport Vehicle	1	
2	Relevant Assorted Equipment key to electrical works	Assorted	
<b>Mechanical works Subcontractor</b>			
1	Transport Vehicle	1	
2	Relevant Assorted Equipment key to mechanical works	Assorted	

- vi) Further Evaluation shall be conducted after Preliminary examination for Determination of Responsiveness. The said further evaluation shall comprise of the Detailed technical examination and financial evaluation.
- vii) Finally, tenders attaining the minimum score of 70 points in detailed technical evaluation shall be subjected to financial evaluation and comparison to determine the lowest evaluated price of the tender.

### Detailed Technical Examination

Award of points for the **Technical Evaluation** will be as follows: -

No	Parameter	Maximum Points
1	Key personnel (MC and subcontractors)	34
2	General Experience (MC)	5
3	Specific Construction Experience (MC and subcontractors)	15
4	Schedules of contractor's equipment (MC and subcontractors)	15
5	Schedule of On-going projects	3
6	Audited Financial Report for the for the last 3 years (MC)	10
7	Evidence of Financial Resources (MC)	10
8	Detailed works program and methodology (MC)	8
<b>Total</b>		100

Item	Description	Points Scored	Max. Points
1	<b>Key Personnel as detailed under clause 4 b (iv) of the Evaluation Criteria</b> <b>NB: Attach Curriculum Vitae and certificates</b>		
	<b>Project Manager for MC</b> <ul style="list-style-type: none"> <li>• With relevant qualifications</li> <li>• With over 8 years general experience and over 5 years' experience in similar works</li> <li>• With experience below the requirements</li> <li>• With no relevant experience</li> </ul>		7
	<b>Site Agent for MC with the relevant Qualifications</b> <ul style="list-style-type: none"> <li>• With relevant qualifications</li> <li>• With over 7 years general experience and over 5 years' experience in similar works</li> <li>• With experience below the requirements</li> <li>• With no relevant experience</li> </ul>		6

Item	Description	Points Scored	Max. Points
	<b>Foreman for MC</b> <ul style="list-style-type: none"> <li>• With relevant qualifications</li> <li>• With over 7 years general experience and over 5 years' experience in similar works</li> <li>• With experience below the requirements</li> <li>• With no relevant experience</li> </ul>		5
	<b>Occupational Health and Safety Personnel for MC</b> <ul style="list-style-type: none"> <li>• Certificate in Occupational Safety and Health</li> <li>• With over 5 years general experience and over 3 years' experience in similar works</li> </ul>		2
	<b>Electrical works Subcontractor</b>		
	<b>At least 1 No. degree/diploma holder of key personnel in relevant field</b> <ul style="list-style-type: none"> <li>• With over 10 years relevant experience .....3</li> <li>• With over 5 years relevant experience.....2</li> <li>• With under 5 years relevant experience .....1</li> </ul>		4
	<b>At least 1 No. Certificate holder of key personnel in relevant field</b> <ul style="list-style-type: none"> <li>• With over 10 years relevant experience .....2</li> <li>• With over 5 years relevant experience.....1</li> <li>• With under 5 years relevant experience .....0.5</li> </ul>		2
	<b>At least 2 No. artisan (trade test certificate in relevant field)</b> <ul style="list-style-type: none"> <li>• With over 10 years relevant experience .....2</li> <li>• With over 5 years relevant experience.....1</li> <li>• Non-skilled worker with over 10 relevant experience ..... 0.5</li> </ul>		2
	<b>Mechanical works Subcontractor</b>		
	<b>Project Manager with degree in Mechanical Engineering field</b> <ul style="list-style-type: none"> <li>• With over 5 years relevant experience .....3</li> <li>• With over 3 years relevant experience.....2</li> <li>• With above 1 year relevant experience .....1</li> </ul>		4
	<b>At least 3 No. artisan Certificate in relevant Engineering field</b> <ul style="list-style-type: none"> <li>• With over 5 years relevant experience .....3</li> <li>• With over 3 years relevant experience.....2</li> <li>• With over 1 year relevant experience.....1</li> <li>• Non-skilled worker with over 5 relevant experience .....0.5</li> </ul>		2
<b>2.</b>	<b>General Experience</b>		
	<ul style="list-style-type: none"> <li>• Has been practicing as a Contractor for the last 5 years.</li> <li>• Experience as Contractor below 5 years</li> <li>• No Experience as a Contractor</li> </ul>		5
<b>3.</b>	<b>Specific Experience (a max of 3No. Projects)</b>		<b>9</b>
	<ul style="list-style-type: none"> <li>• Project of similar nature, complexity and magnitude</li> <li>• Project of similar nature but of lower value than the one in consideration.</li> <li>• Not undertaken/completed project of similar nature.</li> </ul>		
	<b>Electrical works Subcontractor</b>		

	<b>Specific Experience (a max of 3No. Projects)</b> <ul style="list-style-type: none"> <li>• Project of similar nature, complexity and magnitude</li> <li>• Project of similar nature but of lower value than the one in consideration.</li> <li>• Not undertaken/completed project of similar nature.</li> </ul>		<b>3</b>
	<b>Mechanical works Subcontractor</b>		
	<b>Specific Experience (a max of 3No. Projects)</b> <ul style="list-style-type: none"> <li>• Project of similar nature, complexity and magnitude</li> <li>• Project of similar nature but of lower value than the one in consideration.</li> <li>• Not undertaken/completed project of similar nature.</li> </ul>		<b>3</b>
<b>4.</b>	<b>Schedule of On-going projects</b> <ul style="list-style-type: none"> <li>• No Project of similar nature, complexity and magnitude ...3</li> <li>• Three and below Project of similar nature, complexity and magnitude...2</li> <li>• Four and above Project of similar nature, complexity and magnitude...1</li> <li>•</li> </ul>		<b>3</b>
<b>5.</b>	<b>Schedules of equipment (Main Contractor as well as the subcontractors)</b> For each specific equipment required in the construction work being tendered for. (All the categories listed to be considered and <b>1 point will be awarded for meeting each category</b> )		<b>15</b>
<b>6.</b>	<b>Financial report</b> <b>Audited financial report last Three [3]years (2020, 2021&amp; 2022)</b> <ul style="list-style-type: none"> <li>• Turn over greater or equal to 1.5 times the cost of the project.</li> <li>• Turn over greater or equal to the cost of the project</li> <li>• Turn over below the cost of the project</li> </ul>		<b>10</b>
<b>7.</b>	<b>Evidence of financial resources (cash in hand, lines of credit, over draft facility etc.)</b> <ul style="list-style-type: none"> <li>• Has financial resources equal or above the cost of the project</li> <li>• 50% of the cost of the project</li> <li>• Has financial resources below 50% of the cost of the project</li> <li>• Has not demonstrated/given evidence for the financial resources</li> </ul>		<b>10</b>
<b>8.</b>	<b>Detailed works program outlining the methodology of implementing the project to completion including the defects liability period.</b> <ul style="list-style-type: none"> <li>• Adequacy of the proposed Works program and methodology.</li> <li>• No works program or methodology provided.</li> </ul>		<b>8</b>
	<b>TOTAL POINTS</b>		<b>100</b>
	<b>MINIMUM POINTS</b>		<b>70</b>

## **Financial Evaluation**

Tenderers attaining the minimum score of 70 points will be subjected to financial evaluation which shall constitute the following:

- a) Checking arithmetical errors in computation and summation;
- b) Price components of the Bill of Quantities and unit rates of the tender shall be analyzed to verify completeness of the Bills of Quantities, material deviations, reservations or omissions;
- c) Ranking of the tenders.

## **Due Diligence**

Pursuant to Section 83 of the Public Procurement and Asset Disposal, 2015 and attendant Regulations due diligence shall be conducted on the lowest evaluated bidder before award. The due diligence shall be conducted on the following issues inter alia:

- a) The bidder shall be assessed on the financial and technical capacity to carry out the project. In carrying out due diligence on financial capability, the contractor shall be requested to authorize access to their Bank Accounts
- b) The bidder if engaged on other projects shall be assessed on their current performance and delivery on those projects
- c) The bidder shall be required to demonstrate that they can deliver on the project milestones within the stipulated timelines.

## 5. QUALIFICATION FORM SUMMARY

1	2	3	4	5
Item No.	Qualification Subject	Qualification Requirement	Document To be Completed by Tenderer	For Procuring Entity's Use (Qualification met or Not Met)
1	Nationality	Nationality in accordance with ITT 3.6	Forms ELI – 1.1 and 1.2, with attachments	
2	Tax Obligations for Kenyan Tenderers	Has produced a current tax clearance certificate or tax exemption certificate issued by the the Kenya Revenue Authority in accordance with ITT 3.14.	Form of Tender	
4	PPRA Eligibility	Not having been declared ineligible by the PPRA as described in ITT 3.8	Form of Tender	
7	History of Non-Performing Contracts	Non-performance of a contract did not occur as a result of contractor default since <b>1<sup>st</sup> January 2019</b>	Form CON-2	
8	Suspension Based on Execution of Tender/Proposal Securing Declaration by the Procuring Entity	Not under suspension based on-execution of a Tender/Proposal Securing Declaration pursuant to ITT 19.9	Form of Tender	
9	Pending Litigation	Tender's financial position and prospective long-term profitability still sound according to criteria established in 3.1 and assuming that all pending litigation will NOT be resolved against the Tenderer.	Form CON – 2	
10	Litigation History	No consistent history of court/arbitral award decisions against the Tenderer since <b>1<sup>st</sup> January 2019</b>	Form CON – 2	
11	Financial Capabilities	(i) The Tenderer shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the construction cash flow requirements estimated as <b>Kenya</b>	Form FIN – 3.1, with attachments	

1	2	3	4	5
Item No.	Qualification Subject	Qualification Requirement	Document To be Completed by Tenderer	For Procuring Entity's Use (Qualification met or Not Met)
		<p><b>Shillings Thirty million (Kshs.30,000,000)</b> equivalent for the subject contract(s) net of the Tenderer's other commitments.</p> <p>(ii) The Tenderers shall also demonstrate, to the satisfaction of the Procuring Entity, that it has adequate sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments.</p> <p>(iii) The audited balance sheets or, if not required by the laws of the Tenderer's country, other financial statements acceptable to the Procuring Entity, for the last <b>Three years</b> shall be submitted and must demonstrate the current soundness of the Tenderer's financial position and indicate its prospective long-term profitability.</p>		
12	Average Annual Construction Turnover	Minimum average annual construction turnover of <b>Kenya Shillings One Hundred and Fifty Million (Kshs. 150,000,000)</b> , equivalent calculated as total certified payments received for contracts in progress and/or completed within the last <b>Three years</b> , divided by <b>Three years</b>	Form FIN – 3.2	
13	General Construction Experience	Experience under construction contracts in the role of prime contractor, JV member, sub-contractor, or management contractor for at least the last <b>Five (5) years</b> , starting <b>1<sup>st</sup> January 2017</b> .	Form EXP – 4.1	
	Specific Construction & Contract Management Experience	A minimum number of <b>Three (3)</b> similar contracts specified below that have been satisfactorily and substantially completed as a prime contractor, joint venture member, management contractor or sub-contractor between <b>1<sup>st</sup> January 2017</b> and tender submission deadline i.e. .... (number) contracts, each of minimum value i) <b>Kenya shillings Eighty Million (Kshs.80,000,000) equivalent.</b>	Form EXP 4.2(a)	

1	2	3	4	5
Item No.	Qualification Subject	Qualification Requirement	<i>Document To be Completed by Tenderer</i>	<i>For Procuring Entity's Use (Qualification met or Not Met)</i>
		The similarity of the contracts shall be based on the following: <b>physical size, complexity, construction method, technology</b>		



## QUALIFICATION FORMS

### 1. FORMEQU: EQUIPMENT

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

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

Omit the following information for equipment owned by the Tenderer.

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

## 2 FORM PER -1

### Contractor's Representative and Key Personnel Schedule

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

#### Contractor' Representative and Key Personnel

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

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

### 3. FORM PER-2:

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

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

<b>Name of Tenderer</b>
-------------------------

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

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

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

## Declaration

I, the undersigned [*insert either "Contractor's Representative" or "Key Personnel" as applicable*], certify that to the best of my knowledge and belief, the information contained in this Form PER-2 correctly describes myself, my qualifications and my experience.

I confirm that I am available as certified in the following table and throughout the expected time schedule for this position as provided in the Tender:

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

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

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

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

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

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

of authorized representative of the Tenderer:

Signature: \_\_\_\_\_ Date: (day month

year): \_\_\_\_\_

#### 4 TENDERER'S QUALIFICATION WITHOUT PRE-QUALIFICATION

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

##### 4.1 FORM ELI -1.1

###### Tenderer Information Form

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

ITT No. and title: \_\_\_\_\_

Tenderer's name
In case of Joint Venture (JV), name of each member:
Tenderer's actual or intended country of registration: <i>[indicate country of Constitution]</i>
Tenderer's actual or intended year of incorporation:
Tenderer's legal address [in country of registration]:
Tenderer's authorized representative information Name: _____ Address: _____ Telephone/Fax numbers: _____ E-mail address: _____
1. Attached are copies of original documents of <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 ITT 3.6 <input type="checkbox"/> In case of JV, letter of intent to form JV or JV agreement, in accordance with ITT 3.5 <input type="checkbox"/> In case of state-owned enterprise or institution, in accordance with ITT 3.8, documents establishing: <ul style="list-style-type: none"><li>• Legal and financial autonomy</li><li>• Operation under commercial law</li><li>• Establishing that the Tenderer is not under the supervision of the Procuring Entity</li></ul>
2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

## 4.2 FORM ELI -1.2

### Tenderer's JV Information Form (to be completed for each member of Tenderer's JV)

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

ITT No. and title: \_\_\_\_\_

Tenderer's JV name:
JV member's name:
JV member's country of registration:
JV member's year of constitution:
JV member's legal address in country of constitution:
JV member's authorized representative information Name: _____ Address: _____ Telephone/Fax numbers: _____ E-mail address: _____
1. Attached are copies of original documents of <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 ITT 3.6. <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 Procuring Entity, in accordance with ITT 3.8.
2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.



### 4.3 FORM CON – 2

#### Historical Contract Non-Performance, Pending Litigation and Litigation History

Tenderer's Name: \_\_\_\_\_

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

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

ITT No. and title: \_\_\_\_\_

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

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

		Contract Identification: _____ Name of Procuring Entity: _____ Address of Procuring Entity: _____ Matter in dispute: _____ Party who initiated the dispute: _____ Status of dispute: _____	
		Contract Identification: Name of Procuring Entity: Address of Procuring Entity: Matter in dispute: Party who initiated the dispute: Status of dispute:	
Litigation History in accordance with Section III, Evaluation and Qualification Criteria			
<input type="checkbox"/> No Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4. <input type="checkbox"/> Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4 as indicated below.			
<b>Year of award</b>	<b>Outcome as percentage of Net Worth</b>	<b>Contract Identification</b>	<b>Total Contract Amount (currency), Kenya Shilling Equivalent (exchange rate)</b>
<i>[insert year]</i>	<i>[insert percentage]</i>	Contract Identification: [indicate complete contract name, number, and any other identification] Name of Procuring Entity: <i>[insert full name]</i> Address of Procuring Entity: <i>[insert street/city/country]</i> Matter in dispute: <i>[indicate main issues in dispute]</i> Party who initiated the dispute: <i>[indicate "Procuring Entity" or "Contractor"]</i> Reason(s) for Litigation and award decision <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>

#### **4.4 FORM FIN – 3.1:**

##### **Financial Situation and Performance**

Tenderer's Name: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 JV Member's Name \_\_\_\_\_  
 ITT No. and title: \_\_\_\_\_

#### 4.4.1. Financial Data

Type of Financial information in _____ (currency)	Historic information for previous _____ years, _____ (amount in currency, currency, exchange rate*, USD equivalent)				
	Year 1	Year 2	Year 3	Year 4	Year 5
Statement of Financial Position (Information from Balance Sheet)					
Total Assets (TA)					
Total Liabilities (TL)					
Total Equity/Net Worth (NW)					
Current Assets (CA)					
Current Liabilities (CL)					
Working Capital (WC)					
Information from Income Statement					
Total Revenue (TR)					
Profits Before Taxes (PBT)					
Cash Flow Information					
Cash Flow from Operating Activities					

\*Refer to ITT 15 for the exchange rate

#### 4.4.2 Sources of Finance

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

No.	Source of finance	Amount (Kenya Shilling equivalent)
1		
2		
3		

### 4.4.3 Financial documents

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

- (a) reflect the financial situation of the Tenderer or in case of JV member, and not an affiliated entity (such as parent company or group member).
  - (b) be independently audited or certified in accordance with local legislation.
  - (c) be complete, including all notes to the financial statements.
  - (d) correspond to accounting periods already completed and audited.
- Attached are copies of financial statements<sup>1</sup> for the \_\_\_\_\_ years required above; and complying with the requirements

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<sup>1</sup> If the most recent set of financial statements is for a period earlier than 12 months from the date of Tender, the reason for this should be justified.

#### 4.5 FORM FIN – 3.2:

##### Average Annual Construction Turnover

Tenderer's Name: \_\_\_\_\_

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

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

ITT No. and title: \_\_\_\_\_

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

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

#### 4.6 FORM FIN – 3.3:

##### Financial Resources

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

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

#### 4.7 FORM FIN – 3.4:

##### Current Contract Commitments / Works in Progress

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

##### Current Contract Commitments

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

**4.8 FORM EXP - 4.1**

**General Construction Experience**

Tenderer's Name: \_\_\_\_\_

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

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

ITT No. and title: \_\_\_\_\_

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

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

**4.9 FORM EXP - 4.2(a)****Specific Construction and Contract Management Experience**

Tenderer's Name: \_\_\_\_\_

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

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

ITT No. and title: \_\_\_\_\_

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

**4.10 FORM EXP - 4.2 (a) (cont.)****Specific Construction and Contract Management Experience (cont.)**

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



**4.11 FORM EXP - 4.2(b)**

**Construction Experience in Key Activities**

Tenderer's Name: \_\_\_\_\_

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

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

Sub-contractor's Name<sup>2</sup> (as per ITT 34): \_\_\_\_\_

ITT No. and title: \_\_\_\_\_

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

1. Key Activity No One: \_

<b>Information</b>				
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Sub-contractor <input type="checkbox"/>
Total Contract Amount	<b>Kenya Shilling</b>			
Quantity (Volume, number or rate of production, as applicable) performed under the contract per year or part of the year	Total quantity in the contract (i)	Percentage participation (ii)	Actual Quantity Performed (i) x (ii)	
Year 1				
Year 2				
Year 3				
Year 4				
Procuring Entity's Name:				
Address:				
Telephone/fax number				
E-mail:				

<sup>2</sup> If applicable



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

2. Activity No. Two

3. ....

## **OTHER FORMS**

### **5. FORM OF TENDER**

#### *INSTRUCTIONS TO TENDERERS*

- i) *The Tenderer must prepare this Form of Tender on stationery with its letterhead clearly showing the Tenderer's complete name and business address.*
- ii) *All italicized text is to help Tenderer in preparing this form.*
- iii) *Tenderer must complete and sign CERTIFICATE OF INDEPENDENT TENDER DETERMINATION and the SELF DECLARATION OF THE TENDERER attached to this Form of Tender.*
- iv) *The Form of Tender shall include the following Forms duly completed and signed by the Tenderer.*
  - *Tenderer's Eligibility- Confidential Business Questionnaire*
  - *Certificate of Independent Tender Determination*
  - *Self-Declaration of the Tenderer*

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

**Request for Tender No.:** *[insert identification]*

**Name and description of Tender** *[Insert as per ITT]*

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

**To:** *[insert complete name of Procuring Entity]* Dear Sirs,

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

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

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

2. We undertake, if our tender is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Project Manager's notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Special Conditions of Contract.
3. We agree to adhere by this tender until \_\_\_\_\_ *[Insert date]*, and it shall remain binding upon us and may be accepted at any time before that date.
4. Unless and until a formal Agreement is prepared and executed this tender together with your written acceptance thereof, shall constitute a binding Contract between us. We further understand that you are not bound to accept the lowest or any tender you may receive.
5. We, the undersigned, further declare that:
  - i) *No reservations:* We have examined and have no reservations to the tender document, including Addenda issued in accordance with ITT 28;
  - ii) *Eligibility:* We meet the eligibility requirements and have no conflict of interest in accordance with ITT 3 and 4;
  - iii) *Tender-Securing Declaration:* We have not been suspended nor declared ineligible by the Procuring Entity based on execution of a Tender-Securing or Proposal-Securing Declaration in the Procuring Entity's Country in accordance with ITT 19.8;
  - iv) *Conformity:* We offer to execute in conformity with the tendering documents and in accordance with the implementation and completion specified in the construction schedule, the following Works: *[insert a brief description of the Works]*;

- v) Tender Price: The total price of our Tender, excluding any discounts offered in item 1 above is: *[Insert one of the options below as appropriate]*
- vi) Option 1, in case of one lot: Total price is: *[insert the total price of the Tender in words and figures, indicating the various amounts and the respective currencies];* Or
- Option 2, in case of multiple lots:
- a) Total price of each lot *[insert the total price of each lot in words and figures, indicating the various amounts and the respective currencies];* and
- b) Total price of all lots (sum of all lots) *[insert the total price of all lots in words and figures, indicating the various amounts and the respective currencies];*
- vii) Discounts: The discounts offered and the methodology for their application are:
- viii) The discounts offered are: *[Specify in detail each discount offered.]*
- ix) The exact method of calculations to determine the net price after application of discounts is shown below: *[Specify in detail the method that shall be used to apply the discounts];*
- x) Tender Validity Period: Our Tender shall be valid for the period specified in TDS 18.1 (as amended, if applicable) from the date fixed for the Tender submission deadline specified in TDS 22.1 (as amended, if applicable), and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- xi) Performance Security: If our Tender is accepted, we commit to obtain a Performance Security in accordance with the Tendering document;
- xii) One Tender Per Tender: We are not submitting any other Tender(s) as an individual Tender, and we are not participating in any other Tender(s) as a Joint Venture member or as a subcontractor, and meet the requirements of ITT 3.4, other than alternative Tenders submitted in accordance with ITT 13.3;
- xiii) Suspension and Debarment: We, along with any of our subcontractors, suppliers, Project Manager, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the Public Procurement Regulatory Authority or any other entity of the Government of Kenya, or any international organization.
- xiv) State-owned enterprise or institution: *[select the appropriate option and delete the other]* *[We are not a state-owned enterprise or institution]* / *[We are a state-owned enterprise or institution but meet the requirements of ITT 3.8];*
- xv) Commissions, gratuities, fees: We have paid, or will pay the following commissions, gratuities, or fees with respect to the tender process or execution of the Contract: *[insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity].*

Name of Recipient	Address	Reason	Amount

*(If none has been paid or is to be paid, indicate "none.")*

- xvi) Binding Contract: We understand that this Tender, together with your written acceptance thereof included in your Letter of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- xvii) Not Bound to Accept: We understand that you are not bound to accept the lowest evaluated cost Tender, the Most Advantageous Tender or any other Tender that you may receive;
- xviii) Fraud and Corruption: We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf engages in any type of Fraud and Corruption;

- xix) **Collusive practices:** We hereby certify and confirm that the tender is genuine, non-collusive and made with the intention of accepting the contract if awarded. To this effect we have signed the “Certificate of Independent Tender Determination” attached below.
- xx) We undertake to adhere by the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal, copy available from \_\_\_\_\_ (*specify website*) during the procurement process and the execution of any resulting contract.
- xxi) We, the Tenderer, have completed fully and signed the following Forms as part of our Tender:
- a) Tenderer's Eligibility; Confidential Business Questionnaire – to establish we are not in any conflict to interest.
  - b) Certificate of Independent Tender Determination – to declare that we completed the tender without colluding with other tenderers.
  - c) Self-Declaration of the Tenderer – to declare that we will, if awarded a contract, not engage in any form of fraud and corruption.
  - d) Declaration and commitment to the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal

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

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

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

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

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

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

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

**Notes**

*\* In the case of the Tender submitted by joint venture specify the name of the Joint Venture as Tenderer*

*\*\* Person signing the Tender shall have the power of attorney given by the Tenderer to be attached with the Tender.*

## A. TENDERER'S ELIGIBILITY- CONFIDENTIAL BUSINESS QUESTIONNAIRE

### Instruction to Tenderer

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

#### (a) Tenderer's details

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

**General and Specific Details**

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

Name in full \_\_\_\_\_ Age \_\_\_\_\_ Nationality \_\_\_\_\_  
 \_\_\_\_\_ Country of Origin \_\_\_\_\_ Citizenship \_\_\_\_\_  
 \_\_\_\_\_

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

	<b>Names of Partners</b>	<b>Nationality</b>	<b>Citizenship</b>	<b>% Shares owned</b>
1				
2				
3				

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

i) Private or public Company \_\_\_\_\_

ii) State the nominal and issued capital of the Company \_\_\_\_\_

Nominal Kenya Shillings (Equivalent)..... Issued

Kenya Shillings (Equivalent).....

iii) Give details of Directors as follows.

	<b>Names of Director</b>	<b>Nationality</b>	<b>Citizenship</b>	<b>% Shares owned</b>
1				
2				
3				

(e) **DISCLOSURE OF INTEREST- Interest of the Firm in the Procuring Entity.**

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

If yes, provide details as follows.

	<b>Names of Person</b>	<b>Designation in the Procuring Entity</b>	<b>Interest or Relationship with Tenderer</b>
1			
2			
3			

ii) **Conflict of interest disclosure**

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

**f) Certification**

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

Full Name \_\_\_\_\_ Title or

Designation \_\_\_\_\_

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)



## B. CERTIFICATE OF INDEPENDENT TENDER DETERMINATION

I, the undersigned, in submitting the accompanying Letter of Tender to the \_\_\_\_\_ [Name of Procuring Entity] for: \_\_\_\_\_ [Name and number of tender] in response to the request for tenders made by: \_\_\_\_\_ [Name of Tenderer] do hereby make the following statements that I certify to be true and complete in every respect:

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

1. I have read and I understand the contents of this Certificate;
2. I understand that the Tender will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am the authorized representative of the Tenderer with authority to sign this Certificate, and to submit the Tender on behalf of the Tenderer;
4. For the purposes of this Certificate and the Tender, I understand that the word “competitor” shall include any individual or organization, other than the Tenderer, whether or not affiliated with the Tenderer, who:
  - a) has been requested to submit a Tender in response to this request for tenders;
  - b) could potentially submit a tender in response to this request for tenders, based on their qualifications, abilities or experience;
5. The Tenderer discloses that [check one of the following, as applicable:
  - a) The Tenderer has arrived at the Tender independently from, and without consultation, communication, agreement or arrangement with, any competitor;
  - b) the Tenderer has entered into consultations, communications, agreements or arrangements with one or more competitors regarding this request for tenders, and the Tenderer discloses, in the attached document(s), complete details thereof, including the names of the competitors and the nature of, and reasons for, such consultations, communications, agreements or arrangements;
6. In particular, without limiting the generality of paragraphs (5)(a) or (5)(b) above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
  - a) prices;
  - b) methods, factors or formulas used to calculate prices;
  - c) the intention or decision to submit, or not to submit, a tender; or
  - d) the submission of a tender which does not meet the specifications of the request for Tenders; except as specifically disclosed pursuant to paragraph (5)(b) above;
7. In addition, there has been no consultation, communication, agreement or arrangement with any competitor regarding the quality, quantity, specifications or delivery particulars of the works or services to which this request for tenders relates, except as specifically authorized by the procuring authority or as specifically disclosed pursuant to paragraph (5)(b) above;
8. the terms of the Tender have not been, and will not be, knowingly disclosed by the Tenderer, directly or indirectly, to any competitor, prior to the date and time of the official tender opening, or of the awarding of the Contract, whichever comes first, unless otherwise required by law or as specifically disclosed pursuant to paragraph (5)(b) above.

Name \_\_\_\_\_ Title \_\_ Date \_\_\_\_\_

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

**C. SELF - DECLARATION FORMS**

**FORM SD1**

**SELF DECLARATION THAT THE PERSON/TENDERER IS NOT DEBARRED IN THE MATTER OF THE PUBLIC PROCUREMENT AND ASSET DISPOSAL ACT 2015.**

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

1. THAT I am the Company Secretary/ Chief Executive/Managing Director/Principal Officer/Director of ..... (*insert name of the Company*) who is a Bidder in respect of Tender No. .... for ..... (*insert tender title/description*) for ..... (*insert name of the Procuring entity*) and duly authorized and competent to make this statement.
2. THAT the aforesaid Bidder, its Directors and subcontractors have not been debarred from participating in procurement proceeding under Part IV of the Act.
3. THAT what is deponed to herein above is true to the best of my knowledge, information and belief.

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

Bidder Official Stamp

**FORM SD2**

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

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

1. THAT I am the Chief Executive/Managing Director/Principal Officer/Director of ..... (*insert name of the Company*) who is a Bidder in respect of Tender No. .... for ..... (*insert tender title/description*) for ..... (*insert name of the Procuring entity*) and duly authorized and competent to make this statement.
  
2. THAT the aforesaid Bidder, its servants and/or agents /subcontractors will not engage in any corrupt or fraudulent practice and has not been requested to pay any inducement to any member of the Board, Management, Staff and/or employees and/or agents of ..... (*insert name of the Procuring entity*) which is the procuring entity.
  
3. THAT the aforesaid Bidder, its servants and/or agents /subcontractors have not offered any inducement to any member of the Board, Management, Staff and/or employees and/or agents of ..... (name of the procuring entity)
  
4. THAT the aforesaid Bidder will not engage /has not engaged in any corrosive practice with other bidders participating in the subject tender
  
5. THAT what is deponed to herein above is true to the best of my knowledge information and belief.

.....  
(Title)

.....  
(Signature)

.....  
(Date)

Bidder's Official Stamp

**DECLARATION AND COMMITMENT TO THE CODE OF ETHICS**

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

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

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

Position.....

Office address..... Telephone.....

E-mail.....

Name of the Firm/Company.....

Date..... (Company Seal/ Rubber

Stamp where applicable)

Witness

Name ..... Sign.....

Date.....

## D. APPENDIX 1- FRAUD AND CORRUPTION

*(Appendix 1 shall not be modified)*

### 1. Purpose

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

### 3. Requirements

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

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

- 1) a person to whom this Act applies shall not be involved in any corrupt, coercive, obstructive, collusive or fraudulent practice; or conflicts of interest in any procurement or asset disposal proceeding;
- 2) A person referred to under subsection (1) who contravenes the provisions of that sub-section commits an offence;
- 3) Without limiting the generality of the subsection (1) and (2), the person shall be: -
  - a) disqualified from entering into a contract for a procurement or asset disposal proceeding; or
  - b) if a contract has already been entered into with the person, the contract shall be voidable;
- 4) The voiding of a contract by the procuring entity under subsection (7) does not limit any legal remedy the procuring entity may have;
- 5) An employee or agent of the procuring entity or a member of the Board or committee of the procuring entity who has a conflict of interest with respect to a procurement: -
  - a) shall not take part in the procurement proceedings;
  - b) shall not, after a procurement contract has been entered into, take part in any decision relating to the procurement or contract; and
- c) shall not be a subcontractor for the bidder to whom was awarded contract, or a member of the group of bidders to whom the contract was awarded, but the subcontractor appointed shall meet all the requirements of this Act.
- 6) An employee, agent or member described in subsection (1) who refrains from doing anything prohibited under that subsection, but for that subsection, would have been within his or her duties shall disclose the conflict of interest to the procuring entity;
- 7) If a person contravenes subsection (1) with respect to a conflict of interest described in subsection (5)(a) and the contract is awarded to the person or his relative or to another person in whom one of them had a direct or indirect pecuniary interest, the contract shall be terminated and all costs incurred by the public entity shall be made good by the awarding officer. Etc.

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

- a) Defines broadly, for the purposes of the above provisions, the terms set forth below as follows:
  - i) "corrupt practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
  - ii) "fraudulent practice" is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation;

- iii) “collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
  - iv) “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
  - v) “obstructive practice” is:
    - deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede investigation by Public Procurement Regulatory Authority (PPRA) or any other appropriate authority appointed by Government of Kenya into allegations of a corrupt, fraudulent, coercive, or collusive practice; and/or threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or
    - acts intended to materially impede the exercise of the PPRA's or the appointed authority's inspection and audit rights provided for under paragraph 2.3 e. below.
- b) Defines more specifically, in accordance with the above procurement Act provisions set forth for fraudulent and collusive practices as follows:
- "fraudulent practice" includes a misrepresentation of fact in order to influence a procurement or disposal process or the exercise of a contract to the detriment of the procuring entity or the tenderer or the contractor, and includes collusive practices amongst tenderers prior to or after tender submission designed to establish tender prices at artificial non-competitive levels and to deprive the procuring entity of the benefits of free and open competition.
- c) Rejects a proposal for award<sup>1</sup> of a contract if PPRA determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
  - d) Pursuant to the Kenya's above stated Acts and Regulations, may sanction or recommend to appropriate authority (ies) for sanctioning and debarment of a firm or individual, as applicable under the Acts and Regulations;
  - e) Requires that a clause be included in Tender documents and Request for Proposal documents requiring (i) Tenderers (applicants/proposers), Consultants, Contractors, and Suppliers, and their Sub-contractors, Sub-consultants, Service providers, Suppliers, Agents personnel, permit the PPRA or any other appropriate authority appointed by Government of Kenya to inspect<sup>2</sup> all accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have them audited by auditors appointed by the PPRA or any other appropriate authority appointed by Government of Kenya; and
  - f) Pursuant to Section 62 of the above Act, requires Applicants/Tenderers to submit along with their Applications/Tenders/Proposals a “Self-Declaration Form” as included in the procurement document declaring that they and all parties involved in the procurement process and contract execution have not engaged/will not engage in any corrupt or fraudulent practices.

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<sup>1</sup> For the avoidance of doubt, a party's ineligibility to be awarded a contract shall include, without limitation, (i) applying for pre-qualification, expressing interest in a consultancy, and tendering, either directly or as a nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider, in respect of such contract, and (ii) entering into an addendum or amendment introducing a material modification to any existing contract.

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

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

**Beneficiary:** \_\_\_\_\_

**Request for Tenders No:**

\_\_\_\_\_

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

**TENDER GUARANTEE No.:** \_\_\_\_\_

**Guarantor:** \_\_\_\_\_

1. We have been informed that \_\_\_\_\_ (here inafter called "the Applicant") has submitted or will submit to the Beneficiary its Tender (here inafter called" the Tender") for the execution of \_\_\_\_\_ under Request for Tenders No. \_\_\_\_\_ ("the ITT").
2. Furthermore, we understand that, according to the Beneficiary's conditions, Tenders must be supported by a Tender guarantee.
3. At the request of the Applicant, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of \_\_\_\_\_ (\_\_\_\_\_) upon receipt by us of the Beneficiary's complying demand, supported by the Beneficiary's statement, whether in the demand itself or a separate signed document accompanying or identifying the demand, stating that either the Applicant:
  - (a) has withdrawn its Tender during the period of Tender validity set forth in the Applicant's Letter of Tender ("the Tender Validity Period"), or any extension thereto provided by the Applicant; or
  - b) having been notified of the acceptance of its Tender by the Beneficiary during the Tender Validity Period or any extension there to provided by the Applicant, (i) has failed to execute the contract agreement, or (ii) has failed to furnish the Performance.
4. This guarantee will expire: (a) if the Applicant is the successful Tenderer, upon our receipt of copies of the contract agreement signed by the Applicant and the Performance Security and, or (b) if the Applicant is not the successful Tenderer, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Applicant of the results of the Tendering process; or (ii) thirty days after the end of the Tender Validity Period.
5. Consequently, any demand for payment under this guarantee must be received by us at the office indicated above on or before that date.

\_\_\_\_\_  
*[signature(s)]*

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

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

**TENDER GUARANTEE No.:** \_\_\_\_\_

1. Whereas ..... [Name of the tenderer] (hereinafter called “the tenderer”) has submitted its tender dated ..... [Date of submission of tender] for the ..... [Name and/or description of the tender] (hereinafter called “the Tender”) for the execution of \_\_\_\_\_ under Request for Tenders No. \_\_\_\_\_ (“the ITT”).
2. KNOW ALL PEOPLE by these presents that WE ..... of ..... [Name of Insurance Company] having our registered office at ..... (hereinafter called “the Guarantor”), are bound unto ..... [Name of Procuring Entity] (hereinafter called “the Procuring Entity”) in the sum of ..... (Currency and guarantee amount) for which payment well and truly to be made to the said Procuring Entity, the Guarantor binds itself, its successors and assigns, jointly and severally, firmly by these presents.

Sealed with the Common Seal of the said Guarantor this \_\_\_ day of \_\_\_\_\_ 20 \_\_.

3. NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Applicant:
  - a) has withdrawn its Tender during the period of Tender validity set forth in the Principal's Letter of Tender (“the Tender Validity Period”), or any extension thereto provided by the Principal; or
  - b) having been notified of the acceptance of its Tender by the Procuring Entity during the Tender Validity Period or any extension thereto provided by the Principal; (i) failed to execute the Contract agreement; or (ii) has failed to furnish the Performance Security, in accordance with the Instructions to tenderers (“ITT”) of the Procuring Entity's Tendering document.

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

4. This guarantee will expire: (a) if the Applicant is the successful Tenderer, upon our receipt of copies of the contract agreement signed by the Applicant and the Performance Security and, or (b) if the Applicant is not the successful Tenderer, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Applicant of the results of the Tendering process; or (ii) twenty-eight days after the end of the Tender Validity Period.
5. Consequently, any demand for payment under this guarantee must be received by us at the office indicated above on or before that date.

\_\_\_\_\_  
*[Date]*  
\_\_\_\_\_  
*[Witness]*

\_\_\_\_\_  
*[Signature of the Guarantor]*  
\_\_\_\_\_  
*[Seal]*

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



**TENDER-SECURING DECLARATION FORM**

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

Date:.....*[insert date (as day, month and year) of Tender Submission]*

Tender No.:.....*[insert number of tendering process]*

To:..... *[insert complete name of Purchaser]* I/We, the undersigned, declare that:

- 1. I/We understand that, according to your conditions, bids must be supported by a Tender-Securing Declaration.
- 2. I/We accept that I/we will automatically be suspended from being eligible for tendering in any contract with the Purchaser for the period of time of *[insert number of months or years]* starting on *[insert date]*, if we are in breach of our obligation(s) under the bid conditions, because we – (a) have withdrawn our tender during the period of tender validity specified by us in the Tendering Data Sheet; or (b) having been notified of the acceptance of our Bid by the Purchaser during the period of bid validity, (i) fail or refuse to execute the Contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the instructions to tenders.
- 3. I/We understand that this Tender Securing Declaration shall expire if we are not the successful Tenderer(s), upon the earlier of:
  - a) our receipt of a copy of your notification of the name of the successful Tenderer; or
  - b) thirty days after the expiration of our Tender.
- 4. I/We understand that if I am/we are/in a Joint Venture, the Tender Securing Declaration must be in the name of the Joint Venture that submits the bid, and the Joint Venture has not been legally constituted at the time of bidding, the Tender Securing Declaration shall be in the names of all future partners as named in the letter of intent.

Signed:..... Capacity / title (director

or partner or sole proprietor, etc.) ..... Name:

..... Duly authorized to sign the bid

for and on behalf of: *[insert complete name of Tenderer]*

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

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## **PART II - WORK REQUIREMENTS**

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## **SECTION V - DRAWINGS**

To be provided during implementation of the project

## **SECTION VI - SPECIFICATIONS**

As per the approved sample available for viewing at the site and also detailed in the bills of quantities.

## **SECTION VII – BILLS OF QUANTITIES**

Provided as an Annex

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## **PART III - CONDITIONS OF CONTRACT AND CONTRACT FORMS**

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## SECTION VIII - GENERAL CONDITIONS OF CONTRACT

These General Conditions of Contract (GCC), read in conjunction with the Special Conditions of Contract (SCC) and other documents listed therein, should be a complete document expressing fairly the rights and obligations of both parties.

These General Conditions of Contract have been developed on the basis of considerable international experience in the drafting and management of contracts, bearing in mind a trend in the construction industry towards simpler, more straightforward language.

The GCC can be used for both smaller admeasurement contracts and lump sum contracts.

### General Conditions of Contract

#### A. General

##### 1. Definitions

1.1 Bold face type is used to identify defined terms.

- a) **The Accepted Contract Amount** means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and there medying of any defects.
- b) **The Activity Schedule** is a schedule of the activities comprising the construction, installation, testing, and commissioning of the Works in a lump sum contract. It includes a lump sum price for each activity, which is used for valuations and for assessing the effects of Variations and Compensation Events.
- c) **The Adjudicator** is the person appointed jointly by the Procuring Entity and the Contractor to resolve disputes in the first instance, as provided for in GCC 23.
- d) **Bill of Quantities** means the priced and completed Bill of Quantities forming part of the Bid.
- e) **Compensation Events** are those defined in GCC Clause 42 hereunder.
- f) **The Completion Date** is the date of completion of the Works as certified by the Project Manager, in accordance with GCC Sub-Clause 53.1.
- g) **The Contract** is the Contract between the Procuring Entity and the Contractor to execute, complete, and maintain the Works. It consists of the documents listed in GCC Sub-Clause 2.3 below.
- h) **The Contractor** is the party whose Bid to carry out the Works has been accepted by the Procuring Entity.
- i) **The Contractor's Bid** is the completed bidding document submitted by the Contractor to the Procuring Entity.
- j) **The Contract Price** is the Accepted Contract Amount stated in the Letter of Acceptance and thereafter as adjusted in accordance with the Contract.
- k) **Days** are calendar days; months are calendar months.
- l) **Day works** are varied work inputs subject to payment on a time basis for the Contractor's employees and Equipment, in addition to payments for associated Materials and Plant.
- m) **A Defect** is any part of the Works not completed in accordance with the Contract.
- n) **The Defects Liability Certificate** is the certificate issued by Project Manager upon correction of defects by the Contractor.
- o) **The Defects Liability Period** is the period **named in the SCC** pursuant to Sub-Clause 34.1 and calculated from the Completion Date.
- p) **Drawings** means the drawings of the Works, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) the Procuring Entity in accordance with the Contract, include calculations and other information provided or approved by the Project Manager for the execution of the Contract.
- q) **The Procuring Entity** is the party who employs the Contractor to carry out the Works, **as specified in the SCC**, who is also the Procuring Entity.
- r) **Equipment** is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.

- s) **“In writing” or “written”** means hand-written, type-written, printed or electronically made, and resulting in a permanent record;
- t) The Initial Contract Price is the Contract Price listed in the Procuring Entity's Letter of Acceptance.
- u) **The Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is **specified in the SCC**. The Intended Completion Date may be revised only by the Project Manager by issuing an extension of time or an acceleration order.
- v) **Materials** are all supplies, including consumables, used by the Contractor for incorporation in the Works.
- w) **Plant** is any integral part of the Works that shall have a mechanical, electrical, chemical, or biological function.
- x) **The Project Manager** is the person **named in the SCC** (or any other competent person appointed by the Procuring Entity and notified to the Contractor, to act in replacement of the Project Manager) who is responsible for supervising the execution of the Works and administering the Contract.
- y) **SCC** means Special Conditions of Contract.
- z) **The Site** is the area of the works as **defined as such in the SCC**.
- aa) **Site Investigation Reports** are those that were included in the bidding document and are factual and interpretative reports about the surface and subsurface conditions at the Site.
- bb) **Specification** means the Specification of the Works included in the Contract and any modification or addition made or approved by the Project Manager.
- cc) **The Start Date** is **given in the SCC**. It is the latest date when the Contractor shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.
- dd) **A Subcontractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract, which includes work on the Site.
- ee) **Temporary Works** are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works.
- ff) **A Variation** is an instruction given by the Project Manager which varies the Works.
- gg) **The Works** are what the Contract requires the Contractor to construct, install, and turn over to the Procuring Entity, **as defined in the SCC**.

## 2. Interpretation

- 2.1 In interpreting these GCC, words indicating one gender include all genders. Words indicating the singular also include the plural and words indicating the plural also include the singular. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Project Manager shall provide instructions clarifying queries about these GCC.
- 2.2 If sectional completion is specified in the SCC, references in the GCC to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).
- 2.3 The documents forming the Contract shall be interpreted in the following order of priority:
  - a) Agreement,
  - b) Letter of Acceptance,
  - c) Contractor's Bid,
  - d) Special Conditions of Contract,
  - e) General Conditions of Contract, including Appendices,
  - f) Specifications,
  - g) Drawings,
  - h) Bill of Quantities<sup>6</sup>, and
  - i) any other document **listed in the SCC** as forming part of the Contract.

## 2.4 Framework Agreement

- 2.4.1 The Parties shall enter into a Framework Agreement within 28 days after the Contractor receives the Letter of Acceptance, unless the Particular Conditions establish otherwise. The Framework Agreement shall be based upon FORM No. 3 – FRAMEWORK AGREEMENT annexed to the Particular Conditions. The costs

of stamp duties and similar charges (if any) imposed by law in connection with entry into the Framework Agreement shall be borne by the Procuring Entity.

- 2.4.2 The Framework Agreement establishes the terms and conditions that will govern the contract awarded during the term of the Framework Agreement. The Framework Agreement establishes for the procurement works by package as and when required, over the specified period of time. The Framework Agreement does not commit a Procuring Entity to procure, nor a Firm to supply. The Framework Agreement allows the Procuring Entity to call the Contractor to commence the works on a particular package in a specified location within the duration of the agreement.
- 2.4.3 This Framework Agreement does not guarantee the contractor of being called for a contract to start and no commitment is made with regard to possible number of packages to carry out.
- 2.4.4 This Framework Agreement does exclude the Procuring Entity from the right to procure the same Works from other firms.
- 2.4.5 This Framework Agreement does not stop the Procuring Entity from removing the contractor from the same Agreement.
- 2.4.6 FAs shall be established for a maximum period of three (3) years. The Procuring Entity may with the Consent of the Contractor extend this Agreement if the agreement period is less than three (3) years, if the initial engagement has been satisfactory.
- 2.4.7 Call-off Contracts; for work on a package to start, the Procuring Entity shall issue a notice of acceptance of a particular package requesting the contractor to furnish a Performance Security and to start the works thereafter, and providing the contractor with details of location where the works, are to be carried out. The call-off statement shall specify the objectives, tasks, deliverables, timeframes and price or price mechanism. The price for individual call-off contracts shall be based on the prices detailed in the Framework Agreement.

### **3. Language and Law**

- 3.1 The language of the Contract is English Language and the law governing the Contract are the Laws of Kenya.
- 3.2 Throughout the execution of the Contract, the Contractor shall comply with the import of goods and services prohibitions in the Procuring Entity's Country when
- a) as a matter of law or official regulations, Kenya prohibits commercial relations with that country; or
  - b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, Kenya prohibits any import of goods from that country or any payments to any country, person, or entity in that country.

### **4. Project Manager's Decisions**

- 4.1 Except where otherwise specifically stated, the Project Manager shall decide contractual matters between the Procuring Entity and the Contractor in the role representing the Procuring Entity.

### **5. Delegation**

- 5.1 Otherwise **specified in the SCC**, the Project Manager may delegate any of his duties and responsibilities to other people, except to the Adjudicator, after notifying the Contractor, and may revoke any delegation after notifying the Contractor.

### **6. Communications**

- 6.1 Communications between parties that are referred to in the Conditions shall be effective only when in writing. A notice shall be effective only when it is delivered.

### **7. Subcontracting**

- 7.1 The Contractor may subcontract with the approval of the Project Manager, but may not assign the Contract without the approval of the Procuring Entity in writing. Subcontracting shall not alter the Contractor's obligations.

### **8. Other Contractors**

8.1 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Procuring Entity between the dates given in the Schedule of Other Contractors, as **referred to in the SCC**. The Contractor shall also provide facilities and services for them as described in the Schedule. The Procuring Entity may modify the Schedule of Other Contractors, and shall notify the Contractor of any such modification.

## 9. Personnel and Equipment

9.1 The Contractor shall employ the key personnel and use the equipment identified in its Bid, to carry out the Works or other personnel and equipment approved by the Project Manager. The Project Manager shall approve any proposed replacement of key personnel and equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the Bid.

9.2 If the Project Manager asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.

9.3 If the Procuring Entity, Project Manager or Contractor determines, that any employee of the Contractor be determined to have engaged in Fraud and Corruption during the execution of the Works, then that employee shall be removed in accordance with Clause 9.2 above.

## 10. Procuring Entity's and Contractor's Risks

10.1 The Procuring Entity carries the risks which this Contract states are Procuring Entity's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.

## 11. Procuring Entity's Risks

11.1 From the Start Date until the Defects Liability Certificate has been issued, the following are Procuring Entity's risks:

- a) The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to
  - i) use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable result of the Works or
  - ii) negligence, breach of statutory duty, or interference with any legal right by the Procuring Entity or by any person employed by or contracted to him except the Contractor.
- b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Procuring Entity or in the Procuring Entity's design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed.

11.2 From the Completion Date until the Defects Liability Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is a Procuring Entity's risk except loss or damage due to

- aa) a Defect which existed on the Completion Date,
- bb) an event occurring before the Completion Date, which was not itself a Procuring Entity's risk, or cc) the activities of the Contractor on the Site after the Completion Date.

## 12. Contractor's Risks

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

## 13. Insurance

13.1 The Contractor shall provide, in the joint names of the Procuring Entity and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles **stated in the SCC** for the following events which are due to the Contractor's risks:

- a) loss of or damage to the Works, Plant, and Materials;
- b) loss of or damage to Equipment;
- c) loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and
- d) personal injury or death.



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

#### **14. Site Data**

- 14.1 The Contractor shall be deemed to have examined any Site Data **referred to in the SCC**, supplemented by any information available to the Contractor.

#### **15. Contractor to Construct the Works**

- 15.1 The Contractor shall construct and install the Works in accordance with the Specifications and Drawings.

#### **16. The Works to Be Completed by the Intended Completion Date**

- 16.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Program submitted by the Contractor, as updated with the approval of the Project Manager, and complete them by the Intended Completion Date.

#### **17. Approval by the Project Manager**

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

#### **18. Safety**

- 18.1 The Contractor shall be responsible for the safety of all activities on the Site.

#### **19. Discoveries**

- 19.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Procuring Entity. The Contractor shall notify the Project Manager of such discoveries and carry out the Project Manager's instructions for dealing with them.

#### **20. Possession of the Site**

- 20.1 The Procuring Entity shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date **stated in the SCC**, the Procuring Entity shall be deemed to have delayed the start of the relevant activities, and this shall be a Compensation Event.

#### **21. Access to the Site**

- 21.1 The Contractor shall allow the Project Manager and any person authorized by the Project Manager access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.

## 22. Instructions, Inspections and Audits

- 22.1 The Contractor shall carry out all instructions of the Project Manager which comply with the applicable laws where the Site is located.
- 22.2 The Contractor shall keep, and shall make all reasonable efforts to cause its Subcontractors and sub-consultants to keep, accurate and systematic accounts and records in respect of the Works in such form and details as will clearly identify relevant time changes and costs.
- 22.3 The Contractor shall permit and shall cause its subcontractors and sub-consultants to permit, the Procuring Entity and/or persons appointed by the Public Procurement Regulatory Authority 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 Public Procurement Regulatory Authority. The Contractor's and its Subcontractors' and sub-consultants' attention is drawn to Sub-Clause 25.1 (Fraud and Corruption) which provides, inter alia, that acts intended to materially impede the exercise of the Public Procurement Regulatory Authority's inspection and audit rights constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Public Procurement Regulatory Authority's prevailing sanctions procedures).

## 23. Appointment of the Adjudicator

- 23.1 The Adjudicator shall be appointed jointly by the Procuring Entity and the Contractor, at the time of the Procuring Entity's issuance of the Letter of Acceptance. If, in the Letter of Acceptance, the Procuring Entity does not agree on the appointment of the Adjudicator, the Procuring Entity will request the Appointing Authority designated in the SCC, to appoint the Adjudicator within 14 days of receipt of such request.
- 23.2 Should the Adjudicator resign or die, or should the Procuring Entity and the Contractor agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator shall be jointly appointed by the Procuring Entity and the Contractor. In case of disagreement between the Procuring Entity and the Contractor, within 30 days, the Adjudicator shall be designated by the Appointing Authority designated in the SCC at the request of either party, within 14 days of receipt of such request.

## 24. Settlement of Claims and Disputes

### 24.1 Contractor's Claims

- 24.1.1 If the Contractor considers itself to be entitled to any extension of the Time for Completion and/or any additional payment, under any Clause of these Conditions or otherwise in connection with the Contract, the Contractor shall give Notice to the Project Manager, describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than 30 days after the Contractor became aware, or should have become aware, of the event or circumstance.
- 24.1.2 If the Contractor fails to give notice of a claim within such period of 30 days, the Time for Completion shall not be extended, the Contractor shall not be entitled to additional payment, and the Procuring Entity shall be discharged from all liability in connection with the claim. Otherwise, the following provisions of this Sub- Clause shall apply.
- 24.1.3 The Contractor shall also submit any other notices which are required by the Contract, and supporting particulars for the claim, all as relevant to such event or circumstance.
- 24.1.4 The Contractor shall keep such contemporary records as may be necessary to substantiate any claim, either on the Site or at another location acceptable to the Project Manager. Without admitting the Procuring Entity's liability, the Project Manager may, after receiving any notice under this Sub-Clause, monitor the record- keeping and/or instruct the Contractor to keep further contemporary records. The Contractor shall permit the Project Manager to inspect all these records, and shall (if instructed) submit copies to the Project Manager.
- 24.1.5 Within 42 days after the Contractor became aware (or should have become aware) of the event or circumstance giving rise to the claim, or within such other period as may be proposed by the Contractor and approved by the Project Manager, the Contractor shall send to the Project Manager a fully detailed claim which includes full supporting particulars of the basis of the claim and of the extension of time and/or additional payment claimed. If the event or circumstance giving rise to the claim has a continuing effect:
- a) this fully detailed claim shall be considered as interim;
  - b) the Contractor shall send further interim claims at monthly intervals, giving the accumulated delay and/or amount claimed, and such further particulars as the Project Manager may reasonably require; and

c) the Contractor shall send a final claim within 30 days after the end of the effects resulting from the event or circumstance, or within such other period as may be proposed by the Contractor and approved by the Project Manager.

24.1.6 Within 42 days after receiving a Notice of a claim or any further particulars supporting a previous claim, or within such other period as may be proposed by the Project Manager and approved by the Contractor, the Project Manager shall respond with approval, or with disapproval and detailed comments. He may also request any necessary further particulars, but shall nevertheless give his response on the principles of the claim within the above defined time period.

24.1.7 Within the above defined period of 42 days, the Project Manager shall proceed in accordance with Sub-Clause

24.1.8 [Determinations] to agree or determine (i) the extension (if any) of the Time for Completion (before or after its expiry) in accordance with Sub-Clause 8.4 [Extension of Time for Completion], and/or (ii) the additional payment (if any) to which the Contractor is entitled under the Contract.

24.1.9 Each Payment Certificate shall include such additional payment for any claim as has been reasonably substantiated as due under the relevant provision of the Contract. Unless and until the particulars supplied are sufficient to substantiate the whole of the claim, the Contractor shall only be entitled to payment for such part of the claim as he has been able to substantiate.

24.1.10 If the Project Manager does not respond within the timeframe defined in this Clause, either Party may consider that the claim is rejected by the Project Manager and any of the Parties may refer to Arbitration in accordance with Sub-Clause 24.4 [Arbitration].

24.1.11 The requirements of this Sub-Clause are in addition to those of any other Sub-Clause which may apply to a claim. If the Contractor fails to comply with this or another Sub-Clause in relation to any claim, any extension of time and/or additional payment shall take account of the extent (if any) to which the failure has prevented or prejudiced proper investigation of the claim, unless the claim is excluded under the second paragraph of this Sub-Clause 24.3.

## **24.2 Amicable Settlement**

24.1.1 Where a notice of a claim has been given, both Parties shall attempt to settle the dispute amicably before the commencement of arbitration. However, unless both Parties agree otherwise, the Party giving a notice of a claim in accordance with Sub-Clause 24.1 above should move to commence arbitration after the fifty-sixth day from the day on which a notice of a claim was given, even if no attempt at an amicable settlement has been made.

## **24.3 Matters that may be referred to arbitration**

24.3.1 Notwithstanding anything stated herein the following matters may be referred to arbitration before the practical completion of the Works or abandonment of the Works or termination of the Contract by either party:

- a) The appointment of a replacement Project Manager upon the said person ceasing to act.
- b) Whether or not the issue of an instruction by the Project Manager is empowered by these Conditions.
- c) Whether or not a certificate has been improperly withheld or is not in accordance with these Conditions.
- e) Any dispute arising in respect of war risks or war damage.
- f) All other matters shall only be referred to arbitration after the completion or alleged completion of the Works or termination or alleged termination of the Contract, unless the Procuring Entity and the Contractor agree otherwise in writing.

## **24.4 Arbitration**

24.4.1 Any claim or dispute between the Parties arising out of or in connection with the Contract not settled amicably in accordance with Sub-Clause 24.3 shall be finally settled by arbitration.

24.4.2 No arbitration proceedings shall be commenced on any claim or dispute where notice of a claim or dispute has not been given by the applying party within ninety days of the occurrence or discovery of the matter or issue giving rise to the dispute.

24.4.3 Notwithstanding the issue of a notice as stated above, the arbitration of such a claim or dispute shall not commence unless an attempt has in the first instance been made by the parties to settle such claim or dispute amicably with or without the assistance of third parties. Proof of such attempt shall be required.

24.4.4 The Arbitrator shall, without prejudice to the generality of his powers, have powers to direct such measurements, computations, tests or valuations as may in his opinion be desirable in order to determine the

rights of the parties and assess and award any sums which ought to have been the subject of or included in any certificate.

- 24.4.5 The Arbitrator shall, without prejudice to the generality of his powers, have powers to open up, review and revise any certificate, opinion, decision, requirement or notice and to determine all matters in dispute which shall be submitted to him in the same manner as if no such certificate, opinion, decision requirement or notice had been given.
- 24.4.6 The arbitrators shall have full power to open up, review and revise any certificate, determination, instruction, opinion or valuation of the Project Manager, relevant to the dispute. Nothing shall disqualify representatives of the Parties and the Project Manager from being called as a witness and giving evidence before the arbitrators on any matter whatsoever relevant to the dispute.
- 24.4.7 Neither Party shall be limited in the proceedings before the arbitrators to the evidence, or to the reasons for dissatisfaction given in its Notice of Dissatisfaction.
- 24.4.8 Arbitration may be commenced prior to or after completion of the Works. The obligations of the Parties, and the Project Manager shall not be altered by reason of any arbitration being conducted during the progress of the Works.
- 24.4.9 The terms of the remuneration of each or all the members of Arbitration shall be mutually agreed upon by the Parties when agreeing the terms of appointment. Each Party shall be responsible for paying one-half of this remuneration.

#### **24.5 Arbitration with National Contractors**

- 24.5.1 If the Contract is with national contractors, arbitration proceedings will be conducted in accordance with the Arbitration Laws of Kenya. In case of any claim or dispute, such claim or dispute shall be notified in writing by either party to the other with a request to submit it to arbitration and to concur in the appointment of an Arbitrator within thirty days of the notice. The dispute shall be referred to the arbitration and final decision of a person to be agreed between the parties. Failing agreement to concur in the appointment of an Arbitrator, the Arbitrator shall be appointed, on the request of the applying party, by the Chairman or Vice Chairman of any of the following professional institutions;
- i) Architectural Association of Kenya
  - ii) Institute of Quantity Surveyors of Kenya
  - iii) Association of Consulting Engineers of Kenya
  - iv) Chartered Institute of Arbitrators (Kenya Branch)
  - v) Institution of Engineers of Kenya
- 24.5.2 The institution written to first by the aggrieved party shall take precedence over all other institutions.

#### **24.6 Alternative Arbitration Proceedings**

- 24.6.1 Alternatively, the Parties may refer the matter to the Nairobi Centre for International Arbitration (NCIA) which offers a neutral venue for the conduct of national and international arbitration with commitment to providing institutional support to the arbitral process.

#### **24.7 Failure to Comply with Arbitrator's Decision**

- 24.7.1 The award of such Arbitrator shall be final and binding upon the parties.
- 24.7.2 In the event that a Party fails to comply with a final and binding Arbitrator's decision, then the other Party may, without prejudice to any other rights it may have, refer the matter to a competent court of law.

#### **24.8 Contract operations to continue**

- 24.8.1 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 Procuring Entity shall pay the Contractor any monies due the Contractor.

### **25. Fraud and Corruption**

- 25.1 The Government requires compliance with the country's Anti-Corruption laws and its prevailing sanctions policies and procedures as set forth in the Constitution of Kenya and its Statutes.
- 25.2 The Procuring Entity requires the Contractor to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the bidding process or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee.

**26. Program**

- 26.1 Within the time stated in the SCC, after the date of the Letter of Acceptance, the Contractor shall submit to the Project Manager for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the Works. In the case of a lump sum contract, the activities in the Program shall be consistent with those in the Activity Schedule.
- 26.2 An update of the Program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.
- 26.3 The Contractor shall submit to the Project Manager for approval an updated Program at intervals no longer
- 26.4 than the period stated in the SCC. If the Contractor does not submit an updated Program within this period, the Project Manager may withhold the amount stated in the SCC from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted. In the case of a lump sum contract, the Contractor shall provide an updated Activity Schedule within 14 days of being instructed to by the Project Manager.
- 26.5 The Project Manager's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Project Manager again at any time. A revised Program shall show the effect of Variations and Compensation Events.

**27. Extension of the Intended Completion Date**

- 27.1 The Project Manager shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work, which would cause the Contractor to incur additional cost.
- 27.2 The Project Manager shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Project Manager for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

**28. Acceleration**

- 28.1 When the Procuring Entity wants the Contractor to finish before the Intended Completion Date, the Project Manager shall obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Procuring Entity accepts these proposals, the Intended Completion Date shall be adjusted accordingly and confirmed by both the Procuring Entity and the Contractor.
- 28.2 If the Contractor's priced proposals for an acceleration are accepted by the Procuring Entity, they are incorporated in the Contract Price and treated as a Variation.

**29. Delays Ordered by the Project Manager**

- 29.1 The Project Manager may instruct the Contractor to delay the start or progress of any activity within the Works.

**30. Management Meetings**

- 30.1 Either the Project Manager or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.
- 30.2 The Project Manager shall record the business of management meetings and provide copies of the record to those attending the meeting and to the Procuring Entity. The responsibility of the parties for actions to be taken shall be decided by the Project Manager either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

**31. Early Warning**

- 31.1 The Contractor shall warn the Project Manager at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price, or delay the



execution of the Works. The Project Manager may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon as reasonably possible.

- 31.2 The Contractor shall cooperate with the Project Manager in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Project Manager.

## **C. Quality Control**

### **32. Identifying Defects**

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

### **33. Tests**

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

### **34. Correction of Defects**

- 34.1 The Project Manager shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion, and is defined in the SCC. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.
- 34.2 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Project Manager's notice.

### **35. Uncorrected Defects**

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

## **D. Cost Control**

### **36. Contract Price<sup>7</sup>**

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

### **37. Changes in the Contract Price<sup>8</sup>**

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

## **38. Variations**

- 38.1 All Variations shall be included in updated Programs<sup>9</sup> produced by the Contractor.
- 38.2 The Contractor shall provide the Project Manager with a quotation for carrying out the Variation when requested to do so by the Project Manager. The Project Manager shall assess the quotation, which shall be given within seven (7) days of the request or within any longer period stated by the Project Manager and before the Variation is ordered.
- 38.3 If the Contractor's quotation is unreasonable, the Project Manager may order the Variation and make a change to the Contract Price, which shall be based on the Project Manager's own forecast of the effects of the Variation on the Contractor's costs.
- 38.4 If the Project Manager decides that the urgency of varying the work would prevent a quotation being

given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.

<sup>7</sup>*In lump sum contracts, replace GCC Sub-Clauses 36.1 as follows:*

*36.1 The Contractor shall provide updated Activity Schedules within 14 days of being instructed to by the Project Manager. The Activity Schedule shall contain the priced activities for the Works to be performed by the Contractor. The Activity Schedule is used to monitor and control the performance of activities on which basis the Contractor will be paid. If payment for materials on site shall be made separately, the Contractor shall show delivery of Materials to the Site separately on the Activity Schedule.*

<sup>8</sup>*In lump sum contracts, replace entire GCC Clause 37 with new GCC Sub-Clause 37.1, as follows:*

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

<sup>9</sup>*In lumpsum contracts, add "and Activity Schedules" after "Programs."* <sup>10</sup>*In lumpsum contracts, delete this paragraph.*

38.5 The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning

38.6 If the work in the Variation corresponds to an item description in the Bill of Quantities and if, in the opinion of the Project Manager, the quantity of work above the limit stated in Sub-Clause 39.1 or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work

38.7 Value Engineering: The Contractor may prepare, at its own cost, a value engineering proposal at any time during the performance of the contract. The value engineering proposal shall, at a minimum, include the following;

- a) The proposed change(s), and a description of the difference to the existing contract requirements;
- b) a full cost/benefit analysis of the proposed change(s) including a description and estimate of costs (including life cycle costs) the Procuring Entity may incur in implementing the value engineering proposal; and
- c) a description of any effect(s) of the change on performance/functionality.

38.8 The Procuring Entity may accept the value engineering proposal if the proposal demonstrates benefits that:

- a) accelerate the contract completion period; or
- b) reduce the Contract Price or the life cycle costs to the Procuring Entity; or
- c) improve the quality, efficiency, safety or sustainability of the Facilities; or
- d) yield any other benefits to the Procuring Entity, without compromising the functionality of the Works.

38.9 If the value engineering proposal is approved by the Procuring Entity and results in:

- a) a reduction of the Contract Price; the amount to be paid to the Contractor shall be the **percentage specified in the SCC** of the reduction in the Contract Price; or
- b) an increase in the Contract Price; but results in a reduction in life cycle costs due to any benefit described in (a) to (d) above, the amount to be paid to the Contractor shall be the full increase in the Contract Price.

### 39. Cash Flow Forecasts

39.1 When the Program<sup>11</sup>, is updated, the Contractor shall provide the Project Manager with an updated cash flow forecast. The cash flow forecast shall include different currencies, as defined in the Contract, converted as necessary using the Contract exchange rates.

### 40. Payment Certificates

40.1 The Contractor shall submit to the Project Manager monthly statements of the estimated value of the work executed less the cumulative amount certified previously.

40.2 The Project Manager shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.

40.3 The value of work executed shall be determined by the Project Manager.

40.4 The value of work executed shall comprise the value of the quantities of work in the Bill of Quantities that have been completed<sup>12</sup>.

- 40.5 The value of work executed shall include the valuation of Variations and Compensation Events.
- 40.6 The Project Manager may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.
- 40.7 Where the contract price is different from the corrected tender price, in order to ensure the contractor is not paid less or more relative to the contract price (which would be the tender price), payment valuation certificates and variation orders on omissions and additions valued based on rates in the Bill of Quantities or schedule of rates in the Tender, will be adjusted by a plus or minus percentage. The percentage already worked out during tender evaluation is worked out as follows:  $(\text{corrected tender price} - \text{tender price}) / \text{tender price} \times 100$

#### 41. Payments

- 41.1 Payments shall be adjusted for deductions for advance payments and retention. The Procuring Entity shall pay the Contractor the amounts certified by the Project Manager within 30 days of the date of each certificate. If the Procuring Entity makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated from the date by which the payment should have been made up to the date when the late payment is made at the prevailing rate of interest for commercial borrowing for each of the currencies in which payments are made.
- 41.2 If an amount certified is increased in a later certificate or as a result of an award by the Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.
- 41.3 Unless otherwise stated, all payments and deductions shall be paid or charged in the proportions of currencies comprising the Contract Price.
- 41.4 Items of the Works for which no rate or price has been entered in shall not be paid for by the Procuring Entity and shall be deemed covered by other rates and prices in the Contract.

#### 42. Compensation Events

- 42.1 The following shall be Compensation Events:
- d) The Procuring Entity does not give access to a part of the Site by the Site Possession Date pursuant to GCC Sub-Clause 20.1.
  - e) The Procuring Entity modifies the Schedule of Other Contractors in a way that affects the work of the Contractor under the Contract.
  - f) The Project Manager orders a delay or does not issue Drawings, Specifications, or instructions required for execution of the Works on time.
  - g) The Project Manager instructs the Contractor to uncover or to carry out additional tests upon work, which is then found to have no Defects.
  - h) The Project Manager unreasonably does not approve a subcontract to be let.
  - i) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Letter of Acceptance from the information issued to bidders (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site.
  - j) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Procuring Entity, or additional work required for safety or other reasons.
  - k) Other contractors, public authorities, utilities, or the Procuring Entity does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.
  - l) The advance payment is delayed.
  - m) The effects on the Contractor of any of the Procuring Entity's Risks.
  - n) The Project Manager unreasonably delays issuing a Certificate of Completion.
- 42.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Project Manager shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.
- 42.3 As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it shall be assessed by the Project Manager, and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Project



Manager shall adjust the Contract Price based on the Project Manager's own forecast. The Project Manager shall assume that the Contractor shall react competently and promptly to the event.

<sup>11</sup>In lump sum contracts, add "or Activity Schedule" after "Program."

<sup>12</sup>In lump sum contracts, replace this paragraph with the following: "The value of work executed shall comprise the value of completed activities in the Activity Schedule."

42.4 The Contractor shall not be entitled to compensation to the extent that the Procuring Entity's interests are adversely affected by the Contractor's not having given early warning or not having cooperated with the Project Manager.

### 43. Tax

43.1 The Project Manager shall adjust the Contract Price if taxes, duties, and other levies are changed between the date 30 days before the submission of bids for the Contract and the date of the last Completion certificate. The adjustment shall be the change in the amount of tax payable by the Contractor, provided such changes are not already reflected in the Contract Price or area result of GCC Clause 44.

### 44. Currency of Payment

44.1 All payments under the contract shall be made in Kenya Shillings

### 45. Price Adjustment

45.1 Prices shall be adjusted for fluctuations in the cost of inputs only if **provided for in the SCC**. If so provided, the amounts certified in each payment certificate, before deducting for Advance Payment, shall be adjusted by applying the respective priceadjustment factor to thepayment amounts due in each currency. Aseparate formula of the type specified below applies:

$$P = A + B \text{ Im/Io}$$

where:

P is the adjustment factor for theportion of the Contract Pricepayable.

A and B are coefficients<sup>13</sup> **specified in the SCC**, representing the non-adjustable and adjustable portions, respectively, of the Contract Price payable and Im is the index prevailing at the end of the month being invoiced and IOC is the index prevailing 30 days before Bid opening for inputs payable.

45.2 If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The index value shall be deemed to take account of all changes in cost due to fluctuations in costs.

### 46. Retention

46.1 The Procuring Entity shall retain from each payment due to the Contractor the proportion stated in the **SCC** until Completion of the whole of the Works.

46.2 Upon the issue of a Certificate of Completion of the Works by the Project Manager, in accordance with GCC 53.1, half the total amount retained shall be repaid to the Contractor and half when the Defects Liability Period has passed and the Project Manager has certified that all Defects notified by the Project Manager to the Contractor before the end of this period have been corrected. The Contractor may substitute retention money with an "on demand" Bank guarantee.

### 47. Liquidated Damages

47.1 The Contractor shall pay liquidated damages to the Procuring Entity at the rate per day stated in the **SCC** for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount defined in the SCC. The Procuring Entity may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's liabilities.

47.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by the Contractor byadjusting thenext payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in GCC Sub-Clause 41.1.

#### **48. Bonus**

48.1 The Contractor shall be paid a Bonus calculated at the rate per calendar day **stated in the SCC** for each day (less any days for which the Contractor is paid for acceleration) that the Completion is earlier than the Intended Completion Date. The Project Manager shall certify that the Works are complete, although they may not be due to be complete.

#### **49. Advance Payment**

49.1 The Procuring Entity shall make advance payment to the Contractor of the amounts stated in the **SCC** by the date stated in the **SCC**, against provision by the Contractor of an Unconditional Bank Guarantee in a form and by a bank acceptable to the Procuring Entity in amounts and currencies equal to the advance payment. The Guarantee shall remain effective until the advance payment has been repaid, but the amount of the Guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest shall not be charged on the advance payment.

49.2 The Contractor is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilization expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Project Manager.

49.3 The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or Liquidated Damages.

#### **50. Securities**

50.1 The Performance Security shall be provided to the Procuring Entity no later than the date specified in the Letter of Acceptance and shall be issued in an amount **specified in the SCC**, by a bank or surety acceptable to the Procuring Entity, and denominated in the types and proportions of the currencies in which the Contract Price is payable. The Performance Security shall be valid until a date 28 day from the date of issue of the Certificate of Completion in the case of a Bank Guarantee, and until one year from the date of issue of the Completion Certificate in the case of a Performance Bond.

#### **51. Dayworks**

51.1 If applicable, the Dayworks rates in the Contractor's Bid shall be used only when the Project Manager has given written instructions in advance for additional work to be paid for in that way.

51.2 All work to be paid for as Dayworks shall be recorded by the Contractor on forms approved by the Project Manager. Each completed form shall be verified and signed by the Project Manager within two days of the work being done.

51.3 The Contractor shall be paid for Dayworks subject to obtaining signed Dayworks forms.

#### **52. Cost of Repairs**

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

#### **E. Finishing the Contract**

#### **53. Completion**

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

#### **54. Taking Over**

54.1 The Procuring Entity shall take over the Site and the Works within seven days of the Project Manager's issuing a certificate of Completion.

#### **55. Final Account**

55.1 The Contractor shall supply the Project Manager with a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the Project Manager shall issue within 56 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Project Manager shall

decide on the amount payable to the Contractor and issue a payment certificate.

<sup>13</sup>*The sum of the two coefficients A and B should be 1 (one) in the formula for each currency. Normally, both coefficients shall be the same in the formulae for all currencies, since coefficient A, for the non-adjustable portion of the payments, is a very approximate figure (usually 0.15) to take account of fixed cost elements or other non-adjustable components. The sum of the adjustments for each currency are added to the Contract Price.*

## 56. Operating and Maintenance Manuals

56.1 If “as built” Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the SCC.

56.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the SCC pursuant to GCC Sub-Clause 56.1, or they do not receive the Project Manager's approval, the Project Manager shall withhold the amount **stated in the SCC** from payments due to the Contractor.

## 57. Termination

57.1 The Procuring Entity or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.

57.2 Fundamental breaches of Contract shall include, but shall not be limited to, the following:

- a) the Contractor stops work for 30 days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Project Manager;
- b) the Project Manager instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within 30 days;
- c) the Procuring Entity or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
- d) a payment certified by the Project Manager is not paid by the Procuring Entity to the Contractor within 84 days of the date of the Project Manager's certificate;
- e) the Project Manager gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager;
- f) the Contractor does not maintain a Security, which is required;
- g) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as **defined in the SCC**; or
- h) if the Contractor, in the judgment of the Procuring Entity has engaged in Fraud and Corruption, as defined in paragraph 2.2 a of the Appendix A to the GCC, in competing for or in executing the Contract, then the Procuring Entity may, after giving fourteen (14) days written notice to the Contractor, terminate the Contract and expel him from the Site.

57.3 Notwithstanding the above, the Procuring Entity may terminate the Contract for convenience.

57.4 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

57.5 When either party to the Contract gives notice of a breach of Contract to the Project Manager for a cause other than those listed under GCC Sub-Clause 56.2 above, the Project Manager shall decide whether the breach is fundamental or not.

## 58. Payment upon Termination

58.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Project Manager shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as specified in the SCC. Additional Liquidated Damages shall not apply. If the total amount due to the Procuring Entity exceeds any payment due to the Contractor, the difference shall be a debt payable to the Procuring Entity.

58.2 If the Contract is terminated for the Procuring Entity's convenience or because of a fundamental breach of Contract by the Procuring Entity, the Project Manager shall issue a certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works, and less advance payments received up to the date of the certificate.

## **59. Property**

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

## **60. Release from Performance**

60.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Procuring Entity or the Contractor, the Project Manager shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment was made.

## SECTION IX - SPECIAL CONDITIONS OF CONTRACT

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
<b>A. General</b>	
GCC 1.1 (q)	The Procuring Entity is <b>State Department of Housing and Urban Development</b>
GCC 1.1 (u)	The Intended Completion Date for the whole of the Works shall be <b>52 weeks from date of site Possession</b>
GCC 1.1 (x)	The Project Manager is <b>Works Secretary, State Department of Public Works</b> or an appointed representative.
GCC 1.1 (z)	The Site is located at <b>Administration Police Training College Embakasi, Nairobi County. Region</b>
GCC 1.1 (cc)	The Start Date shall be 14 days after site handing over
GCC 1.1 (gg)	The Works consist of <b>Completion of 3NO. 4 Storey Blocks of 32NO. Bedsitters, 14NO. Two Bedroom and 4NO. Three Bedroom Units at Administration Police Training College Embakasi, Nairobi County.</b>
GCC 2.2	Sectional Completions are: <b>Allowed</b>
GCC 5.1	The Project manager <b>may</b> delegate any of his duties and responsibilities.
GCC 8.1	Schedule of other contractors: <b>None</b>
GCC 9.1	<p><b>Key Personnel</b></p> <p>GCC 9.1 is replaced with the following:</p> <p>9.1 Key Personnel are the Contractor’s personnel named in this GCC 9.1 of the Special Conditions of Contract. The Contractor shall employ the Key Personnel and use the equipment identified in its Bid, to carry out the Works or other personnel and equipment approved by the Project Manager. The Project Manager shall approve any proposed replacement of Key Personnel and equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the Bid.</p> <p>[insert the name/s of each Key Personnel agreed by the Procuring Entity prior to Contract signature.]</p>
GCC 13.1	<p>The minimum insurance amounts and deductibles shall be:</p> <p>(a) for loss or damage to the Works, Plant and Materials: <i>[insert amounts]</i>.</p> <p>(b) For loss or damage to Equipment: <i>[insert amounts]</i>.</p> <p>(c) for loss or damage to property (except the Works, Plant, Materials, and Equipment) in connection with Contract <i>[insert amounts]</i>.</p> <p>(d) for personal injury or death:</p> <p>(i) of the Contractor’s employees: <i>[amount]</i>.</p> <p>(ii) of other people: <i>[amount]</i>.</p>
GCC 14.1	Site Data are: <b>The Site is located at Administration Police Training College Embakasi, Nairobi County. Region</b>

<b>GCC 20.1</b>	The Site Possession Date(s) shall be: <b>7 days after signing the contract.</b>
<b>Number of GC Clause</b>	<b>Amendments of, and Supplements to, Clauses in the General Conditions of Contract</b>
<b>GCC 23.1 &amp; GCC 23.2</b>	Appointing Authority for the Adjudicator: <b>Nairobi Centre for International Arbitration.</b>
	Hourly rate and types of reimbursable expenses to be paid to the Adjudicator: <b>to be determined guided by fees guidelines</b>
<b>B. Time Control</b>	
<b>GCC 26.1</b>	The Contractor shall submit for approval a Program for the Works within <i>[number]</i> days from the date of the Letter of Acceptance.
<b>GCC 26.3</b>	The period between Program updates is Fourteen ( <b>14</b> ) days.  The amount to be withheld for late submission of an updated Program is <i>[insert amount]</i> .
<b>C. Quality Control</b>	
<b>GCC 34.1</b>	The Defects Liability Period is: <b>180</b> days.
<b>D. Cost Control</b>	
<b>GCC 38.9</b>	If the value engineering proposal is approved by the Procuring Entity the amount to be paid to the Contractor shall be: <b>Not applicable</b>
<b>GCC 44.1</b>	The currency of the Procuring Entity's Country is: <b>Kenya Shillings</b>
<b>GCC 45.1</b>	The Contract <b>is not</b> subject to price adjustment in accordance with GCC Clause 45, and the following information regarding coefficients <b>does not</b> apply.  The coefficients for adjustment of prices are:  (a) percent nonadjustable element (coefficient A).  (b) percent adjustable element (coefficient B).  (c) The Index I for shall be.
<b>GCC 46.1</b>	The proportion of payments retained is: <b>5% of amount payable.</b>
<b>GCC 47.1</b>	The liquidated damages for the whole of the Works are <b>at the rate of Kshs.20,000</b> per week. The maximum amount of liquidated damages for the whole of the Works is <b>10%</b> of the final Contract Price.
<b>GCC 49.1</b>	The Advance Payments shall be: <b>None</b> and shall be paid to the Contractor no later than <b>Not applicable</b>
<b>GCC 50.1</b>	The Performance Security amount is <b>10% of the Contract Amount.</b>  (a) Performance Security – Bank Guarantee: in the amount(s) of <b>10%</b> percent of the Accepted Contract Amount and in the same currency(ies) of the Accepted Contract Amount.
<b>E. Finishing the Contract</b>	
<b>GCC 56.1</b>	The date by which operating and maintenance manuals are required is: <b>Not Applicable</b>  The date by which “as built” drawings are required is : <b>Not Applicable</b>

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
<b>GCC 56.2</b>	The amount to be withheld for failing to produce “as built” drawings and/or operating and maintenance manuals by the date required in GCC 58.1 is : <b><i>Not Applicable</i></b>
<b>GCC 57.2 (g)</b>	The maximum number of days is: <i>100 days</i> .
<b>GCC 58.1</b>	The percentage to apply to the value of the work not completed, representing the Procuring Entity’s additional cost for completing the Works, is <b><i>15%</i></b> .



## **FORM No 1: NOTIFICATION OF INTENTION TO AWARD**

This Notification of Intention to Award shall be sent to each Tenderer that submitted a Tender. Send this Notification to the Tenderer's Authorized Representative named in the Tender Information Form on the format below.

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### **FORMAT**

1. For the attention of Tenderer's Authorized Representative

- i) Name: *[insert Authorized Representative's name]*
- ii) Address: *[insert Authorized Representative's Address]*
- iii) Telephone: *[insert Authorized Representative's telephone/fax numbers]*
- iv) Email Address: *[insert Authorized Representative's email address]*

*[IMPORTANT: insert the date that this Notification is transmitted to Tenderers. The Notification must be sent to all Tenderers simultaneously. This means on the same date and as close to the same time as possible.]*

2. Date of transmission: *[email]* on *[date]* (local time)

This Notification is sent by *(Name and designation)* \_\_\_\_\_

3. Notification of Intention to Award

- i) Procuring Entity: *[insert the name of the Procuring Entity]*
- ii) Project: *[insert name of project]*
- iii) Contract title: *[insert the name of the contract]*
- iv) Country: *[insert country where ITT is issued]*
- v) ITT No: *[insert ITT reference number from Procurement Plan]*

This Notification of Intention to Award (Notification) notifies you of our decision to award the above contract. The transmission of this Notification begins the Standstill Period. During the Standstill Period, you may:

4. Request a debriefing in relation to the evaluation of your tender

Submit a Procurement-related Complaint in relation to the decision to award the contract.

a) The successful tenderer

i) Name of successful Tender \_\_\_\_\_

ii) Address of the successful Tender \_\_\_\_\_

iii) Contract price of the successful Tender Kenya Shillings \_\_\_\_\_ (in words \_\_\_\_\_)

b) Other Tenderers

Names of all Tenderers that submitted a Tender. If the Tender's price was evaluated include the evaluated price as well as the Tender price as read out. For Tenders not evaluated, give one main reason the Tender was unsuccessful.



SN o	Name of Tender	Tender Price as read out	Tender's evaluated price (Note a)	One Reason Why not Evaluated
1				
2				
3				
4				
5				

(Note a) State NE if not evaluated

#### 5. How to request a debriefing

- a) DEADLINE: The deadline to request a debriefing expires at midnight on [insert date] (local time).
- b) You may request a debriefing in relation to the results of the evaluation of your Tender. If you decide to request a debriefing your written request must be made within three (5) Business Days of receipt of this Notification of Intention to Award.
- c) Provide the contract name, reference number, name of the Tenderer, contact details; and address the request for debriefing as follows:
  - i) Attention: [insert full name of person, if applicable]
  - ii) Title/position: [insert title/position]
  - ii) Agency: [insert name of Procuring Entity]
  - iii) Email address: [insert email address]
- d) If your request for a debriefing is received within the 3 Days deadline, we will provide the debriefing within five (3) Business Days of receipt of your request. If we are unable to provide the debriefing within this period, the Standstill Period shall be extended by five (3) Days after the date that the debriefing is provided. If this happens, we will notify you and confirm the date that the extended Standstill Period will end.
- e) The debriefing may be in writing, by phone, video conference call or in person. We shall promptly advise you in writing how the debriefing will take place and confirm the date and time.
- f) If the deadline to request a debriefing has expired, you may still request a debriefing. In this case, we will provide the debriefing as soon as practicable, and normally no later than fifteen (15) Days from the date of publication of the Contract Award Notice.

#### 6. How to make a complaint

- a) Period: Procurement-related Complaint challenging the decision to award shall be submitted by midnight, [insert date] (local time).
- b) Provide the contract name, reference number, name of the Tenderer, contact details; and address the Procurement-related Complaint as follows:
  - i) Attention: [insert full name of person, if applicable]
  - ii) Title/position: [insert title/position]
  - iii) Agency: [insert name of Procuring Entity]
  - iv) Email address: [insert email address]
- c) At this point in the procurement process, you may submit a Procurement-related Complaint challenging the decision to award the contract. You do not need to have requested, or received, a debriefing before making this complaint. Your complaint must be submitted within the Standstill Period and received by us before the Standstill Period ends.
- d) Further information: For more information refer to the Public Procurement and Disposals Act 2015 and its Regulations available from the Website [info@ppra.go.ke](mailto:info@ppra.go.ke) or [complaints@ppra.go.ke](mailto:complaints@ppra.go.ke). You should read these documents before preparing and submitting your complaint.

e) There are four essential requirements:

- i) You must be an 'interested party'. In this case, that means a Tenderer who submitted a Tender in this tendering process, and is the recipient of a Notification of Intention to Award.
- ii) The complaint can only challenge the decision to award the contract.
- iii) You must submit the complaint within the period stated above.
- iv) You must include, in your complaint, all of the information required to support your complaint.

7. Standstill Period

- i) **DEADLINE:** The Standstill Period is due to end at midnight on *[insert date]* (local time).
- ii) The Standstill Period lasts ten (14) Days after the date of transmission of this Notification of Intention to Award.
- iii) The Standstill Period may be extended as stated in paragraph Section 5 (d) above.

If you have any questions regarding this Notification please do not hesitate to contact us. On behalf of the Procuring Entity:

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

Title/position: \_\_\_\_\_ Telephone: \_\_\_\_\_ Email: \_\_\_\_\_

**FORM FOR REVIEW(r.203(1))**

**PUBLIC PROCUREMENT ADMINISTRATIVE REVIEW BOARD**

**APPLICATION NO.....OF.....20.....**

**BETWEEN**

.....**APPLICANT**

**AND**

.....**RESPONDENT (Procuring Entity)**

Request for review of the decision of the..... (Name of the Procuring Entity of .....dated the...day of .....20.....in the matter of Tender No.....of .....20..... for (Tender description).

**REQUEST FOR REVIEW**

I/We.....,the above named Applicant(s), of address: Physical address.....P. O. Box No Tel. No.....Email , hereby request the Public Procurement Administrative Review Board to review the whole/part of the above mentioned decision on the following grounds , namely:

- 1.
- 2.

By this memorandum, the Applicant requests the Board for an order/orders that:

- 1.
- 2.

SIGNED .....(Applicant) Dated on.....day of ...../...20.....

FOR OFFICIAL USE ONLY Lodged with the Secretary Public Procurement Administrative Review Board on .....day of .....20.....

**SIGNED**

**Board Secretary**

**FORM NO 3: LETTER OF AWARD**

*[letterhead paper of the Procuring Entity] [date]*

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

This is to notify you that your Tender dated *[date]* for execution of the *[name of the Contract and identification number, as given in the Contract Data]* for contract Package No... .. (amount.....), Packages No... .. (amount.....), Packages No... .. (amount.....). etc. are hereby accepted by ..... (name of Procuring Entity).

You are requested to arrange to sign the Framework Agreement within 28 days in accordance with the Conditions of Contract. On being instructed to commence the contract on any of the packages you have won, by a call-off notification, you will be requested to furnish for the particular package a Performance Security within 28 days in accordance with the Conditions of Contract, and for that purpose, using one of the Performance Security Forms included in Section VIII, Contract Forms, of the Tender Document.

Authorized Signature: .....

Name and Title of Signatory: .....

Name of Procuring Entity.....

Attachment: *Contract Agreement*.....

**FORM NO 4: CONTRACT AGREEMENT**

THIS AGREEMENT made the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, between \_\_\_\_\_ of \_\_\_\_\_ (hereinafter “the Procuring Entity”), of the one part, and \_\_\_\_\_ of \_\_\_\_\_ (hereinafter “the Contractor”), of the other part:

WHEREAS the Procuring Entity desires that the Works known as \_\_\_\_\_ should be executed by the Contractor, and has accepted a Tender by the Contractor for the execution and completion of these Works and the remedying of any defects therein,

The Procuring Entity and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.
  - a) the Letter of Acceptance
  - b) the Letter of Tender
  - c) the addenda Nos \_\_\_\_\_ (if any)
  - d) the Special Conditions of Contract
  - e) the General Conditions of Contract;
  - f) the Specifications
  - g) the Drawings; and
  - h) the completed Schedules and any other documents forming part of the contract.
3. In consideration of the payments to be made by the Procuring Entity to the Contractor as specified in this Agreement, the Contractor hereby covenants with the Procuring Entity to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Procuring Entity hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the Laws of Kenya on the day, month and year specified above.

Signed and sealed by \_\_\_\_\_ (for the Procuring Entity)

Signed and sealed by \_\_\_\_\_ (for the Contractor)

**FORM NO. 5 - PERFORMANCE SECURITY**

[Option 1 - Unconditional Demand Bank Guarantee]

[Guarantor letterhead]

**Beneficiary:** \_\_\_\_\_ [insert name and Address of Procuring Entity] **Date:** \_\_\_\_\_  
\_\_\_\_\_ [Insert date of issue]

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

1. We have been informed that \_\_\_\_\_ (hereinafter called "the Contractor") has entered into Contract No. \_\_\_\_\_ dated \_\_\_\_\_ with (name of Procuring Entity) \_\_\_\_\_ (the Procuring Entity as the Beneficiary), for the execution of \_\_\_\_\_ (hereinafter called "the Contract").
2. Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.
3. At the request of the Contractor, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of \_\_\_\_\_ (in words),<sup>1</sup> such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.
4. This guarantee shall expire, no later than the .... Day of ....., 2<sup>2</sup>, and any demand for payment under it must be received by us at the office indicated above on or before that date.
5. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

[Name of Authorized Official, signature(s) and seals/stamps].

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

<sup>1</sup>The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, less provisional sums, if any, and denominated either in the currency of the Contract or a freely convertible currency acceptable to the Beneficiary.

<sup>2</sup>Insert the date twenty-eight days after the expected completion date as described in GC Clause 11.9. The Procuring Entity should note that in the event of an extension of this date for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee

**FORM No. 6- PERFORMANCE SECURITY****[Option 2– Performance Bond]**

*[Note: Procuring Entities are advised to use Performance Security – Unconditional Demand Bank Guarantee in stead of Performance Bond due to difficulties involved in calling Bond holder to action]*

*[Guarantor letterhead or SWIFT identifier code]*

**Beneficiary:** *[insert name and Address of Procuring Entity]*

**Date:** \_\_\_\_\_ *[Insert date of issue]*

**PERFORMANCE BOND No.:** \_\_\_\_\_

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

1. By this Bond \_\_\_\_\_ as Principal (hereinafter called “the Contractor”) and \_\_\_\_\_] as Surety (hereinafter called “the Surety”), are held and firmly bound unto \_\_\_\_\_] as Obligee (hereinafter called “the Procuring Entity”) in the amount of \_\_\_\_\_ for the payment of which sum well and truly to be made in the types and proportions of currencies in which the Contract Price is payable, the Contractor and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.
2. WHEREAS the Contractor has entered into a written Agreement with the Procuring Entity dated the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_, for \_\_\_\_\_ in accordance with the documents, plans, specifications, and amendments there to, which to the extent here in provided for, are by reference made part here of and are here in after referred to as the Contract.
3. NOW, THEREFORE, the Condition of this Obligation is such that, if the Contractor shall promptly and faithfully perform the said Contract (including any amendments thereto), then this obligation shall be null and void; otherwise, it shall remain in full force and effect. Whenever the Contractor shall be, and declared by the Procuring Entity to be, in default under the Contract, the Procuring Entity having performed the Procuring Entity's obligations there under, the Surety may promptly remedy the default, or shall promptly:
  - a) Complete the Contract in accordance with its terms and conditions; or
  - b) Obtain a tender or tenders from qualified tenderers for submission to the Procuring Entity for completing the Contract in accordance with its terms and conditions, and upon determination by the Procuring Entity and the Surety of the lowest responsive Tenderers, arrange for a Contract between such Tenderer, and Procuring Entity and make a available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the Balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term “Balance of the Contract Price,” as used in this paragraph, shall mean the total amount payable by Procuring Entity to Contractor under the Contract, less the amount properly paid by Procuring Entity to Contractor; or
  - c) Pay the Procuring Entity the amount required by Procuring Entity to complete the Contract in accordance with its terms and conditions upto a total not exceeding the amount of this Bond.
4. The Surety shall not be liable for a greater sum than the specified penalty of this Bond.
5. Any suit under this Bond must be instituted before the expiration of one year from the date of the issuing of the Taking-Over Certificate. No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Procuring Entity named here in or the heirs, executors, administrators, successors, and assigns of the Procuring Entity.
6. In testimony whereof, the Contractor has here unto set his hand and affixed his seal, and the Surety has caused these presents to be sealed with his corporate seal duly at tested 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 \_\_\_\_\_



**FORM NO. 7 - ADVANCE PAYMENT SECURITY**

**[Demand Bank Guarantee]**

*[Guarantor letterhead]*

**Beneficiary:** \_\_\_\_\_ *[Insert name and Address of Procuring Entity]*

**Date:** \_\_\_\_\_ *[Insert date of issue]*

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

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

1. We have been informed that \_\_\_\_\_ (hereinafter called "the Contractor") has entered into Contract No. \_\_\_\_\_ dated \_\_\_\_\_ with the Beneficiary, for the execution of \_\_\_\_\_ (hereinafter called "the Contract").
2. Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum \_\_\_\_\_ (in words \_\_\_\_\_) is to be made against an advance payment guarantee.
3. At the request of the Contractor, we as Guarantor, here by irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of \_\_\_\_\_ (in words \_\_\_\_\_)<sup>1</sup> upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating either that the Applicant:
  - a) Has used the advance payment for purposes other than the costs of mobilization in respect of the Works; or
  - b) Has failed to repay the advance payment in accordance with the Contract conditions, specifying the amount which the Applicant has failed to repay.
4. A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the advance payment referred to above has been credited to the Contractor on its account number \_\_\_\_\_ at \_\_\_\_\_.
5. The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Contractor as specified in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that ninety (90) percent of the Accepted Contract Amount, less provisional sums, has been certified for payment, on the \_\_\_\_\_ day of \_\_\_\_\_, 2 \_\_\_\_\_, <sup>2</sup> whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.
6. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed *[six months]* *[one year]*, in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.

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*[Name of Authorized Official, signature(s) and seals/stamps]*

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

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<sup>1</sup>The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency of the advance payment as specified in the Contract.

<sup>2</sup>Insert the expected expiration date of the Time for Completion. The Procuring Entity should note that in the event of an extension of the time for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee.

**FORM NO. 8 – RETENTION MONEY SECURITY**

**[Demand Bank Guarantee]**

*[Guarantor letterhead]*

**Beneficiary:** \_\_\_\_\_ *[Insert name and Address of Procuring Entity]*

**Date:** \_\_\_\_\_ *[Insert date of issue]*

**Advance payment guarantee no.** *[Insert guarantee reference number]*

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

1. We have been informed that \_\_\_\_\_ *[insert name of Contractor, which in the case of a joint venture shall be the name of the joint venture]* (hereinafter called "the Contractor") has entered into Contract No. \_\_\_\_\_ *[insert reference number of the contract]* dated \_\_\_\_\_ with the Beneficiary, for the execution of \_\_\_\_\_ *[insert name of contract and brief description of Works]* (hereinafter called "the Contract").
2. Furthermore, we understand that, according to the conditions of the Contract, the Beneficiary retains moneys upto the limit set forth in the Contract ("the Retention Money"), and that when the Taking-Over Certificate has been issued under the Contract and the first half of the Retention Money has been certified for payment, and payment of *[insert the second half of the Retention Money]* is to be made against a Retention Money guarantee.
3. At the request of the Contractor, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in figures]* \_\_\_\_\_ *([insert amount in words])* upon receipt by us of the Beneficiary's complying demands supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or show grounds for your demand or the sum specified there in.
4. A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the second half of the Retention Money as referred to above has been credited to the Contractor on its account number \_\_\_\_\_ at \_\_\_\_\_ *[insert name and address of Applicant's bank]*.
5. This guarantee shall expire no later than the.....Day of.....<sup>2</sup>, and any demand for payment under it must be received by us at the office indicated above on or before that date.
6. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed *[six months]* *[one year]*, in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.

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*[Name of Authorized Official, signature(s) and seals/stamps]*

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

<sup>1</sup>The Guarantor shall insert an amount representing the amount of the second half of the Retention Money.

<sup>2</sup>Insert a date that is twenty-eight days after the expiry of retention period after the actual completion date of the contract. The Procuring Entity should note that in the event of an extension of this date for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee.

**FORM NO. 9 BENEFICIAL OWNERSHIP DISCLOSURE FORM**

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

*This Beneficial Ownership Disclosure Form (“Form”) is to be completed by the successful tenderer. In case of joint venture, the tenderer must submit a separate Form for each member. The beneficial ownership information to be submitted in this Form shall be current as of the date of its submission.*

*For the purposes of this Form, a Beneficial Owner of a Tenderer is any natural person who ultimately owns or controls the Tenderer by meeting one or more of the following conditions:*

- (1) Directly or indirectly holding 25% or more of the shares.*
- (2) Directly or in directly holding 25% or more of the voting rights.*
- (3) Directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Tenderer.*

Tender Reference No.: \_\_\_\_\_ [insert identification no]

Name of the Assignment: \_\_\_\_\_ [insert name of the assignment] to:  
 \_\_\_\_\_ [insert complete name of Procuring Entity]

In response to your notification of award dated \_\_\_\_\_ [insert date of notification of award] to furnish additional information on beneficial ownership: \_\_\_\_\_ [select one option as applicable and delete the options that are not applicable]

I) We here by provide the following beneficial ownership information.

**Details of beneficial ownership**

<b>Identity of Beneficial Owner</b>	<b>Directly or indirectly holding 25% or more of the shares (Yes / No)</b>	<b>Directly or indirectly holding 25 % or more of the Voting Rights (Yes / No)</b>	<b>Directly or indirectly having the right to appoint a majority of the board of the directors or an equivalent governing body of the Tenderer (Yes / No)</b>
<i>[include full name (last, middle, first), nationality, country of residence]</i>			

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 Tenderer.*

OR

*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 Tenderer 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 Tenderer]”*

Name of the Tenderer: .....\*[insert complete name of the Tenderer]\_\_\_\_\_

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

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

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

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

BILL OF QUANTITIES

PROPOSED COMPLETION OF 3 No. 4 STOREY BLOCKS  
OF 32 No. BEDSITTER UNITS, 14 No. TWO BEDROOM  
AND 4 No. THREE BEDROOM UNITS AT  
ADIMINISTRATION POLICE TRAINING COLLEGE  
EMBAKASI, NAIROBI COUNTY

PARTICULAR PRELIMINARIES

Item	Description	Amount Ksh.
<p><b>A</b></p>	<p><b><u>PARTICULAR PRELIMINARIES</u></b></p> <p><b>EMPLOYER</b> The Employer is the <b>Principal Secretary, State Department for Housing and Urban Development(Ministry of Lands, Public Works, Housing and Urban Development). P.O Box 30119 - 00100, NAIROBI.</b> The term "Employer" and "Government" wherever used in the contract document shall be synonymous.</p> <p><b>B PROJECT MANAGER</b> The term "PM" wherever used in these Bills of Quantities shall be deemed to imply the project Manager as defined in Condition 1 of the Conditions of Contract or such person or persons as may be duly authorised to represent him on behalf of the Government .</p> <p><b>C ARCHITECT</b> The term "Architect" shall be deemed to mean "The P.M " as defined above whose address unless otherwise notified is Ministry of Lands, Public Works, Housing and Urban Development, State Department for Public Works, P.O Box 30743, NAIROBI.</p> <p><b>D QUANTITY SURVEYOR</b> The term "Quantity Surveyor" shall be deemed to mean "The P.M " as defined above whose address unless otherwise notified is Ministry of Lands, Public Works, Housing and Urban Development, State Department for Public Works, P.O Box 30743, NAIROBI.</p> <p><b>E ELECTRICAL ENGINEER</b> The term "Electrical Engineer" shall be deemed to mean "The P.M " as defined above whose address unless otherwise notified is Ministry of Lands, Public Works, Housing and Urban Development, State Department for Public Works, P.O Box 30743, NAIROBI.</p> <p><b>F MECHANICAL ENGINEER</b> The term "Mechanical Engineer" shall be deemed to mean "The P.M " as defined above whose address unless otherwise notified is Ministry of Lands, Public Works, Housing and Urban Development, State Department for Public Works, P.O Box 30743, NAIROBI.</p> <p><b>G STRUCTURAL ENGINEER</b> The term "Structural Engineer" shall be deemed to mean "The P.M " as defined above whose address unless otherwise notified is Ministry of Lands, Public Works, Housing and Urban Development, State Department for Public Works, P.O Box 30743, NAIROBI.</p> <p><b>H CHIEF DESIGNER</b> The term "Chief Designer" shall be deemed to mean "The P.M " as defined above whose address unless otherwise notified is Ministry of Lands, Public Works, Housing and Urban Development, State Department for Public Works, P.O Box 30743, NAIROBI.</p>	
	<p><i>Total carried to particular preliminaries collection page</i></p>	

Item	Description	Amount Ksh.
A	<p><b><u>PRICING OF ITEMS OF PRELIMINARIES</u></b>  Preliminaries to the contract are mandatory conditions and responsibilities the contractor is required to fulfill for the complete and proper execution of the contract. The contractor is advised to read and understand all his obligations under preliminaries. Should he find that fulfillment of any of the items will lead to him incurring any cost not covered under measured works he shall price such works accordingly otherwise failure to price any item will be construed to mean that the tenderer has included it in other priced items in the bills of quantities.</p>	
B	<p><b><u>SCOPE OF CONTRACT</u></b>  Completion of 3no. 4 storey Block consisting of 32no. Bedsitters, 14no. Two Bedroom and 4no. Three Bedroom units each and associated Civil, Electrical and Mechanical Installations works at AP Training College Embakasi Nairobi County.</p> <p><b><u>The works on this site are partly done as detailed below;</u></b></p> <p>Block One (4 storey block of 50 Units) the Superstructure and Roof are fully complete, Doors, Windows, Finishes(Floor and Wall), Fittings, fixtures and Balustrading are partially complete.</p> <p>Block Two (4 storey block of 50 Units) the Superstructure and Roof are fully complete, Doors, Windows, Finishes(Floor and Wall), Fittings, fixtures and Balustrading are partially complete.</p> <p>Block Three (4 storey block of 50 Units) the Superstructure and Roof are fully complete, Doors, Windows, Finishes(Floor and Wall), Fittings, fixtures and Balustrading are partially complete.</p> <p><b>Builder's Work</b>  The works consists of: Completion of 3no. 4 storey Block consisting of 32no. Bedsitters, 14no. Two Bedroom and 4no. Three Bedroom units on reinforced concrete strip foundations. The Superstructure will be of any Industrial Building Systems or any other approved appropriate building Technology, partially finished both externally and internally in plaster and paint to match the appropriate building technology, Floors to be finished with approved ceramic tiles on cement sand backing. The roof is of 28 gauge G.C.I sheets fixed on light gauge steel trusses or of the matching appropriate building technology used. Ceiling finishes are in plaster and paint and celotex ceiling on timber brandering. External doors are of 45mm thick timber panels while internal doors are semi solid core timber flush doors. Windows are in glazed steel casement.</p> <p><b>Electrical Works</b>  Electrical Works include remaining electrical wiring, electrical fittings and K.P.L.C power connection</p> <p><b>Mechanical Works</b>  Mechanical Works include water reticulation, remaining piping within the building and associated sanitary fittings.</p> <p><b>Civil Works</b>  Civil Works comprises of road works and parkings around the building are of compacted hardcore and murrum surface in accordance with civil engineer's instructions.</p>	
	<b>Total carried to particular preliminaries collection page</b>	



Item	Description	Amount Ksh.
A	<p><b><u>FLOOR AREAS</u></b></p> <p>Ground Floor = 562sm            Typical 1st,2nd &amp; 3rd Floor = 1,528sm            Total Floor Area = 2,209sm            Storey Height = 2.7Meters</p> <p>The floor area is give without warranty but for guidance only.</p>	
B	<p>The scheme designs indicating the floor areas are a guide only.</p>	
<p><b>Total carried to particular preliminaries collection page</b></p>		

Item	Description	Amount Ksh.
A	<p><b><u>MEASUREMENTS</u></b></p> <p>In the event of any discrepancies arising between the Bills of Quantities and the actual works, the site measurements shall generally take precedence. However, such discrepancies between any contract documents shall immediately be referred to the PROJECT MANAGER in accordance with Clause 12 of the Conditions of Contract. The discrepancies shall then be treated as a variation and be dealt with in accordance with Clause 13 of the said Conditions.</p>	
B	<p><b><u>LOCATION OF SITE</u></b></p> <p>The site is Located at the AP Training College Embakasi Nairobi County. Approximately Twenty Eight (28) Kilometers from Nairobi town CBD, in Embakasi. The Contractor is advised to visit the site, to familiarize with the nature and position of the site. No claims arising from the Contractor's failure to do so will be entertained.</p>	
C	<p><b><u>CLEARING AWAY</u></b></p> <p>The Contractor shall remove all temporary works, rubbish, debris and surplus materials from the site as they accumulate and upon completion of the works, remove and clear away all plant, equipment, rubbish, unused works and stains and leave in a clean and tidy state to the reasonable satisfaction of the Project Manager.</p> <p>The whole of the works shall be delivered up clean, complete and in perfect condition in every respect to the satisfaction of the Project Manager.</p>	
D	<p><b><u>CLAIMS</u></b></p> <p>It shall be a condition of this contract that upon it becoming reasonably apparent to the Contractor that he has incurred losses and/or expenses due to any of the contract conditions, or by any other reason whatsoever, he shall present such claim or intent to claim notice to the PROJECT MANAGER in accordance with Clause 20 of the conditions of contract. No claims shall be entertained if the contractor has not complied with the said conditions.</p>	
<b>Total carried to particular preliminaries collection page</b>		

Item	Description	Amount Ksh.
A	<p><b><u>PAYMENTS</u></b></p> <p>The tenderer's attention is drawn to the fact that the GOVERNMENT pays for work done and materials delivered to site: all in accordance with Clause 14 of the Conditions of Contract Agreement. In order to facilitate this, a list of the general component elements for the works is given at the summary page of these specifications and the tenderer is requested to break down his tender sum commensurate to the said elements.</p>	
B	<p><b><u>LABOUR CAMPS</u></b></p> <p>The Contractor will not be allowed to house labour on site.</p>	
C	<p><b><u>FIRM PRICE CONTRACT</u></b></p> <p>This is a firm price contract and, therefore the tenderer shall not be reimbursed for any increases in the costs of materials and/or labour in the execution of the works except as provided under the fluctuations clause.</p>	
D	<p><b><u>PRICING RATES</u></b></p> <p>The tenderer shall include for all costs in executing the whole of the works, including transport, replacing damaged items, fixing, all to comply with the said Conditions of Contract.</p>	
E	<p><b><u>URGENCY OF THE WORKS</u></b></p> <p>The Contractor is notified that these "works are urgent" and should be completed within the period stated in these Particular Preliminaries.</p> <p>The Contractor should allow for any costs he may incur by having to complete the works within the stipulated contract period.</p>	
F	<p><b><u>PAYMENT FOR MATERIALS ON SITE</u></b></p> <p>All materials for incorporation in the works must be stored on site before payment is effected, unless specifically exempted by the Project Manager. This is to include materials of the Contractor, nominated sub-Contractors and nominated suppliers.</p>	
G	<p><b><u>SIGN BOARD</u></b></p> <p>Allow for providing, erecting, maintaining throughout the course of the Contract and afterwards clearing away a signboard as designed, specified and approved by the Project Manager.</p>	
	<p><b>Total carried to particular preliminaries collection page</b></p>	

Item	Description	Amount Ksh.
A	<p><b><u>PRICING OF PRELIMINARIES</u></b></p> <p>The tenderer is required to price items covered in these preliminaries as items for which no price is entered will not be paid for but shall be deemed covered by other rates and prices in these Bills of Quantities.</p>	
B	<p><b><u>ADJOINING PROPERTY</u></b></p> <p>Take all necessary precautions to prevent damage to adjoining property. Any damage occurring must be made good to the satisfaction of the PM and/or owner(s) of the adjoining property at the contractor's expense.</p> <p>The bidders are notified that the adjoining property is a security area and they shall be required to take necessary precautions as instructed by the PM.</p>	
C	<p><b><u>USE OF SITE</u></b></p> <p>Do not use the site for any other purpose other than carrying out the works. Do not permit or display any advertisement without the consent of the PM</p>	
D	<p><b><u>QUALITY OF THE WORKS</u></b></p> <p>The works should be of high quality and the contractor will be required to make samples of the work to be executed for approval by the PM before he commences the carrying out of the works. The contractor should allow for sample works in his rates accordingly. In case a sample does not meet the standards set by the PM, the contractor shall be expected to make another sample at his cost until it is approved by the PM.</p>	
E	<p><b><u>BID SECURITY</u></b></p> <p>The Bidder shall furnish, as part of his bid, a security as specified in the tender advertisement.</p> <p>The bid security shall, at the bidder's option, be in the form of a certified cheque, bank draft, standby letter of credit or guarantee from a reputable bank located in Kenya or foreign bank which has been determined by the bidder to be acceptable to the Government. The format of the bank guarantee shall be in accordance with the sample forms of bid security included in the post qualification forms, other formats may be permitted, subject to the prior approval of the Government. Letters of credit, bank</p> <p>Guarantees issued as surety for <b>the bid shall be valid for a period of 150 days from the date of Tender Opening.</b></p>	
	<b>Total carried to particular preliminaries collection page</b>	

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Amount Ksh.
A	<p><b><u>TRAINING LEVY</u></b>            Legal notice No. 237 of October, 1971 requires payment by the contractor of a training levy of a quarter percent of the value of the contract where the contract value exceeds KShs. 50,000/=. The contractor will be required to furnish the Project Manager with a receipt showing that he has paid the required Training Levy to the Director of Industrial Training. In case the contractor fails to furnish the said receipt to the Project Manager, the Client will pay the amount to the Director of Industrial Training from monies due to the contractor.</p>	
B	<p><b><u>EXISTING SERVICES</u></b>            Prior to the commencement of any work, the Contractor is to ascertain from the relevant authority the exact position, depth and level of all existing services in the area and he shall make whatever provisions may be required by the authorities concerned for the support, maintenance and protection of such services.</p>	
<b>Total carried to particular preliminaries collection page</b>		

Item	Description	Amount Ksh.
A	<p><b><u>PREVENTION OF ACCIDENT, DAMAGE OR LOSS</u></b></p> <p>The Contractor is notified that these works are to be carried out on a site where the Client is going on with other normal activities. The Contractor is instructed to take reasonable care in the execution of the works as to prevent accidents, damage or loss and disruption of normal activities being carried out by the Client. The Contractor shall allow in his rates any expense he deems necessary by taking such care within the site.</p>	
B	<p><b><u>PERFORMANCE BOND</u></b></p> <p>A bond of <b>10% of the contract sum</b> will be required in accordance with clause 48.0of the Instructions to Tenderers (ITT). No payment will be made without the required performance security.</p>	
C	<p><b><u>DELIVERY OF TENDER</u></b></p> <p>Tenders and all documents in connection therewith, as specified above must be delivered in the addressed envelope which should be properly sealed and deposited in the tender box as specified in the advertisement and or letter of invitation to tender.</p> <p>Tenders will be opened at the time specified in the advertisement and/or letter of invitation to tender. Tenders arriving later than the specified time will not be considered.</p>	
D	<p><b><u>CORRECTION OF ERRORS IN TENDER</u></b></p> <p>Arithmetical errors will be rectified on the following basis.</p> <p>If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and the quantity, the unit price shall prevail and the total price shall be corrected.</p> <p>If there is a discrepancy between words and figures, the amount in words will prevail.</p>	
E	<p><b><u>VIEWING OF DRAWINGS</u></b></p> <p>Any tenderer interested in viewing the drawings related to this project before submission of the tenders may do so by contacting the Chief Architect, State Departmenr for Public Works, Head Office, Ngong Road, Nairobi.</p>	
F	<p><b><u>STANDARD FORMS</u></b></p> <p>Any tender with standard forms not filled as appropriate will be treated as non-responsive.</p>	
	<p><b>Total carried to particular preliminaries collection page</b></p>	

Item	Description	Amount Ksh.
A	<p><b><u>V.A.T DEDUCTIONS</u></b></p> <p>The tenderer is advised that in accordance with Government public notice No. 35 &amp;36 Dated 11<sup>th</sup> September 2003 operational from 1<sup>st</sup> October 2003, withholding VAT will be levied against the contract sum by the Employer and remitted to the Commissioner of VAT through all interim certificates. It should however be noted that this is not additional tax but a new mode of payment of VAT, any excess payment will be refundable once the Contractor has submitted monthly returns to the Commissioner of VAT who will do the refunds when satisfied that the VAT regulations have been complied with.</p> <p>NB: The contractor should therefore include the tax within the rates. no VAT will be added at the Grand summary (GS/1)</p>	
B	<p><b><u>TENDER VALIDITY</u></b></p> <p>Tenders shall remain valid for a period of <b>120 days</b> from the date of Tender Opening.</p>	
C	<p><b><u>PROJECT MANAGEMENT EXPENSES</u></b></p> <p>Provide allowances worth Kenya Shillings One Million (kshs. 1,200,000.00) for State Department for Public Works Officers project management expenses for the duration of the contract period.</p>	
	<p>Allow for Contractor's profit and overheads (-----%)</p>	
D	<p>Provide a provisional sum of Kenya Shillings Three Hundred Thousand (Kshs 300,000.00) only for <b>Clerk of works</b> expenses</p>	
	<p>Allow for Contractor's profit and overheads (-----%)</p>	
	<p><b>Total carried to particular preliminaries collection page</b></p>	

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Amount Ksh.
	<b><u>CARRIED TO COLLECTION</u></b>	
	BROUGHT FORWARD FROM PAGE PP/1	
	BROUGHT FORWARD FROM PAGE PP/2	
	BROUGHT FORWARD FROM PAGE PP/3	
	BROUGHT FORWARD FROM PAGE PP/4	
	BROUGHT FORWARD FROM PAGE PP/5	
	BROUGHT FORWARD FROM PAGE PP/6	
	BROUGHT FORWARD FROM PAGE PP/7	
	BROUGHT FORWARD FROM PAGE PP/8	
	BROUGHT FORWARD FROM PAGE PP/9	
	<b>Total for Particular Preliminaries Carried to Grand Summary Page</b>	



# GENERAL PRELIMINARIES

Item	Description	Amount Ksh.
A	<p><b><u>GENERAL PRELIMINARIES</u></b></p> <p><b><u>PRICING OF ITEMS OF PRELIMINARIES AND PREAMBLES</u></b></p> <p>Preliminaries to the contract are mandatory conditions and responsibilities the contractor is required to fulfill for the complete and proper execution of the contract. The contractor is advised to read and understand all his obligations under preliminaries. Should he find that fulfillment of any of the items will lead to him incurring any cost not covered under measured works he shall price such works accordingly otherwise failure to price any item will be construed to mean that the tenderer has included it in other priced items in the bills of quantities.</p>	
B	<p><b><u>ABBREVIATIONS</u></b></p> <p>Throughout these Bills, units of measurement and terms are abbreviated and shall be interpreted as follows;</p> <p>C.M.                      Shall mean cubic metre</p> <p>S.M.                      Shall mean square metre</p> <p>L.M.                      Shall mean linear metre</p> <p>mm                        Shall mean Millimetre</p> <p>KG                        Shall mean Kilogramme</p> <p>No.                        Shall mean Number</p> <p>PRS.                      Shall mean Pairs</p> <p>B.S.                      Shall mean the British Standard Specification published by the British Standards Institution, 2 park Street, London W.I.</p> <p>Ditto                      Shall mean the whole of the preceding description except as qualified in</p> <p>m.s.                      Shall mean measured separately.</p> <p>a.b.d                      Shall mean as before described.</p>	
	<i>Total carried to general preliminaries collection page</i>	

Item	Description	Amount Ksh.
A	<p><b><u>EXCEPTION TO THE STANDARD METHOD OF MEASUREMENT</u></b></p> <p><u>Attendance</u> Clause B19(a) of the Standard Method of Measurement is and the following clause is substituted:- Attendance on nominated Sub-Contractors shall be given as an item in and shall be deemed to include: allowing use of standing scaffolding, messrooms, sanitary conditions and welfare facilities; provision of special scaffolding where necessary, office accommodation and for storage of plant and materials; providing light and water for their work: clearing away rubbish; unloading checking and hoisting: providing electric power: and removing and replacing duct covers, pipe casings and and the like necessary for the execution and testing of Sub- Contractors' work and being responsible for the accuracy of the same.</p>	
B	<p><b><u>Fix Only:-</u></b></p> <p>"Fix Only" shall mean take delivery at nearest railway station (unless otherwise stated), pay all demurrage charges, load and transport to site where necessary, unload, store, unpack, assemble as necessary, distribute to position, hoist and fix only.</p>	
C	<p><b><u>EMPLOYER</u></b></p> <p>The Employer is the State Department for Housing and Urban Development. The terms "Employer" and "State Department for Housing and Urban Development" whenever used in any contract document shall be synonymous.</p>	
D	<p><b><u>PROJECT MANAGER</u></b></p> <p>The term "PROJECT MANAGER" wherever used in these Bills of Quantities shall be deemed to imply the person defined in Condition 1 of the Conditions of Contract hereby attached or such person or persons as may be duly authorised to represent him on behalf of the Government.</p>	
	<p><i>Total carried to general preliminaries collection page</i></p>	

Item	Description	Amount Ksh.
A	<p><b><u>FORM OF CONTRACT</u></b></p> <p>The form of contract will be the one included in the Republic of Kenya Standard Tender Document for Procurement of Works (February 2021 Edition) hereby attached and Conditions of Contract are those attached thereto. If the Contractor considers that compliance with any of the Conditions of Contract involves any expenses distribute them among his rates for the various items in the Bills of Quantities. No claim shall be allowed arising from the Contractors compliance with any of the Conditions of Contract. These are numbered from clause 1 to 20 as set out on pages 74 to 129 of these tender documents. Particulars of the insertion to be made in the Special Conditions of the contract document and the appendix of the Particular Preliminaries of these Bills of Quantities.</p>	
B	<p><b><u>PLANT, TOOLS AND VEHICLES</u></b></p> <p>Allow for providing all scaffolding, plant, tools and vehicles required for the works except in so far as may be stated otherwise herein and except for such items specifically and only required for the use of nominated Sub-Contractors as described hereiin. No timber used for formwork, scaffolding or temporary works of any kind shall be used afterwards in the permanent work.</p>	
C	<p><b><u>TRANSPORT.</u></b></p> <p>Allow for transport of workmen, materials, etc., to and from the site at such hours and by such routes as may be permitted by the competent authorities.</p>	
<b>Total carried to general preliminaries collection page</b>		

Item	Description	Amount Ksh.
A	<p><b><u>MATERIALS AND WORKMANSHIP.</u></b></p> <p>All materials and workmanship used in the execution of the work shall be of the best quality and description unless otherwise stated. The Contractor shall order all materials to be obtained from overseas immediately after the Contractor shall also order materials from local sources as early as necessary to ensure that they are on site when required for use in the the works. The Bills of Quantities shall not be used for the purpose of ordering materials.</p>	
B	<p><b><u>SIGN FOR MATERIALS SUPPLIED.</u></b></p> <p>The Contractor will be required to sign a receipt for all articles and materials supplied by the "PROJECT MANAGER" at the time of taking delivery thereof, as having received them in good order and condition, and will thereafter be responsible for any loss or damage and replacements of any such loss or damage with articles and/or materials which will be supplied by the "PROJECT MANAGER" at the current market prices including Customs Duty and V.A.T., all at the Contractor's own cost and expense, to the satisfaction of the "PROJECT MANAGER"</p>	
C	<p><b><u>STORAGE OF MATERIALS</u></b></p> <p>The Contractor shall provide at his own risk and cost where directed on the site weatherproof lockup sheds for the safe storage and custody of materials for the works and for the use of workmen engaged thereon and shall remove such sheds and make good damaged or disturbed surfaces upon completion to the satisfaction of the "PROJECT MANAGER". Nominated Sub-Contractors are to be made liable for the cost of any storage accommodation provided especially for their use.</p> <p>The site already has an existing store built by the previous contractor. The bidder is required to access the same and provide costs related to it's adaptation, alterations and afterwards clearing away only.</p>	
	<p><b>Total carried to general preliminaries collection page</b></p>	

Item	Description	Amount Ksh.
A	<p><b><u>SAMPLES</u></b></p> <p>The Contractor shall furnish at his own cost any samples of materials or workmanship including concrete test cubes required for the works that may be required by the "PROJECT MANAGER" for his approval or rejection and any other samples in case of rejection until such samples are approved by the "PROJECT MANAGER" and he may reject any materials or workmanship not in his opinion to be up to the approved samples. The "PROJECT MANAGER" shall arrange for the testing of such materials as he may at his discretion deem desirable, but the testing shall be made at the expense of the Contractor and not at the expense of the "PROJECT MANAGER". The Contractor shall pay for the testing in accordance with the current scale of testing charges laid down by the Ministry of Transport, Infrastructure, Housing and Urban Development. The procedure for submitting samples of materials for testing and the method of marking for identification shall be as laid down by the "PROJECT MANAGER". The Contractor shall allow in his tender for such samples and tests except those in connection with nominated sub-contractors' work.</p>	
B	<p><b><u>GOVERNMENT ACTS REGARDING WORKPEOPLE ETC.</u></b></p> <p>Allow for complying with all Government Acts, Orders and Regulations in connection with the employment of Labour and other matters related to the execution of the works. In particular the Contractor's attention is drawn to the provisions of the Factory Act 1950 and his tender must include for all costs arising or resulting from compliance with any Act, Order or Regulation relating to Insurances, pensions and holidays for workpeople or to the safety, health and welfare of the workpeople. The Contractor must make himself fully acquainted with current Acts and Regulations, including Police Regulations regarding the movement, housing, security and control of labour, labour camps, passes for transport, etc. It is important that the contractor, before tendering, shall obtain from the relevant Authority the fullest information regarding all such regulations and/or restrictions which may affect the organisation of the works, supply and control of labour, etc., and allow accordingly in his tender. No claim in respect of want of knowledge in this connection will be entertained.</p>	
<b>Total carried to general preliminaries collection page</b>		

Item	Description	Amount Ksh.
A	<p><b><u>SECURITY OF WORKS ETC.</u></b></p> <p>The Contractor shall be entirely responsible for the security of all the works, stores, materials, plant, personnel, etc., both his own and sub-contractors' and must provide all necessary watching, lighting and other precautions as necessary to ensure security against theft, loss or damage and the protection of the public.</p>	
B	<p><b><u>ACCESS TO SITE, TEMPORARY ROADS, PUBLIC AND PRIVATE ROADS.</u></b></p> <p>The bidders are hereby informed that there already exist a temporary access road to site done by the previous contractor. They are required to access the same and price for costs related to its adaptations, alterations and maintenance only.</p> <p>For any other means of access to the Site, the same shall be agreed with the "PROJECT MANAGER" prior to commencement of the work and the Contractor must allow for building any necessary temporary access roads for the transport of the materials, plant and workmen as may be required for the complete execution of the works including the provision of temporary culverts, crossings, bridges, or any other means of gaining access to the Site. Upon completion of the works, the Contractor shall remove such temporary access roads; temporary culverts, bridges, etc., and make good and reinstate all works and surfaces disturbed to the satisfaction of the "PROJECT MANAGER"</p> <p>The bidder will maintain as required throughout the execution of the works and make good any damage to public or private roads arising from or consequent upon the execution of the works to the satisfaction of the local and other competent authority and the "PROJECT MANAGER".</p>	
C	<p><b><u>EXISTING PROPERTY.</u></b></p> <p>The Contractor shall take every precaution to avoid damage to all existing property including roads, cables, drains and other services and he will be held responsible for and shall make good all such damage arising from the execution of this contract at his own expense to the satisfaction of the "PROJECT MANAGER"</p>	
<b>Total carried to general preliminaries collection page</b>		

Item	Description	Amount Ksh.
A	<p><b><u>VISIT SITE AND EXAMINE DRAWINGS.</u></b></p> <p>The Contractor is recommended to examine the drawings and visit the site the location of which is described in the Particular Preliminaries hereof. He shall be deemed to have acquainted himself therewith as to its nature, position, means of access or any other matter which may affect his tender. No claim arising from his failure to comply with this recommendation will be considered</p>	
B	<p><b><u>AREA TO BE OCCUPIED BY THE CONTRACTOR</u></b></p> <p>The area of the site which may be occupied by the Contractor for use of storage and for the purpose of erecting workshops, etc., shall be defined on site by the "PROJECT MANAGER"</p>	
C	<p><b><u>WATER AND ELECTRICITY SUPPLY FOR THE WORKS</u></b></p> <p>The Contractor shall provide at his own risk and cost all necessary water, electric light and power required for use in the works. The Contractor must make his own arrangements for connection to the nearest suitable water main and for metering the water used. He must also provide temporary tanks and meters at his own cost and clear away when no longer required and make good on completion to the entire satisfaction of the "PROJECT MANAGER"</p> <p>The Contractor shall pay all charges in connection herewith. No guarantee is given or implied that sufficient water will be available from from mains and the Contractor must make his own arrangements for augmenting this supply at his cost. Nominated sub-contractors are to be made liable for the cost of any water or electric current used and for any installation provided especially for their own use.</p>	
D	<p><b><u>OFFICE FOR THE PROJECT MANAGER</u></b></p> <p>There is an existing permanent office of the PM constructed by the previous constructor on site using pre-stressed concrete panels on site. The contractor shall provide for the completion of the structure by supplying and fixing windows, doors, external and internal finishes as directed by the PM complete with furniture. He shall provide, erect maintain a lock-up pedestral type water or bucket closet for the sole use of the "PM" including making temporary connections to the drain where applicable to the satisfaction Government and Medical Officer of Health and pay the services of a cleaner and pay all conservancy charges and keep both office and closet in a clean and sanitary condition from commencement to the completion of the works and dismantle and make good disturbed surfaces. The office and closet shall be complete before the contractor is permitted to commence the works. The Contractor shall make available on site as and when required by the "PM" a modern and accurate level together with levelling staff, ranging rods and 50 metre metallic linen tape.</p>	
	<b>Total carried to general preliminaries collection page</b>	



Item	Description	Amount Ksh.
A	<p><b><u>SANITATION OF THE WORKS</u></b></p> <p>The Sanitation of the works shall be arranged and maintained by the Contractor to the satisfaction of the Government and/or Local Authorities, Labour Department and the "PROJECT MANAGER"</p>	
B	<p><b><u>SUPERVISION AND WORKING HOURS</u></b></p> <p>The works shall be executed under the direction and to the entire satisfaction in all respects of the "PROJECT MANAGER" who shall at all times have access to the works and to the yards and workshops of the Contractor and sub-Contractors or other places where work is being prepared for the contract. The working hours shall be those generally worked by good employers in the in the Building and Civil Engineering trades in Kenya. No work shall be carried out at night or on gazetted holidays unless the "PROJECT MANAGER" shall so direct. No work shall be covered up nor shall any concreting be carried out in the in the absence of the Clerk of Works without prior approval of the "PROJECT MANAGER" in writing.</p>	
C	<p><b><u>PROVISIONAL SUMS.</u></b></p> <p>The term "Provisional Sum" wherever used in these Bills of Quantities shall have the meaning stated in Section A item A7(i) of the Standard Method of Measurements. Such sums are net and no addition shall be made to them for profit.</p>	
D	<p><b><u>PRIME COST (OR P.C.) SUMS.</u></b></p> <p>The term "Prime Cost Sum" or "P.C. Sum" wherever used in these Bills of Quantities shall have the meaning stated in Section A item A7 (ii) of the Standard Method of Measurements. Persons or firms nominated by the "PROJECT MANAGER" to execute work or to provide and fix materials or goods as stated in Condition No. 8 of the Conditions of Contract are described herein as Nominated Sub-Contractors. Persons or firms so nominated to supply goods or materials are described herein as Nominated Suppliers.</p>	
	<b>Total carried to general preliminaries collection page</b>	

Item	Description	Amount Ksh.
A	<p><b><u>PROGRESS CHART.</u></b></p> <p>The Contractor shall provide within two weeks of Possession of Site and in agreement with the "PROJECT MANAGER" a Progress Chart for the whole of the works including the works of Nominated Sub- Contractors ; one copy to be handed to the "PROJECT MANAGER" and a further copy to be retained site. Progress to be recorded and chart to be amended as necessary as the work proceeds.</p>	
B	<p><b><u>ADJUSTMENT OF P.C. SUMS.</u></b></p> <p>In the final account all P.C. Sums shall be deducted and the amount properly expended upon the P.M's order in respect of each of them added to the Contract sum. The Contractor shall provide to the "PROJECT MANAGER" such quotations, invoices or bills, properly receipted,as may be necessary to show the actual details of the sums paid by the Contractor. Items of profit upon P.C. Sums shall be adjusted in the final account pro-rata to the amount paid. Items of "attendance" (as previously described) following P.C. Sums shall be adjusted pro-rata to the physical extent of the work executed (not pro-rata to the amount paid) and this shall apply even though the Contractor's priced Bill shows a percentage in the rate column in respect of them.</p> <p>Should the Contractor be permitted to tender and his tender be accepted of any work for which a P.C. Sum is included in these Bill of Quantities profit and attendance will be allowed at the same rate as it would be if the work were executed by a Nominated Sub-Contractor.</p>	
C	<p><b><u>ADJUSTMENT OF PROVISIONAL SUMS.</u></b></p> <p>In the final account all Provisional Sums shall be deducted and the value of the work properly executed in respect of them upon the "PROJECT MANAGERS" order added to the contract Sum. Such work shall be valued as described for variations in condition No. 22 of the conditions of Contract, but should any part of the contract be executed by a nominated Sub-Contractor, or any articles for the Work be supplied by a Nominated Supplier, the value of such work or articles shall be treated as P.C. P.C. Sum and profit and attendance comparable to that contained in the priced Bills of Quantities for similar items added.</p>	
<b>Total carried to general preliminaries collection page</b>		

Item	Description	Amount Ksh.
A	<p><b><u>NOMINATED SUB-CONTRACTORS</u></b></p> <p>When any work is ordered by the "PROJECT MANAGER" to be executed by nominated sub-contractors, the Contractor shall enter into sub-contracts as described in Condition No 8 of the Conditions of Contract and shall thereafter be responsible for such sub contractors in every respect. Unless otherwise described the Contractor is to provide for such Sub-Contractors any or all of the facilities described in these Preliminaries. The Contractor should price for these with the nominated Sub-contract contractor's work concerned in the P.C. Sums under the description "Add for Attendance".</p>	
B	<p><b><u>DIRECT CONTRACTS</u></b></p> <p>Notwithstanding the foregoing conditions, the Government reserves the right to place a "Direct Contract" for any goods or services required in the works which are covered by a P.C. Sum in the Bills of Quantities and to pay for the same direct. In the instances, profit relative to the P.C. Sum the priced Bills of Quantities will be adjusted as described for P.C. Sums and allowed.</p>	
C	<p><b><u>ATTENDANCE UPON OTHER TRADESMEN, ETC.</u></b></p> <p>The Contractor shall allow for the attendance of trade upon trade and shall afford any tradesmen or other persons employed for the execution of any work not included in this Contract every facility for carrying out their work and also for use of his ordinary scaffolding. The Contractor, however, shall not be required to erect any special scaffolding for them. The Contractor shall perform such cutting away for and making good after the work of such tradesmen or persons as may be ordered by the "PROJECT MANAGER" and the work will be and measured and paid for to the extent executed at rates provided in these bills.</p>	
<b>Total carried to general preliminaries collection page</b>		

Item	Description	Amount Ksh.
A	<p><b><u>INSURANCE</u></b></p> <p>The Contractor shall insure as required in Condition No.30 of the Conditions of contract. No payment on account of the work executed will be made to the Contractor until he has satisfied the "PROJECT MANAGER" either by production of an insurance Policy or and Insurance Certificate that the provision of the foregoing Insurance Clause have been complied with in all respects. Thereafter the "PROJECT MANAGER" shall from time to time ascertain that the premiums are duly paid up by the Contractor, who, if called upon to do so, shall produce receipted premium renewals for the "PROJECT MANAGER"'s inspection.</p>	
B	<p><b><u>PROVISIONAL WORK</u></b></p> <p>All work described as "Provisional" in these Bills of Quantities is subject to remeasurement in order to ascertain the actual quantity executed for which payment will be made. All "Provisional" and other work liable to adjustment under this contract shall be left uncovered for a reasonable time to allow all measurements needed for such adjustment to be taken by the "PROJECT MANAGER" Immediately the work is ready for measuring, the Contractor shall give notice to the "PROJECT MANAGER" If the Contractor makes default in these respects he shall, if the "PROJECT MANAGER" so directs, uncover the work to enable all measurements to be taken and afterwards reinstate at his own expense.</p>	
C	<p><b><u>ALTERATIONS TO BILLS, PRICING, ETC.</u></b></p> <p>Any unauthorised alteration or qualification made to the text of the Bills of Quantities may cause the Tender to be disqualified and will in any case be ignored.The Contractor shall be deemed to have made allowance in his prices generally to cover any items against which no price has been inserted in the Bills of Quantities. All items shall be priced in detail and the Tenders containing Lump Sums to cover trades or groups of work must be broken down to show the price of each item before they will be accepted.</p>	
	<b>Total carried to general preliminaries collection page</b>	

Item	Description	Amount Ksh.
A	<p><b><u>BLASTING OPERATIONS</u></b></p> <p>Blasting will only be allowed with the express permission of the "PROJECT MANAGER" in writing. All blasting operations shall be carried out at the Contractor's sole risk and cost in accordance with any Government regulations laid down by the "PROJECT MANAGER" governing the use and storage of explosives.</p>	
B	<p><b><u>MATERIALS ARISING FROM EXCAVATIONS</u></b></p> <p>Materials of any kind obtained from the excavations shall be the property of the Government Unless the "PROJECT MANAGER"directs otherwise such materials shall be dealt with as provided in the Contract. Such materials shall only be used in the works, in substitution of materials which the Contractor would otherwise have had to supply with the written permission of the "PROJECT MANAGER". Should such permission be given, the Contractor shall make due allowance for the value of the materials so used at a price to be agreed.</p>	
C	<p><b><u>PROTECTION OF THE WORKS.</u></b></p> <p>Provide protection of the whole of the works contained in the Bills of Quantities, including casing up, covering or such other means as may be necessary to avoid damage to the satisfaction of the "PROJECT MANAGER" and remove such protection when no longer required and make good any damage which may nevertheless have been done at completion free of cost to the Government.</p>	
<b>Total carried to general preliminaries collection page</b>		

Item	Description	Amount Ksh.
	<p><b><u>WORKS TO BE DELIVERED UP CLEAN</u></b></p> <p>Clean and flush all gutters, rainwater and waste pipes, manholes and drains, wash (except where such treatment might cause damage) and clean all floors, sanitary fittings, glass inside and outside and any other parts of the works and remove all marks, blemishes, stains and defects from joinery fittings and decorated surfaces generally, polish door furniture and bright parts of metalwork and leave the whole of the buildings watertight, clean, perfect and fit for occupation to the approval of the "PROJECT MANAGER."</p> <p><b><u>GENERAL SPECIFICATION.</u></b></p> <p>For the full description of materials and workmanship, method of execution of the work and notes for pricing, the Contractor is referred to the Ministry of Transport, Infrastructure, Hoising and Urban Development's General Specification dated 1976 or any subsequent revision thereof which is issued as a separate document, and which shall be followed in all respects unless it conflicts with the General Preliminaries, Trade Preambles or other items in these Bills of Quantities.</p> <p><b><u>MATERIALS ON SITE</u></b></p> <p>All materials for incorporation in the works must be stored on or adjacent to the site before payment is effected unless specifically exempted by the "PROJECT MANAGER". This is to include the materials of Main Contractor, and Nominated Sub-Contractors Suppliers.</p> <p><b><u>HOARDING</u></b></p> <p>The Contractor shall enclose the site or part of the works under construction with a hoarding 2400mm high of iron sheets on 100x 50 mm timber posts firmly secured at 1800mm centres with two 75x 50mm timber rails. The Contractor is in addition required to take all precautions necessary for the safe custody of the works, materials, plants, public and Employer's property on the site.</p>	
	<b>Total carried to general preliminaries collection page</b>	

Item	Description	Amount Ksh.
	<b><u>General Preliminaries Collection Page</u></b>	
	Brought forward from page GP/1	
	Brought forward from page GP/2	
	Brought forward from page GP/3	
	Brought forward from page GP/4	
	Brought forward from page GP/5	
	Brought forward from page GP/6	
	Brought forward from page GP/7	
	Brought forward from page GP/8	
	Brought forward from page GP/9	
	Brought forward from page GP/10	
	Brought forward from page GP/11	
	Brought forward from page GP/12	
	Brought forward from page GP/13	
	<b>Total for General Preliminaries carried to Grand Summary</b>	

PREAMBLES AND PRICING NOTES



## PREAMBLES AND PRICING NOTES

### **A.           GENERALLY**

All work to be carried out in accordance with the Ministry of Public Works General Specifications for Building Works issued in 1976 or as qualified or amended below.

### **B.           MANUFACTURERS' NAMES**

Where manufacturers' names and catalogue references are given for guidance to quality and standard only. Alternative manufacturer of equal quality will be accepted at the discretion of the Project Manager.

### **C.           WALLING**

All precast concrete blocks shall be manufactured by the methods and to the sizes specified in the Ministry of Public Works "Specification for Metric Sized Concrete Blocks for Building (1972)"

Walling of 100 mm thickness or under shall be reinforced with hoop iron every alternate course.

Prices for walling must allow for all costs in preparing, packing and sending sample blocks for testing as and when required by the Project Manager.

### **D.           CARPENTRY**

The grading rules for cypress shall be the same for podocarpus and all timber used for structural work shall be select (second grade).

All structural timber must conform to the minimum requirements for moisture content and preservative treatment and timber prices must allow for preparing, packing and sending samples for testing when required.

Prices must also include for all nails and fasteners.

### **E.           JOINERY**

Cypress for joinery shall be second grade in accordance with the latest grading rules of the Kenya Government.

Where Mahogany is specified, this refers to prime grade only. The Contractor may with the approval of the Project Manager; use either Msharagi or Mvuli in lieu of Mahogany but such approval will be given only in the case of shortages of the hardwoods specified.

Plugging shall be carried out by drilling walling or concrete with masonry drill and filling with propriety plugs of the correct sizes. Cutting with hammer and chisel will not be allowed.

Prices for joinery must include for pencil rounded arises, protection against damage, nails, screws, framing and bedding in cement mortar as required.

Sizes given for joinery items are nominal sizes and exact dimensions of doors, etc, must be ascertained on site.

**A. IRONMONGERY**

Ironmongery shall be specified in the Bills of Quantities or equal and approved.

Prices must include for removing and re-fixing during and after painting, labeling all keys, and for fixing to hardwood, softwood, concrete or blockwork.

Catalogue references given for ironmongery are for purposes of indicating quality and size of item(s). Should the Contractor wish to substitute the specified item(s) with others of equal manufacture, he must inform the Project Manager and obtain approval in writing.

**B. STRUCTURAL STEELWORK**

All structural steelwork shall comply with the Ministry of Public Works “Structural Steelwork Specification (1973) and shall be executed by an approved Sub-contractor.

**C. PLASTERWORK AND OTHER FINISHES**

All finishing shall be as described in the general specifications and in these Bills of Quantities.

Prices for paving are to include for brushing concrete clean, wetting and coating with cement and sand grout 1:1.

Rates for glazed wall tiling are to include for a 12 mm cement and sand (1:4) backing screed unless otherwise specified in these Bills of Quantities.

**D. GLAZING**

Where polished plate glass is specified, this refers to general glazing quality.

Prices for glazing shall include for priming of rebates before placing putty.

The Contractor will be responsible for replacing any broken or scratched glass and handing over in perfect condition.

**E. PAINTING**

Painting shall be applied in accordance with the manufacturers’ instructions.

Prices for painting are to include for scaffolding, preparatory work, priming coats, protection of other works and for cleaning up on completion. Prices for painting on galvanized metal are to include for mordant solution as necessary.

**BUILDER'S WORKS**

BLOCK ONE

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><u>ELEMENT NO.1</u></b> <b><u>SUBSTRUCTURES</u></b>				
	<b><u>Plinths</u></b>				
A	15mm (min) thick cement and sand (1:4) render to plinths	57	SM		
B	Prepare and apply three coats bituminous paint to rendered plinths	57	SM		
	<b><u>Paving Slabs.</u></b>				
C	600 x 600 x 50 mm Precast concrete class 20/20 paving slabs, laid to falls on blinded hardcore surface and jointed in cement and sand (1:3) mortar	57	SM		
	<b>Total for Substructures Carried to Summary</b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><u>ELEMENT NO.2</u></b> <b><u>ROOFING WORKS</u></b>				
	<b><u>Roof drainage</u></b>				
A	Prepainted 2000 mm G.I./ALUZINC Gutters, 22 G x 150 x 125 mm box gutter	124	LM		
	<b><u>Water proofing</u></b>				
B	Two coats "plast-fix-repel" waterproofing membrane to roofing sheets and gutters with 10year guarantee	15	SM		
	<b><u>Prepainted G.I/Aluzinc flashing</u></b>				
C	22 g x 110mm diameter downpipe	72	LM		
D	100mm down pipe clips	36	NO		
E	110mm swan neck	6	NO		
F	110mm pipe shoe	6	NO		
	<b><u>Painting and decorating</u></b>				
	<b><u>Prepare, prime, apply two undercoats and one gloss finishing egg shell paint on the following metal surface</u></b>				
G	Prepare and apply three coats of first quality silk vinyl paint to fascia girth exceeding 100 not exceeding 200mm girth	189	LM		
	<b>Total for Roofing carried to Summary</b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><u>ELEMENT.NO 3</u></b>				
	<b><u>WINDOWS</u></b>				
	<b><u>Curtain Rod</u></b>				
A	20mm diameter heavy duty twin brass rod complete accessories to approval	196	LM		
B	5mm thick clear sheet glass in panes exceeding 0.50-1.00m2	76	SM		
C	5mm thick obscure sheet glass in panes exceeding 0.50-1.00m2	24	SM		
	<b><u>Prepare . Prime and apply one undercoat and two finishing coat gloss oil paint on</u></b>				
D	General external window surfaces; over 300mm girth	175	SM		
E	General internal window surfaces; over 300mm girth	175	SM		
	<b>Total for Windows Carried to Summary</b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<p><b><u>ELEMENT NO.4</u></b>  <b><u>DOORS</u></b>  <b><u>Flush Doors</u></b></p> <p><b><u>45mm thick solid core flush single leafed door to B.S 459 faced both sides with embossed plywood, finished for painting and lipped on all edges in hardwood including 300mm high fanlight with 5mm thick clear glass(M/S) as per the Architect's detail:</u></b></p>				
A	Door overall size 900 x 2100 mm high	30	NO		
	<b><u>Supply and fix the following ironmongery with screws to match.</u></b>				
B	2 Lever mortice lock to approval of the Architect	140	NO.		
C	100mm Brass butts hinges	47	PRS		
D	Rubber door stop complete with 38 mm rawl bolt	140	NO.		
	<b><u>Knot, prime and stop; prepare and apply one coat stain and two coats of clear varnish</u></b>				
E	General surfaces of timber doors over 300mm girth; external	544	SM		
F	Frames; over 200mm but not exceeding 300mm girth; internal	864	LM		
G	Frames not exceeding 100mm girth; internal	864	LM		
	<i>Carried to Doors Collection</i>				



PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<i>Doors Cont'd</i>				
A	<u>Glazing</u> 5mm thick clear sheet glass in panes exceeding 0.50-1.00m2	16	SM		
	<i>Carried to Doors Collection</i>				
	<u>Doors Collection Page</u>  Brought forward from page B/W 4  Brought forward from page B/W 5				
	<b>Total for Doors carried to Summary</b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><u>ELEMENT NO.5</u></b> <b><u>FINISHES</u></b>				
	<b><u>Wall finishes</u></b> <b><u>Backing: cement and sand (1:3)</u></b>				
A	15mm thick one coat backings; wood floated to receive ceramic wall tiles (m/s)	365	SM		
	<b><u>Colour glazed ceramic tiles bedding and jointing in cement and sand (1:3) mortar and flush pointed with white cement:</u></b>				
B	200 x 250 x 6mm thick	365	SM		
	<b><u>Cement and sand (1:4) screed</u></b>				
C	32mm bed prepared to receive ceramic floor tiles	600	SM		
	<b><u>Supply and fix ceramic floor tiles on prepared screed backing (m/s)</u></b>				
D	300 x 300 x 8.2mm thick tiles	1275	SM		
E	300 x 80 x 8.2mm thick skirting tiles	690	LM		
	<b><u>Ceiling finishes</u></b>				
F	Supply and fix 12mm thick celotex board ceiling including metal gridwork and filler	489	SM		
	<b><u>Carried to Finishes Collection</u></b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<i>Finishes cont'd</i>				
	<u><i>Prepare and apply three coats of premium quality silk vinyl paint as "Basco Paints - Duracoat" or "Crown Paints" or equal and approved to:-</i></u>				
A	Rendered surfaces Externally	2041	SM		
B	Plastered surfaces internally	1944	SM		
C	Celotex board surface	489	SM		
D	Timber surface not exceeding 100mm girth	107	LM		
	<i>Carried to Finishes collection</i>				
	Total brought forward from BW/6				
	Brought forward from above				
	<b>Total for Finishes carried to Summary</b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><u>ELEMENT NO.6</u></b>				
	<b><u>BALUSTRADING</u></b>				
	<b><u>Staircase Railing</u></b>				
A	50 x 50 x 3mm thick RHS balusters bedded to concrete with cement and sand 1:3 mortar 500mm c/c	108	LM		
B	50 x 3mm CHS top rail	30	LM		
C	Prepare and apply 3 coats gloss oil paint to metal surfaces not exceeding 100mm girth	178	LM		
D	Ditto 100-200mm girth	306	LM		
	<b><u>Sundries</u></b>				
E	Make holes in concrete slab 50 x 50 x 50mm deep	90	NO		
	<b><u>Painting and Decorations</u></b>				
	<b><u>To metal surfaces</u></b>				
	<b><u>One coat etching primer: one undercoat: two coats super gloss oil paint to "Crown Paints" or other equal and approved</u></b>				
F	Small pipes	272	LM		
G	Frames; 100 to 200mm girth	51	LM		
	<b>Total for Balustrading Carried to Summary</b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><u>ELEMENT NO.7</u></b> <b><u>FITTINGS AND FIXTURES</u></b>				
	<b><u>Wrot cypress as described</u></b>				
A	75 x 50mm frame	72	LM		
	<b><u>Wood Work</u></b> <b><u>25mm thick Blockboard veneered one side with mahogany to B.S. 3444</u></b>				
B	18mm thick door size 600 x 700mm high.	8	No.		
C	Ditto; 550 x 700mm high.	8	No.		
D	Ditto; 500 x 700mm high.	29	No.		
	<b><u>Prepare and apply 3 coats oil paint to woodwork</u></b>				
E	To kitchen cabinet doors	34	SM		
	<b><u>Ironmongery</u></b>				
F	Piano hinges	32	LM		
G	Brass door knobs	42	No.		
	<b><u>Finishes</u></b>				
H	Prepare and apply 3 coats first grade silk vinyl emulsion paint to plastered soffits of the worktop	36	SM		
	<b><u>Carried to Fittings and Fixtures collection</u></b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<i>Fittings and Fixtures Cont'd</i>				
	<u><i>The following in 50 No. High level Kitchen cabinets overall size 1200 x 300 x 770mm high</i></u>				
	<u><i>In Wrot cypress</i></u>				
A	50 x 50mm bearers plugged	14	LM		
	<u><i>25mm thick Blockboard veneered one side with mahogany to B.S. 3444</i></u>				
B	18mm thick shelving	4	SM		
C	Ditto top and bottom	8	SM		
D	Ditto; divisions and sides	8	SM		
E	Ditto doors size 600 x 770mm high	10	SM		
	<u><i>Iron mongeries</i></u>				
F	Piano hinges	17	LM		
G	100mm aluminium D handles	23	No.		
	<u><i>Prepare and apply three coats of oil paint to woodwork</i></u>				
H	To kitchen cabinet shelving	8	SM		
J	To kitchen cabinet top and bottom	16	SM		
K	To kitchen cabinet division and sides	16	SM		
L	To kitchen cabinet doors	21	SM		
	<i>Carried to Fittings and Fixtures collection</i>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<i>Fittings and Fixtures Cont'd</i>				
	<u><i>The following in 50 No. built - in wardrobes overall size 1900 x 500 x 2,500mm high and 1300 x 500 x 2400mm high</i></u>				
	<u><i>Wood Work</i></u>				
	<u><i>In Wrot cypress</i></u>				
A	50 x 50mm bearer	36	LM		
B	50 x 50mm ditto; plugged	50	LM		
C	Ditto; shoe rack	67	LM		
	<u><i>25mm thick Blockboard veneered one side with mahogany to B.S. 3444</i></u>				
D	18mm thick blockboard shelving and top	24	SM		
E	Ditto; divisions	14	SM		
F	18mm thick door size 650 x 2000mm high and	4	No.		
G	Ditto; 550 x2000 high	8	No.		
H	Ditto; size 550 x 500mm high	8	No.		
J	Ditto; size 650 x 500mm high	4	No.		
	<i>Carried to Fittings and Fixtures collection</i>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><i>Fittings and Fixtures Cont'd</i></b>				
	<b><u>Mild Steel</u></b>				
A	20mm diameter chrome plated wardrobe rail	14	LM		
	<b><u>Ironmongery</u></b>				
	<b><u>Supply and fix the following ironmongery to timber</u></b>				
B	Brass piano hinges	66	LM		
C	Brass door lock	34	No.		
D	Brass door knob	34	No.		
	<b><u>Finishes</u></b>				
E	20mm thick cement screeding smooth trowelled to benching of wardrobes	8	SM		
F	Ditto to sides of support wall	28	SM		
G	Prepare and apply three coats first grade silk vinyl emulsion paint to plastered support wall	28	SM		
	<b><u>Prepare and apply three coats oil paint to woodwork</u></b>				
H	To wardrobe shelving and top	60	SM		
J	Ditto doors	6	SM		
K	Ditto divisions	28	SM		
	<b><i>Carried to Fittings and Fixtures collection</i></b>				
	<b><u>Fittings and Fixtures collection Page</u></b>				
	Total from BW/9				
	Total from BW/10				
	Total from BW/11				
	Total from Above				
	<b>Total for Joinery works carried to Summary</b>				



PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><u>BLOCK ONE SUMMARY</u></b>				
1	SUBSTRUCTURE				
2	ROOF CONSTRUCTION				
3	WINDOWS				
4	DOORS				
5	FINISHES				
6	BALUSTRADING				
7	FITTING AND FIXTURES				
	<b>Total For Block One Carried to Grand Summary</b>				

**BLOCK TWO**

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><u>ELEMENT NO.1</u></b> <b><u>SUBSTRUCTURES</u></b>				
	<b><u>Plinths</u></b>				
A	15mm (min) thick cement and sand (1:4) render to plinths	57	SM		
B	Prepare and apply three coats bituminous paint to rendered plinths	57	SM		
	<b><u>Paving Slabs.</u></b>				
C	600 x 600 x 50 mm Precast concrete class 20/20 paving slabs, laid to falls on blinded hardcore surface and jointed in cement and sand (1:3) mortar	117	SM		
	<b>Total for Substructures Carried to Summary</b>				

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><u>ELEMENT NO.2</u></b>				
	<b><u>ROOFING WORKS</u></b>				
	<b><u>Water proofing</u></b>				
A	Two coats "plast-fix-repel" waterproofing membrane to roofing sheets and gutters with 10year guarantee	15	SM		
	<b><u>Prepainted G.I/Aluzinc flashing</u></b>				
B	110mm swan neck	6	NO		
C	110mm pipe shoe	6	NO		
	<b><u>Painting and decorating</u></b>				
	<b><u>Prepare, prime, apply two undercoats and one gloss finishing egg shell paint on the following metal surface</u></b>				
D	General surfaces of flashing and gutters	43	SM		
E	Surfaces of large pipes	23	SM		
	<b><u>Eaves</u></b>				
F	25 x 25mm Prime grade cypress timber slats at 75mm centres nailed to tie beams (m/s)	81	SM		
	<b>Total for Roofing carried to Summary</b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><u>ELEMENT NO.3</u></b>				
	<b><u>WINDOWS</u></b>				
	<b><u>Curtain Rod</u></b>				
A	20mm diameter heavy duty twin brass rod complete accessories to approval	196	LM		
B	5mm thick clear sheet glass in panes exceeding 0.50-1.00m2	86	SM		
	<b><u>Prepare , Prime and apply one undercoat and two finishing coat gloss oil paint on</u></b>				
C	General external window surfaces; over 300mm girth	175	SM		
D	General internal window surfaces; over 300mm girth	175	SM		
	<b>Total for Windows Carried to Summary</b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><u>ELEMENT NO.4</u></b> <b><u>DOORS</u></b> <b><u>45mm thick solid core flush door to B.S</u></b> <b><u>459 faced both sides with embossed</u></b> <b><u>plywood. finished for painting and</u></b> <b><u>lipped on all edges in hardwood</u></b> <b><u>including 300mm high fanlight with</u></b> <b><u>5mm thick clear glass(M/S) as per the</u></b> <b><u>Architect's detail:</u></b>				
A	Door size 800 x 2050mm high  <i>Mahogany or other equal and approved</i>	79	NO		
B	150mm x 50mm Frame with two labours	200	LM		
C	75 x 25 mm architrave with two labours	200	LM		
D	25mm diameter quadrant beading	200	LM		
E	150mm x 50 mm door transome with two labours	23	LM		
	<u>Supply and fix the following ironmongery</u> <u>with screws to match.</u>				
F	2 Lever mortice lock to approval of the Architect	79	NO.		
G	100mm Brass butts hinges	119	PRS		
H	25 mm Diameter rubber door stops	140	NO.		
	<b>Carried to Doors collection</b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<i>Doors Cont'd</i>				
	<b><u>Knot, prime and stop; prepare and apply one coat stain and two coats of clear varnish</u></b>				
A	General surfaces of timber doors over 300mm girth; external	544	SM		
B	Frames; over 200mm but not exceeding 300mm girth; internal	864	LM		
C	Frames not exceeding 100mm girth; internal	864	LM		
	<u>Glazing</u>				
D	5mm thick clear sheet glass in panes exceeding 0.50-1.00m2	16	SM		
	<b>Carried to Doors collection</b>				
	Brought forward from page B/W 4				
	Brought forward from above				
	<b>Total for Doors carried to Summary</b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><u>ELEMENT NO.5</u></b> <b><u>FINISHES</u></b>				
	<b><u>Wall finishes</u></b>				
	<b><u>Render: cement and sand (1:3)</u></b>				
A	15mm thick one coat backings; wood floated to receive ceramic wall tiles (m/s)	2268	SM		
	<b><u>Backing: cement and sand (1:3)</u></b>				
B	15mm thick one coat backings; wood floated to receive ceramic wall tiles (m/s)	521	SM		
	<b><u>Colour glazed ceramic tiles bedding and jointing in cement and sand (1:3) mortar and flush pointed with white cement:</u></b>				
C	200 x 250 x 6mm thick	521	SM		
	<b><u>Floor finishes</u></b>				
	<b><u>Cement and sand (1:4) screed</u></b>				
D	32mm bed prepared to receive ceramic floor tiles	600	SM		
	<b><u>Colour glazed ceramic tiles bedding and jointing in cement and sand (1:3) mortar and flush pointed with white cement:</u></b>				
E	300 x 300 x 8.2mm thick tiles	600	SM		
F	300 x 80 x 8.2mm thick skirting tiles	690	LM		
	<b><u>Ceiling finishes</u></b>				
G	Supply and fix 12mm thick celotex board ceiling including metal gridwork and filler	489	SM		
	<b><i>Carried to Finishes Collection</i></b>				



PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<i>Finishes cont'd</i>				
	<u><i>Prepare and apply three coats of premium quality silk vinyl paint as "Basco Paints - Duracoat" or "Crown Paints" or equal and approved to:-</i></u>				
A	Rendered surfaces Externally	2041	SM		
B	Plastered surfaces internally	1944	SM		
C	Celotex board surface	489	SM		
D	Timber surface not exceeding 100mm girth	107	LM		
	<i>Carried to Finishes collection</i>				
	Total brought forward from BW/6				
	Brought forward from above				
	<b>Total for Finishes carried to Summary</b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><u>ELEMENT NO.5</u></b>				
	<b><u>BALUSTRADING</u></b>				
	<u>Railing</u>				
A	50 x 50 x 3mm thick RHS balusters bedded to concrete with cement and sand 1:3 mortar 500mm c/c	108	LM		
B	50 x 3mm CHS top rail	30	LM		
C	Prepare and apply 3 coats gloss oil paint to metal surfaces not exceeding 100mm girth	178	LM		
D	Ditto 100-200mm girth	306	LM		
	<u>Sundries</u>				
E	Make holes in concrete slab 50 x 50 x 50mm deep	90	NO		
	<u>Painting and Decorations</u>				
	<u>To metal surfaces</u>				
	<u>One coat etching primer; one undercoat; two coats super gloss oil paint to "Crown Paints" or other equal and approved</u>				
F	Small pipes	272	LM		
G	Frames; 100 to 200mm girth	51	LM		
	<b>Total for Balustrading Carried to Summary</b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><u>ELEMENT NO.7</u></b> <b><u>FITTINGS AND FIXTURES</u></b>				
	<b><u>Wrot cypress as described</u></b>				
A	75 x 50mm frame	72	LM		
	<b><u>Wood Work</u></b> <b><u>25mm thick Blockboard veneered one side with mahogany to B.S. 3444</u></b>				
B	18mm thick door size 600 x 700mm high.	8	No.		
C	Ditto; 550 x 700mm high.	8	No.		
D	Ditto; 500 x 700mm high.	29	No.		
	<b><u>Prepare and apply 3 coats oil paint to woodwork</u></b>				
E	To kitchen cabinet doors	34	SM		
	<b><u>Ironmongery</u></b>				
F	Piano hinges	32	LM		
G	Brass door knobs	42	No.		
	<b><u>Finishes</u></b>				
H	20mm thick cement screeding smooth trowelled to benching of kitchen cabinets	17	SM		
J	25 mm thick granito tile finish to worktop	36	SM		
K	20 x 100 mm high granito tile skirting	53	LM		
L	12mm thick cement sand (1:4) plaster to soffits of worktop	36	SM		
M	Ditto to sides of walling	60	SM		
N	Prepare and apply 3 coats first grade silk vinyl emulsion paint to plastered soffits of the worktop	36	SM		
	<b><i>Carried to Fittings and Fixtures collection</i></b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<i>Fittings and Fixtures Cont'd</i>				
	<u><i>The following in 50 No. High level Kitchen cabinets overall size 1200 x 300 x 770mm high</i></u>				
	<u><i>In Wrot cypress</i></u>				
A	50 x 50mm bearers plugged	14	LM		
	<u><i>25mm thick Blockboard veneered one side with mahogany to B.S. 3444</i></u>				
B	18mm thick shelving	4	SM		
C	Ditto top and bottom	8	SM		
D	Ditto; divisions and sides	8	SM		
E	Ditto doors size 600 x 770mm high	10	SM		
	<u><i>Iron mongeries</i></u>				
F	Piano hinges	17	LM		
G	100mm aluminium D handles	23	No.		
	<u><i>Prepare and apply three coats of oil paint to woodwork</i></u>				
H	To kitchen cabinet shelving	8	SM		
J	To kitchen cabinet top and bottom	16	SM		
K	To kitchen cabinet division and sides	16	SM		
L	To kitchen cabinet doors	21	SM		
	<i>Carried to Fittings and Fixtures collection</i>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><i>Fittings and Fixtures Cont'd</i></b>				
	<b><u>The following in 50 No. built - in wardrobes overall size 1900 x 500 x 2,500mm high and 1300 x 500 x 2400mm high</u></b>				
	<b><u>Plain concrete class 20/12 as described in: -</u></b>				
A	100mm thick concrete (1:3:6) benching	8	SM		
B	100mm thick support walling bedded and jointed in cement and sand (1:3) mortar	14	SM		
	<b><u>Sawn formwork</u></b>				
C	Edges of benching 75-150mm high	16	LM		
	<b><u>Wood Work</u></b>				
	<b><u>In Wrot cypress</u></b>				
D	50 x 50mm bearer	36	LM		
E	50 x 50mm ditto; plugged	50	LM		
F	Ditto; shoe rack	67	LM		
	<b><u>25mm thick Blockboard veneered one side with mahogany to B.S. 3444</u></b>				
G	18mm thick blockboard shelving and top	24	SM		
H	Ditto; divisions	14	SM		
J	18mm thick door size 650 x 2000mm high and	4	No.		
K	Ditto; 550 x2000 high	8	No.		
L	Ditto; size 550 x 500mm high	8	No.		
M	Ditto; size 650 x 500mm high	4	No.		
	<b><i>Carried to Fittings and Fixtures collection</i></b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><i>Fittings and Fixtures Cont'd</i></b>				
	<b><u>Mild Steel</u></b>				
A	20mm diameter chrome plated wardrobe rail	14	LM		
	<b><u>Ironmongery</u></b>				
	<b><u>Supply and fix the following ironmongery to timber</u></b>				
B	Brass piano hinges	66	LM		
C	Brass door lock	34	No.		
D	Brass door knob	34	No.		
	<b><u>Finishes</u></b>				
E	20mm thick cement screeding smooth trowelled to benching of wardrobes	8	SM		
F	Ditto to sides of support wall	28	SM		
G	Prepare and apply three coats first grade silk vinyl emulsion paint to plastered support wall	28	SM		
	<b><u>Prepare and apply three coats oil paint to woodwork</u></b>				
H	To wardrobe shelving and top	60	SM		
J	Ditto doors	6	SM		
K	Ditto divisions	28	SM		
	<b><i>Carried to Fittings and Fixtures collection</i></b>				
	<b><u>Fittings and Fixtures collection Page</u></b>				
	Total from BW/9				
	Total from BW/10				
	Total from BW/11				
	Total from Above				
	<b>Total for Joinery works carried to Summary</b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><u>BLOCK TWO SUMMARY</u></b>				
1	SUBSTRUCTURE				
2	ROOFING WORKS				
3	WINDOWS				
4	DOORS				
5	FINISHES				
6	BALUSTRADING AND RAILING				
7	FITTING AND FIXTURES				
	<b>Total For Block Two Carried to Grand Summary</b>				

**BLOCK THREE**



PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><u>ELEMENT NO.1</u></b> <b><u>SUBSTRUCTURES</u></b>				
	<b><u>Plinths</u></b>				
A	15mm (min) thick cement and sand (1:4) render to plinths	57	SM		
B	Prepare and apply three coats bituminous paint to rendered plinths	57	SM		
	<b><u>Paving Slabs.</u></b>				
C	600 x 600 x 50 mm Precast concrete class 20/20 paving slabs, laid to falls on blinded hardcore surface and jointed in cement and sand (1:3) mortar	117	SM		
	<b>Total for Substructures Carried to Summary</b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><u>ROOFING WORKS</u></b>				
	<b><u>Water proofing</u></b>				
A	Two coats "plast-fix-repel" waterproofing membrane to roofing sheets and gutters with 10year guarantee	15	SM		
	<b><u>Prepainted G.I/Aluzinc flashing</u></b>				
B	110mm swan neck	6	NO		
C	110mm pipe shoe	6	NO		
	<b><u>Painting and decorating</u></b>				
	<b><u>Prepare, prime, apply two undercoats and one gloss finishing egg shell paint on the following metal surface</u></b>				
D	General surfaces of flashing and gutters	43	SM		
E	Surfaces of large pipes	23	SM		
	<b><u>Eaves</u></b>				
F	25 x 25mm Prime grade cypress timber slats at 75mm centres nailed to tie beams (m/s)	81	SM		
	<b>Total for Roofing carried to Summary</b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><u>ELEMENT NO.3</u></b> <b><u>WINDOWS</u></b>				
	<b><u>Curtain Rod</u></b>				
A	20mm diameter heavy duty twin brass rod complete accessories to approval	196	LM		
B	5mm thick clear sheet glass in panes exceeding 0.50-1.00m2	86	SM		
	<b><u>Prepare, Prime and apply one undercoat and two finishing coat gloss oil paint on</u></b>				
C	General external window surfaces; over 300mm girth	175	SM		
D	General internal window surfaces; over 300mm girth	175	SM		
	<b>Total for Windows Carried to Summary</b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><u>ELEMENT NO.4</u></b> <b><u>DOORS</u></b>  <b><u>45mm thick solid core flush to B.S 459</u></b> <b><u>faced both sides with embossed plywood.</u></b> <b><u>finished for painting and lipped on all</u></b> <b><u>edges in hardwood including 300mm</u></b> <b><u>high fanlight with 5mm thick clear</u></b> <b><u>glass(M/S) as per the Architect's detail:</u></b>				
A	Door size 800 x 2050mm high  <b><u>Mahogany or other equal and approved</u></b> <b><u>:-</u></b>	95	NO		
B	150mm x 50mm Frame with two labours	200	LM		
C	75 x 25 mm architrave with two labours	200	LM		
D	25mm diameter quadrant beading	200	LM		
E	150mm x 50 mm door transome with two labours	23	LM		
	<b><u>Supply and fix the following</u></b> <b><u>ironmongery with screws to match.</u></b>				
F	2 Lever mortice lock to approval of the Architect	79	NO.		
G	100mm Brass butts hinges	119	PRS		
H	25 mm Diameter rubber door stops	79	NO.		
	<b><i>Carried to Doors collection</i></b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<i>Doors Cont'd</i>				
	<b><u>Knot, prime and stop; prepare and apply one coat stain and two coats of clear varnish</u></b>				
A	General surfaces of timber doors over 300mm girth; external	544	SM		
B	Frames; over 200mm but not exceeding 300mm girth; internal	864	LM		
C	Frames not exceeding 100mm girth; internal	864	LM		
	<u>Glazing</u>				
D	5mm thick clear sheet glass in panes exceeding 0.50-1.00m2	16	SM		
	<b>Carried to Doors collection</b>				
	Brought forward from page B/W 4				
	Brought forward from above				
	<b>Total for Doors carried to Summary</b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><u>ELEMENT NO.5</u></b> <b><u>FINISHES</u></b>				
	<b><u>Wall finishes</u></b>				
	<b><u>Render: cement and sand (1:3)</u></b>				
A	15mm thick one coat backings; wood floated to receive ceramic wall tiles (m/s)	2268	SM		
	<b><u>Backing: cement and sand (1:3)</u></b>				
B	15mm thick one coat backings; wood floated to receive ceramic wall tiles (m/s)	521	SM		
	<b><u>Colour glazed ceramic tiles bedding and jointing in cement and sand (1:3) mortar and flush pointed with white cement:</u></b>				
C	200 x 250 x 6mm thick	521	SM		
	<b><u>Cement and sand (1:4) screed</u></b>				
D	32mm bed prepared to receive ceramic floor tiles	600	SM		
	<b><u>Colour glazed ceramic tiles bedding and jointing in cement and sand (1:3) mortar and flush pointed with white cement:</u></b>				
E	300 x 300 x 8.2mm thick tiles	1275	SM		
F	300 x 80 x 8.2mm thick skirting tiles	690	LM		
	<b>Carried to Finishes collection</b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<i>Finishes Cont'd</i>				
	<u>Ceiling finishes</u>				
A	Supply and fix 12mm thick celotex board ceiling including metal gridwork and filler	489	SM		
	<u>One coat etching primer; one undercoat; two coats super gloss oil paint to "Crown Paints" or other equal and approved</u>				
B	Rendered surfaces Externally	2041	SM		
C	Plastered surfaces internally	1944	SM		
D	Celotex board surface	500	SM		
E	Timber surface not exceeding 100mm girth	107	LM		
	<b>Carried to collection</b>				
	Total brought forward from BW/6				
	Brought forward from above				
	<b>Total for Finishes carried to Summary</b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><u>ELEMENT NO.6</u></b> <b><u>BALUSTRADING</u></b>				
	<i>Staircase Railing</i>				
A	50 x 50 x 3mm thick RHS balusters bedded to concrete with cement and sand 1:3 mortar 500mm c/c	108	LM		
B	50 x 3mm CHS top rail	30	LM		
C	Prepare and apply 3 coats gloss oil paint to metal surfaces not exceeding 100mm girth	178	LM		
D	Ditto 100-200mm girth	306	LM		
	<i>sundries</i>				
E	Make holes in concrete slab 50 x 50 x 50mm deep	90	NO		
	<i>Painting and Decorations</i>				
	<i>To metal surfaces</i>				
	<i>One coat etching primer; one undercoat; two coats super gloss oil paint to "Crown Paints" or other equal and approved</i>				
F	Small pipes	272	LM		
G	Frames; 100 to 200mm girth	51	LM		
	<b>Total for Balustrading Carried to Summary</b>				



PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><u>ELEMENT NO.7</u></b> <b><u>FITTINGS AND FIXTURES</u></b>				
	<b><u>Wrot cypress as described</u></b>				
A	75 x 50mm frame	72	LM		
	<b><u>Wood Work</u></b> <b><u>25mm thick Blockboard veneered one side with mahogany to B.S. 3444</u></b>				
B	18mm thick door size 600 x 700mm high.	8	No.		
C	Ditto; 550 x 700mm high.	8	No.		
D	Ditto; 500 x 700mm high.	29	No.		
	<b><u>Prepare and apply 3 coats oil paint to woodwork</u></b>				
E	To kitchen cabinet doors	34	SM		
	<b><u>Ironmongery</u></b>				
F	Piano hinges	32	LM		
G	Brass door knobs	42	No.		
	<b><u>Finishes</u></b>				
H	20mm thick cement screeding smooth trowelled to benching of kitchen cabinets	17	SM		
I	25 mm thick granito tile finish to worktop	36	SM		
J	20 x 100 mm high granito tile skirting	53	LM		
K	12mm thick cement sand (1:4) plaster to soffits of worktop	36	SM		
L	Ditto to sides of walling	60	SM		
M	Prepare and apply 3 coats first grade silk vinyl emulsion paint to plastered soffits of the worktop	36	SM		
	<b><i>Carried to Fittings and Fixtures collection</i></b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<i>Fittings and Fixtures Cont'd</i>				
	<u><i>The following in 50 No. High level Kitchen cabinets overall size 1200 x 300 x 770mm high</i></u>				
	<u><i>In Wrot cypress</i></u>				
A	50 x 50mm bearers plugged	14	LM		
	<u><i>25mm thick Blockboard veneered one side with mahogany to B.S. 3444</i></u>				
B	18mm thick shelving	4	SM		
C	Ditto top and bottom	8	SM		
D	Ditto; divisions and sides	8	SM		
E	Ditto doors size 600 x 770mm high	10	SM		
	<u><i>Iron mongeries</i></u>				
F	Piano hinges	17	LM		
G	100mm aluminium D handles	23	No.		
	<u><i>Prepare and apply three coats of oil paint to woodwork</i></u>				
H	To kitchen cabinet shelving	8	SM		
J	To kitchen cabinet top and bottom	16	SM		
K	To kitchen cabinet division and sides	16	SM		
L	To kitchen cabinet doors	21	SM		
	<i>Carried to Fittings and Fixtures collection</i>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><i>Fittings and Fixtures Cont'd</i></b>				
	<b><u>The following in 50 No. built - in wardrobes overall size 1900 x 500 x 2,500mm high and 1300 x 500 x 2400mm high</u></b>				
	<b><u>Plain concrete class 20/12 as described in: -</u></b>				
A	100mm thick concrete (1:3:6) benching	8	SM		
B	100mm thick support walling bedded and jointed in cement and sand (1:3) mortar	14	SM		
	<b><u>Sawn formwork</u></b>				
C	Edges of benching 75-150mm high	16	LM		
	<b><u>Wood Work</u></b>				
	<b><u>In Wrot cypress</u></b>				
D	50 x 50mm bearer	36	LM		
E	50 x 50mm ditto; plugged	50	LM		
F	Ditto; shoe rack	67	LM		
	<b><u>25mm thick Blockboard veneered one side with mahogany to B.S. 3444</u></b>				
G	18mm thick blockboard shelving and top	24	SM		
H	Ditto; divisions	14	SM		
J	18mm thick door size 650 x 2000mm high and	4	No.		
K	Ditto; 550 x2000 high	8	No.		
L	Ditto; size 550 x 500mm high	8	No.		
M	Ditto; size 650 x 500mm high	4	No.		
	<b><i>Carried to Fittings and Fixtures collection</i></b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b><i>Fittings and Fixtures Cont'd</i></b>				
	<b><u>Mild Steel</u></b>				
A	20mm diameter chrome plated wardrobe rail	14	LM		
	<b><u>Ironmongery</u></b>				
	<b><u>Supply and fix the following ironmongery to timber</u></b>				
B	Brass piano hinges	66	LM		
C	Brass door lock	34	No.		
D	Brass door knob	34	No.		
	<b><u>Finishes</u></b>				
E	20mm thick cement screeding smooth trowelled to benching of wardrobes	8	SM		
F	Ditto to sides of support wall	28	SM		
G	Prepare and apply three coats first grade silk vinyl emulsion paint to plastered support wall	28	SM		
	<b><u>Prepare and apply three coats oil paint to woodwork</u></b>				
H	To wardrobe shelving and top	60	SM		
J	Ditto doors	6	SM		
K	Ditto divisions	28	SM		
	<b><i>Carried to Fittings and Fixtures collection</i></b>				
	<b><u>Fittings and Fixtures collection Page</u></b>				
	Total from BW/9				
	Total from BW/10				
	Total from BW/11				
	Total from Above				
	<b>Total for Joinery works carried to Summary</b>				

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

Item	Description	Qty	Unit	Rate	Amount Ksh
	<b>BLOCK THREE SUMMARY</b>				
1	SUBSTRUCTURE				
2	ROOFING WORKS				
3	WINDOWS				
4	DOORS				
5	FINISHES				
6	BALUSTRADING AND RAILING				
7	FITTING AND FIXTURES				
	<b>Total For Block Three Carried to Grand Summary</b>				

**CIVIL WORKS**

**PROJECT: PROPOSED NATIONAL POLICE AND KENYA PRISONS SERVICE HOUSING  
AT AP TRAINING COLLEGE - EMBAKASI**

**BILL NO 1: ACCESS ROAD AND PARKING**

Item	Description	Unit	Qty	Rate	AMOUNT
	<b><u>EXTERNAL WORKS (PROVISIONAL)</u></b>				
	<b><u>SITE CLEARANCE (PROVISIONAL)</u></b>				
A	Clear site of grass, bushes, shrubs and hedges; grub up roots and remove from site as directed by the Engineer.	SM	500		
	<b><u>ROADWORKS)</u></b>				
	<b><u>Earthworks</u></b>				
B	Excavate to formation level, depth n.e 1.0m average depth 0.5m.	CM	742		
C	Load and cart away from site surplus excavated material as directed by the PM.	CM	742		
D	Provide, lay and compact approved material filling in layers not exceeding 150mm thick upto formation level.	CM	300		
E	Trim and compact formation to correct crossfalls.	SM	1482		
F	Treat the surface with approved herbicide.	SM	1482		
	<b><u>Construction</u></b>				
G	Provide, lay and compact 150mm thick approved gravel base course to 98% M.D.D. specifications.	SM	1482		
H	Provide, lay and compact 150mm thick approved hand packed stone base to 98% M.D.D specifications; Include filling of voids with quarry dust.	SM	1482		
J	Provide and spread on hand packed stone 50mm thick stone dust ready to receive medium duty interlocking precast paving blocks.	SM	1482		
K	Provide,lay and compact 60mm thick heavy duty interlocking paving blocks (min strength 49N/mm <sup>2</sup> ).	SM	1482		
	<b>TOTAL CARRIED TO COLLECTION PAGE</b>				

**PROJECT: PROPOSED NATIONAL POLICE AND KENYA PRISONS SERVICE HOUSING  
AT AP TRAINING COLLEGE - EMBAKASI  
BILL NO 1: ACCESS ROAD AND PARKING**

Item	Description	Unit	Qty	Rate	AMOUNT
	<b><u>Kerbs and channels</u></b>				
A	Provide, lay and joint along the edge of the road and parking 250x125mm kerb and 125x100mm channel, including 450x350mm concrete bed and haunch (mix 1:3:6) and any necessary formwork to detail (50) 5332 'B'	LM	300		
B	Ditto but curved to varying radii as shown on the plan.	LM	100		
	<b><u>Kerbs Only</u></b>				
C	Provide, lay and joint along the edge of the road and parking 250x125mm kerb including 350x325mm concrete bed and haunch (mix 1:3:6) and any necessary formwork to detail (50) 5332 'A'	LM	200		
D	Ditto but curved to varying radii as shown on the plan.	LM	50		
	<b><u>CHANNEL ONLY</u></b>				
E	Provide, lay and joint along the edges precast concrete channel 250x125mm including 100mm thick concrete bed and haunch (mix 1:3:6) to detail (50) 5332C	LM	320		
	<b><u>Prepare and prime concrete surfaces and apply two coats of approved road marking paint to:-</u></b>				
F	Driveways / parkings 100mm wide stripes.	LM	700		
G	250mm Kerb	LM	500		
H	Allow a provisional sum of Ksh. Three Hundred Thousand (Ksh 300,000.00) for any additional road works to be used at the discretion of the Engineer.	SUM			
<b>TOTAL CARRIED TO COLLECTION PAGE</b>					
	<b><u>COLLECTION</u></b>				
	From page CIV/1				
	From page CIV/2				
<b>TOTAL CARRIED TO SUMMARY PAGE</b>					



**PROJECT: PROPOSED NATIONAL POLICE AND KENYA PRISONS SERVICE HOUSING  
AT AP TRAINING COLLEGE - EMBAKASI  
BILL NO 2: FOOTPATHS AND PAVED AREAS**

Item	Description	Unit	Qty	Rate	AMOUNT
	<b><u>FOOTPATHS.</u></b>				
A	Remove vegetable soil average depth 150mm and dispose as directed by the project manager	SM	234		
B	Excavate to formation level, depth n.e 1.0m average depth 0.5m.	CM	117		
C	Provide, lay and compact approved hardcore filling in layers not exceeding 150mm thick.	CM	82		
D	Provide, lay and compact 150mm thick approved murram.	SM	234		
E	Provide and apply persistent herbicide.	SM	234		
F	Provide, lay and joint in cement mortar 600x600x50mm precast concrete paving slabs including 50mm thick sand bed.	SM	144		
G	Provide, lay and joint 125x100mm precast concrete channel including 100mm thick concrete bed and haunch, mix 1:3:6, any necessary excavation, formwork and disposal of surplus material.	LM	100		
	<b><u>PAVING SLABS ROUND THE BUILDING</u></b>				
H	Clear area around the building and trim surfaces above to achieve reduced levels and cart away excavated material to tips as directed. Depth n.e 0.2m.	CM	87		
J	Treat surface of formation with approved persistent herbicide.	SM	432		
K	Provide, lay and compact 100mm hardcore filling.	SM	432		
L	Provide, lay and compact 100mm thick approved murram base.	SM	432		
M	Provide, lay and joint in cement sand mortar (mix 1:4) 600 X 600 X 50mm precast concrete paving slabs.Drg. (50) 5353.	SM	432		
	<b>TOTAL CARRIED TO SUMMARY PAGE</b>				

**PROJECT: PROPOSED NATIONAL POLICE AND KENYA PRISONS SERVICE HOUSING  
AT AP TRAINING COLLEGE - EMBAKASI**

**BILL NO 3: STORM WATER DRAINAGE**

Item	Description	Unit	Qty	Rate	AMOUNT
	<b><u>Open storm water drain</u></b>				
A	Excavate trench for 450x225mm external dimension Pcc IBD not exceeding 0.7m (average depth 0.45m) including trimming sides to slope and disposal of surplus material to detail (50) 5329 'B'.	CM	40		
B	Ditto but average depth 1.0m ditto.	CM	160		
C	Ditto but average depth 1.5m ditto.	CM	75		
D	Provide, lay and compact 100mm thick approved murrum bed and on sloping sides of the IBD to detail (50) 5329'B'	SM	630		
E	Provide, lay and joint 450x225x600mm external dimensions Pcc IBD to detail (50) 5326.	LM	350		
F	Extra over Item F for one side slab on each side to detail (50) 5329'B'.	LM	100		
G	Extra over Item F for two sides slabs on each side to detail (50) 5329 'B'.	LM	200		
H	Extra over Item F for three sides slabs on each side to detail (50) 5329 'B'.	LM	50		
	<b><u>Storm water drainage around the buildings.</u></b>				
J	Provide, lay and joint 800x500x175mm precast concrete Storm Water Channel including 50mm thick concrete bed, mix 1:3:6, any necessary excavation, formwork and disposal of surplus material to detail (50) 5353.	LM	270		
	<b><u>Court yard drainage</u></b>				
	<b><u>Pipe work</u></b>				
K	Provide, lay and joint 200mm diameter uPVC pipe (class 41 Golden brown) including 150mm bedding and surround to detail (50)5310'C'.	LM	90		
	<b>TOTAL CARRIED TO COLLECTION PAGE</b>				

**PROJECT: PROPOSED NATIONAL POLICE AND KENYA PRISONS SERVICE HOUSING  
AT AP TRAINING COLLEGE - EMBAKASI**

**BILL NO 3: STORM WATER DRAINAGE**

Item	Description	Unit	Qty	Rate	AMOUNT
	<p><b><u>Manholes</u></b>  <b>Construct rectangular manholes with concrete (1:3:6) to base and bedding,(1:2:4) to cover slabs including screeding, 190mm thick solid concrete block walling plastered to the inside with water proofing cement, manhole cover grating with Y16 bars welded to 50 x50mm angle frames; including excavations of pits, parts return fill and ram and part cart away, All necessary formwork.</b></p>				
A	Manhole size 1180 x 930 x 1000mm deep from invert level.	NO	6		
	<p><b><u>Stone pitching</u></b>  <b>Provide all materials and stone pitch the edge of the storm drain and other sloping surfaces as directed by the Engineer.</b></p>				
B		SM	50		
<b>TOTAL CARRIED TO COLLECTION PAGE</b>					
	<p><b><u>COLLECTION</u></b>   From page CIV/4   From ABOVE</p>				
<b>TOTAL CARRIED TO SUMMARY PAGE</b>					

**PROJECT: PROPOSED NATIONAL POLICE AND KENYA PRISONS SERVICE HOUSING  
AT AP TRAINING COLLEGE - EMBAKASI  
BILL NO 4: FOUL WATER DRAINAGE**

Item	Description	Unit	Qty	Rate	AMOUNT
	<b><u>Excavations</u></b>				
A.	Excavate trench for 160mm diameter pipe and bed under, not exceeding 1.50m deep from ground level average depth 1.0m	CM	125		
B	Ditto, but depth exceeding 1.5m, but n.e 2.0m	CM	10		
C	Extra over for excavation in rock	CM	20		
	<b><u>PIPE WORK</u></b>				
D	Provide, lay and joint 160mm diameter UPVC pipe (Class 41 Golden brown) including 100mm approved material bedding and 150mm surround to detail (50) 5310 'F'.	LM	222		
E	Ditto; Item G above, but including 150mm concrete bedding and surround to detail (50) 5310'C'	LM	100		
	<b><u>MANHOLES</u></b>				
	<b><u>The following in Manholes complete with:-</u></b>				
	<b>Construct rectangular manholes with concrete (1:3:6) to base and bedding,(1:2:4) to cover slabs including screeding, 190mm thick solid concrete block walling plastered to the inside with water proofing cement, medium duty CI manhole covers and frames, malleable step irons; including excavations of pits, parts return fill and ram and part cart away, All necessary formwork.</b>				
F	Manhole size 1180 x 930 x 1000mm deep from invert level.	NO	48		
G	Ditto 1380 x 1180 x 1.5m deep	NO	10		
H	Allow for testing the whole foul drainage system during installation and again at completion of the works to leave in sound working order to the satisfaction of the Engineer.	ITEM			
J	Allow for connection to the existing sewer line.	ITEM			
K	Allow for provision sums of Ksh Two Hundred Thousand (Kshs 200,000.00) for any additional foul water drainage works to be used at the discretion of the Engineer.	SUM			
	<b>TOTAL CARRIED TO SUMMARY PAGE</b>				

**PROJECT: PROPOSED NATIONAL POLICE AND KENYA PRISONS SERVICE HOUSING  
AT AP TRAINING COLLEGE - EMBAKASI**

<b><u>SUMMARY</u></b>		
<b>Item BILL</b>	<b>Description</b>	<b>AMOUNT</b>
1	ACCESS ROAD AND PARKING	<b>PAGE</b> CIV/1
2	FOOT PATH AND PAVED AREAS	CIV/3
3	STORM WATER DRAINAGE	CIV/5
4	FOUL WATER DRAINAGE	CIV/6
<b>TOTAL CARRIED TO GRAND SUMMARY</b>		

*PROPOSED COMPLETION OF 3No. BLOCKS EACH OF 32No. BEDSITTER UNITS, 14No.  
TWO-BEDROOMED UNITS AND 4No. THREE-BEDROOMED UNITS AT  
ADMINISTRATION POLICE TRAINING COLLEGE IN EMBAKASI, NAIROBI COUNTY*

*TENDER SPECIFICATIONS & BILLS OF QUANTITIES FOR  
SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF ELECTRICAL  
INSTALLATION WORKS*

SECTION A

GENERAL SPECIFICATIONS

OF

MATERIALS AND WORKS

## GENERAL SPECIFICATIONS OF MATERIALS AND WORKS

- 2.1 General
- 2.2 Standard of Materials
- 2.3 Workmanship
- 2.4 Procurement of Materials
- 2.5 Shop Drawings
- 2.6 Record Drawings
- 2.7 Regulations and Standards
- 2.8 Setting out Works
- 2.9 Position of Electrical Plant and Apparatus
- 2.10 M.C.B Distribution Panels and Consumer Units
- 2.11 Fused Switchgear and Isolators
- 2.12 Conduits and Conduit Runs
- 2.13 Conduit Boxes and Accessories
- 2.14 Labels
- 2.15 Earthing
- 2.16 Cables and Flexible Cords
- 2.17 Armoured PVC Insulated and Sheathed Cables
- 2.18 Cable Supports; Markers and Tiles
- 2.19 PVC Insulated Cables
- 2.20 Heat Resisting Cables
- 2.21 Flexible Cords
- 2.22 Cable Ends and phase Colours
- 2.23 Cable Insulation Colours



- 2.24 Sub-circuit Wiring
- 2.25 Space Factor
- 2.26 Insulation
- 2.27 Lighting Switches
- 2.28 Sockets and Switched sockets
- 2.29 Fused Spur Boxes
- 2.30 Cooker Outlets
- 2.31 Connectors
- 2.32 Lamp holders
- 2.33 Lamps
- 2.34 lighting Fittings Street Lighting Lanterns
- 2.35 Position of Points and Switches
- 2.36 Street/Security Lighting Columns
- 2.37 Timing Control Switch
- 2.38 Wiring System for Street Lighting
- 2.39 Metal control Pillar
- 2.40 Current Operated Earth leakage circuit breaker
- 2.41 MV Switchboard
- 2.42 Steel Conduits and Steel Trunking
- 2.43 Testing on Site

## 2.1 GENERAL

This specification is to be read in conjunction with the drawings which are issued with it. Bills of quantities shall be the basis of all additions and omissions during the progress of the works.

## 2.2 STANDARD OF MATERIALS

Where the material and equipment are specifically described and named in the Specification followed by approved equal, they are so named or described for the purpose of establishing a standard to which the sub-contractor shall adhere.

Should the Sub-contractor install any material not specified herein before receiving approval from the proper authorities, the Engineer shall direct the Sub-contractor to remove the material in question immediately. The fact that this material has been installed shall have no bearing or influence on the decision by the Engineer.

All materials condemned by the Engineer as not approved for use, are to be removed from the premises and suitable materials delivered and installed in their place at the expense of the Sub-contractor. All materials required for the works shall be new and the best of the respective kind and shall be of a uniform pattern.

## 2.3 WORKMANSHIP

The workmanship and method of installation shall conform to the best standard practice. All work shall be performed by a skilled tradesman and to the satisfaction of the Engineer. Helpers shall have qualified supervision.

Any work that does not in the opinion of the Engineer conform to the best standard practice will be removed and reinstated at the Sub-contractor's expense.

Permits, Certificates or Licenses must be held by all tradesmen for the type of work; in which they are involved where such permits, certificates or licenses exist under Government legislation.

## 2.4 PROCUREMENT OF MATERIALS

The sub-contractor is advised that no assistance can be given in the procurement or allotment of any materials or products to be used in and necessary for the construction and completion of the work.

Sub-contractors are warned that they must make their own arrangements for the supply of materials and/or products specified or required.

## 2.5 SHOP DRAWINGS

Before manufacture or Fabrication is commenced the sub-contractor shall submit Two copies of detailed drawings of all control pillars, meter cubicles, medium voltage switchboards including their components showing all pertinent information including sizes, capacities, construction details, etc., as may be required to determine the suitability of the equipment for the approval of the Engineer. Approval of the detailed drawings shall not relieve the sub-contractor of the full responsibility of errors or the necessity of checking the drawings himself or of furnishing the materials and equipment and performing the work required by the plans and specifications.

## 2.6 RECORD DRAWINGS

These diagrams and drawings shall show the completed installation including sizes, runs and arrangements of the installation. The drawings shall be to scale not less than 1:50 and shall include plan views and section.

The drawings shall include all the details which may be useful in the operation, maintenance or subsequent modifications or extensions to the installation.

Three sets of diagrams and drawings shall be provided, all to the approval of the Engineer.

One coloured set of line diagrams relating to operating and maintenance instructions shall be framed and, mounted in a suitable location.

## 2.7 REGULATIONS AND STANDARDS

All work executed by the Sub-contractor shall comply with the current edition of the "Regulations" for the Electrical Equipment of Buildings, issued by the Institution of Electrical Engineers, and with the Regulations of the Local Electricity Authority.

Where the two sets of regulations appear to conflict, they shall be clarified with the Engineers. All materials used shall comply with relevant Kenya Bureau of Standards Specification.

## 2.8 SETTING OUT WORK

The sub-contractor at his own expenses; is to set out works and take all measurements and dimensions required for the erection of his materials on site; making any modifications in details as may be found necessary during the progress of the works, submitting any such modifications or alterations in detail to the Engineer before proceeding and must allow in his Tender for all such modifications and for the provision of any such sketches or drawings related thereto.

## 2.9 POSITIONS OF ELECTRICAL PLANT AND APPARATUS

The routes of cables and approximate positions of switchboards etc, as shown on the drawings shall be assumed to be correct for purpose of Tendering, but exact positions of all electrical Equipment and routes of cables must be agreed on site with the Engineer before any work is carried out.

## 2.10 MCB DISTRIBUTION PANELS AND CONSUMER UNITS

All cases of MCB Panels and consumer units shall be constructed in heavy gauge sheet with hinged covers.

Removable undrilled gland plates shall be provided on the top and bottom of the cases. Miniature circuit breakers shall be enclosed in moulded plastic with the tripping mechanism and arc chambers separated and sealed from the cable terminals.

The operating dolly shall be tripfree with a positive movement in both make and break position. Clear indication of the position of the handle shall be incorporated.

The tripping mechanism shall be on inverse characteristic to prevent tripping in temporary overloads and shall not be affected by normal variation in ambient temperature.

A locking plate shall be provided for each size of breaker; A complete list of circuit details on typed cartridge paper glued to stiff cardboards and covered with a sheet of Perspex, and held in position with four suitable fixings, shall be fitted to the inner face of the lids of each distribution panel. The appropriate MCB ratings shall be stated on the circuit chart against each circuit in use: Ivorine labels shall be secured to the insulation barriers in such a manner as to indicate the number of the circuits shown on the circuit chart.

Insulated barriers shall be fitted between phases, and neutrals in all boards, and to shroud live parts.

Neutral cables shall be connected to the neutral bar in the same sequence as the phase cables are connected to the MCB's. This shall also apply to earth bars when installed.

## 2.11 FUSED SWITCHGEAR AND ISOLATORS

All fused switchgear and isolators whether mounted on machinery, walls or industrial panels shall conform to the requirements of KS 04 – 226 PART: 1: 1985.

All contacts are to be fully shrouded and are to have a breaking capacity on manual operations as required by KS 04 – 182: 1980.

Fuse links for fused switches are to be of high rupturing capacity cartridge type, conforming to KS 04 – 183: 1978.

Isolators shall be load breaking/fault making isolators.

Fused switches and isolators are to have separate metal enclosures. Mechanical interlocks are to be provided between the door and main switch operating mechanism so arranged that the door may not be opened with the switch in the 'ON' position. Similarly; it shall not be possible to close the switch with the door open except that provision to defeat the mechanical interlock and close the switch with the door in the open position for test purposes. The 'ON' and 'OFF' positions of all switches and isolators shall be clearly indicated by a mechanical flag indicator or similar device. In T.P & N fused switch units, bolted neutral links are to be fitted.

## 2.12 CONDUITS AND CONDUIT RUNS

Conduit systems are to be installed so as to allow the loop-in system of wiring:

All conduits shall be black rigid super high impact heavy gauge class 'A' PVC in accordance with KS 04 – 179: 1988 and IEE Regulations. No conduit less than 20mm in diameter shall be used anywhere in this installation.

Conduit shall be installed buried in plaster work and floor screed except when run on wooden or metal surface when they will be installed surface supported with saddles every 600mm. Conduit run in chases shall be firmly held in position by means of substantial pipe hooks driven into wooden plugs.

The Sub-contractor's attention is drawn to the necessity of keeping all conduits entirely separate from other piping services such as water and no circuit connections will be permitted between conduits and such pipes.

All conduits systems shall be arranged wherever possible to be self-draining to switch boxes and conduit outlet points for fittings:

The systems, when installed and before wiring shall be kept plugged with well fitting plugs and when short conduit pieces are used as plugs, they shall be doubled over and tied firmly together with steel wire; before wiring all conduit systems shall be carried out until the particular section of the conduit installation is complete in every respect.

The sets and bends in conduit runs are to be formed on site using appropriate size bending springs and all radii of bends must not be less than 2.5 times the outside diameter of the conduit. No solid or inspection bends, tees or elbows will be used.

Conduit connections shall either be by a demountable (screwed up) assembly or adhesive fixed and water tight by solution. The tube and fittings must be clean and free of all grease before applying the adhesive. When connections are made between the conduit and switch boxes, circular or non-screwed boxes, care shall be taken that no rough edges of conduit stick out into the boxes.

Runs between draw in boxes are not to have more than two right angle bends or their equivalent. The sub-contractor may be required to demonstrate to the Engineers that wiring in any particular run is easily withdrawable and the sub-contractor may, at no extra cost to the contract; be required to install additional draw-in boxes required. If conduit is installed in straight runs in excess of 6000mm, expansion couplings as manufactured by Egatube shall be used at intervals of 6000mm.

Where conduit runs are to be concealed in pillars and beams, the approval of the Structural Engineer, shall be obtained. The sub-contractor shall be responsible for marking the accurate position of all holes chases etc, on site, or if the Engineer so directs, shall provide the Main Contractor with dimensional drawings to enable him to mark out and form all holes and chases. Should the sub-contractor fail to inform the main contractor of any inaccuracies in this respect they shall be rectified at the sub-contractor's expense.

It will be the Sub-contractor's responsibility to ascertain from site, the details of reinforced concrete or structural steelwork and check from the builder's drawings the positions of walls, structural concrete and finishes. No reinforced concrete or steelwork may be drilled without first obtaining the written permission of the Structural Engineer.

The drawings provided with these specifications indicate the appropriate positions only of points and switches, and it shall be the Sub-Contractors responsibility to mark out and centre on site the accurate positions where necessary in consultation with the Architect and the Engineer. The sub-contractor alone shall be responsible for the accuracy of the final position.

## 2.13 CONDUIT BOXES AND ACCESSORIES

All conduit outlets and junction boxes are to be either malleable iron and of standard circular pattern of the appropriate type to suit saddles being used or super high impact PVC manufactured to KS 04 – 179 : 1983.

Small circular pattern boxes are to be used with conduits up to and including 25mm outside diameter. Rectangular pattern adaptable boxes are to be used for conduits of 32mm outside diameter and larger. For drawing in of cables in exposed runs of conduit, standard pattern through boxes are to be used:

Boxes are to be not less than 50mm deep and of such dimensions as will enable the largest appropriate number of cables for the conduit sizes to be drawn in without excessive bending.

Outlet boxes for lighting fittings are to be of the loop-in type where conduit installation is concealed and the sub-contractor shall allow one such box per fitting, except where fluorescent fittings are specified when two such boxes per fitting shall be fitted flush with ceiling and if necessary fitted with break joint rings. Pattresses shall be fitted where required to outlets on surface conduit runs.

Adaptable boxes are two of PVC or mild steel (of not less than 12swg) and black enamelled or galvanised finish according to location. They shall be of square or oblong shape location. They shall be of square or oblong shape complete with lids secured by four 2 BA brass roundhead screws; No adaptable box shall be less than 75mm x 75mm x 50mm or larger than 300mm x 300mm x 75mm and shall be adequate in depth in relation to the size of conduit entering it. Conduits shall only enter boxes by means of conduit bushes.

#### 2.14 LABELS

Labels fitted to switches and fuse boards; -

- (i) Shall be Ivorine engraved black on white.
- (ii) Shall be secured by R.H brass screws of same manufacturing throughout.
- (iii) Shall be indicated on switches: -
  - a) Reference number of switch
  - b) Special current rating
  - c) Item of equipment controlled
- (iv) Shall indicate on MCB panels
  - a) Reference number
  - b) Type of board, i.e.; lighting, sockets, etc.
  - c) Size of cable supplying panel
  - d) where to isolate feeder cable
- (v) Shall be generally not less than 75mm x 50mm.

#### 2.15 EARTHING

The earthing of the installation shall comply with the following requirements; -

- (i) It shall be carried out in accordance with the appropriate sections of the current edition of the Regulations, for the Electrical Equipment of Buildings issued by Institute of Electrical Engineers of Great Britain.

- (ii) At all main distribution panels and main service positions a 25mm x 3mm minimum cross sectional area Copper tape shall be provided and all equipment including the lead sheath and armoring of cables, distribution boards and metal frames shall be bonded thereto.
- (iii) The earth tape in Sub-clause (ii) shall be connected by means of a copper tape or cable of suitable cross sectional area to an earth electrode which shall be a copper earth rod (see later sub-clause).
- (iv) All tapes to be soft high conductivity copper, untinned except where otherwise specified and where run underground on or through walls, floors, etc., it shall be served with corrosion resisting tape or coated with corrosion compound and braided
- (v) Where the earth electrode is located outside the building a removable test link shall be provided inside the building as near as possible to the point of entry to the tape, for isolating the earth electrode for testing purposes.
- (vi) Earthing of sub-main equipment shall be deemed to be satisfactory where the sub-main cables are M.I.C.S. or conduit with separate earth wire, and installation is carried out in accordance with the figures stated in the current edition of the I.E.E Regulations.
- (vii) Where an earth rod is specified (see Sub-clause (iii) it shall be proprietary manufacture, solid hand drawn copper of 15mm diameter driven into the ground to a minimum depth of 3.6M. It shall be made up to 1.2m sections with internal screw and socket joints and fitted with hardened steel tip and driving cap.
- (viii) Earth plates will not be permitted
- (ix) Where an earth rod is used the earth resistance shall be tested in the manner described in the current edition of the IEE Regulations, by the Sub-Contractor in the presence of the Engineer and the Sub-Contractor shall be responsible for the supply of all test equipment.
- (x) Where copper tape is fixed to the building structure it shall be by means of purpose made non-ferrous saddles which space the conductor away from the structure a minimum distance of 20mm. Fixings, shall be made using purpose made plugs; No fixings requiring holes to be drilled through the tape will be accepted.
- (xi) Joints in copper tape shall be tinned before assembly riveted with a minimum of two copper rivets and seated solid.
- (xii) Where holes are drilled in the earth tape for connection to items of equipment the effective cross sectional area must not be less than required to comply with the IEE regulations.
- (xiii) Bolts, nuts and washers for any fixing to the earth tape must be of non-ferrous material.
- (xiv) Attention is drawn to the need for the earthing metal parts of lighting fittings and for bonding ball joint suspension in lighting fittings.

## 2.16 CABLES AND FLEXIBLE CORDS

All cables used in this Sub-Contract shall be manufactured in accordance with the current appropriate Kenya standard Specification which are as follows:-

P.V.C. Insulated Cables and Flexible Cords	---	Ks 04-192:1988
P.V.C Insulated Armoured Cables	---	Ks 04-194:1990
Armouring of Electric cables	---	Ks 04-290:1987

The successful Sub-Contractor will, at the Engineers discretion be required to submit samples of cables for the Engineers approval; the Engineer reserves the right to call for the cables of an alternative manufacture without any extra cost being incurred.

P.V.C. insulated cables shall be 500/1000 volt grade. No cables smaller than 1.5mm<sup>2</sup> shall be used unless otherwise specified. The installation and the finish of cables shall be as detailed in later clauses. The colour of cables shall conform to the details stated in the "Cable Braid and insulation Colours" Clause.

## 2.17 ARMOURED P.V.C. INSULATED AND SHEATHED CABLES:

Shall be 600/1000 volt grade manufactured to Ks 04-194:1988 and Ks 04-187/188 with copper stranded conductors.

The wire armour of the cable shall be used wholly as an earth continuity conductor and the resistance of the wire armour shall have a resistance not more than twice of the largest current carrying conductor of the cable.

P.V.C./S.W.A./P.V.C. cables shall be terminated using "Telecom" "B" type or approved equal or approved equal glands and a P.V.C. tapered sleeve shall be provided to shroud each gland.

## 2.18 CABLE SUPPORTS, MARKERS AND TILES

All PVC/SWA/PVC cables run inside the building shall be fixed in rising ducts or on ceilings by means of die cast cable hooks or clamps, of appropriate size to suit cables, fixed by studs and back nuts to their channel sections.

Alternatively, fixing shall be by BICC claw type cleating system with die-cast cleats and galvanised mild steel back straps or similar approved equal method. For one or two cables run together the cleats shall be fixed a special channel section supports or backstraps described above which shall in turn be secured to walls or ceilings of ducts by rawbolts.

In excessively damp or corrosive atmospheric conditions special finishes may be required and the Sub-contractor shall apply to the Engineer for further instructions before ordering cleats and channels for such areas.

The above type of hooks and clamps and channels or cleats and blackstraps shall also be used for securing cables in vertical ducts.



Cables supports shall be fixed at 600mm maximum intervals, the supports being supplied and erected under this Sub-contract. Saddles shall not be used for supporting cables nor any other type of fixing other than one of the two methods described above or other system which has received prior approval of the Engineer;

Cables are to be kept clear of all pipe work and the Sub-contractor shall work in close liaison with other services Sub-contractors.

The Sub-Contractor shall include for the provision of fixing of approved type coloured slip on cables end markers to indicate permanently the correct phase and neutral colours on all ends.

Provision shall be made for supplying and fixing approved non-corrosive metal cable markers to be attached to the outside of all PVC/SWA/PVC cables at 15mm intervals indicating cable size and distinction.

Where PVC/SWA/PVC cables are outside the building they shall be laid underground 750mm deep with protecting concrete interlocking cover tiles laid over which shall be provided and laid under this Sub-contract.

All necessary excavations and reinstatement of ground including sanding or trenches will be carried out by the Sub-Contractor, unless otherwise stated.

#### 2.19 PVC INSULATED CABLES

Shall be of non-braided type as CMA reference 6491 x 600/1000/1000-volt grade cables, or equal approved.

PVC cables shall conform to the details of the "Cables and Flexible cords" and "Cable Braid and Insulation Colours" clauses.

#### 2.20 HEAT RESISTING CABLES

Final connections to cookers, water heaters, etc., shall be made using butyl rubber insulated cable as CMA reference 610 butyl (Single core 600/1000 Volt).

This type of cable shall be used in all instances where a temperature exceeding 100°F, but not exceeding 150°F is likely to be experienced. Final connections to all lighting fittings (and other equipment where a temperature in excess of 150°C likely to be experienced) shall be made using silicon rubber insulated cable or equal and approved.

#### 2.21 FLEXIBLE CORDS

Shall be in accordance with the "Cable and Flexible Cords" clause. No cord shall be less than 24/0.2mm in size unless otherwise specified.

Circular white twin TRS flex shall be used for plain pendant fittings up to 100 watts. For all other types of lighting fittings, the flexible cable shall be silicone rubber insulated.

No polythene insulated flexible cable shall be used in any lighting fitting or other appliance (see "Heat Resisting Cables" Clause 30).

## 2.22 CABLE ENDS AND PHASE COLOURS

All cable ends connected up in switchgear, MCB panels etc, shall have the insulation carefully cut back and the ends sealed with Hellerman rubber slip on cable end markers.

The markers shall be of appropriate phase colour for switch and all other live feeds to the details of the "Cable Insulation Colours" clause. Black cable with black end markers shall only be used for neutral cables.

## 2.23 CABLE INSULATION COLOURS

Unless otherwise stated in later clauses the insulation colours shall be in accordance with the following table.

Where other systems are installed the cable colours shall be in accordance with the details stated in the appropriate clause.

<u>SYSTEM</u>	<u>INSULATION COLOUR</u>	<u>CABLE END MARKER</u>
1) Main and Sub-Main		
a) Phase	Red	Red
b) Neutral	Black	Black
2) Sub-Circuits Single Phase		
a) Phase	Red	Red
b) Neutral	Black	Black

## 2.24 SUB-CIRCUIT WIRING

For all lighting and sockets wiring shall be carried out in the "looping in" system and there shall be no joints whatsoever. No lighting circuits shall comprise more than 20 points when protected by 10A MCB. Cables with different cross-section area of copper shall not be used in combination.

Lighting circuits P.V.C. cable.

(i) 1.5mm<sup>2</sup> for all lighting circuits indicated on the drawing.

Power circuits P.V.C cable (minimum sizes).

(ii) 2.5mm<sup>2</sup> for one, two or three 5Amp sockets wired in parallel.

(iii) 2.5mm<sup>2</sup> for one 15Amp socket.

(iv) 2.5mm<sup>2</sup> for maximum of ten switched 13 Amp sockets wired from 30 Amp MCB.

The wiring sizes for lighting circuits and sockets are shown on the drawings. In such cases, the sizes shown on the drawings shall prevail over the sizes specified.

Wiring sizes for other appliances shall be shown on the drawing or specified in later clauses of this specification.

#### 2.25 SPACE FACTOR

The maximum number of cables that may be accommodated in a given size of conduit or trunking or duct is not to exceed the number in Tables B.5 and B.6 or as stated in Regulation B.91, B.117 and B.118 of the I.E.E Regulations whichever is appropriate.

#### 2.26 INSULATION

The insulation resistance to earth and between poles of the whole wiring system, fittings and lumps, shall not be less than the requirements of the latest edition of the I.E.E Regulations. Complete tests shall be made on all circuits by the Sub-contractor before the installations are handed over.

A report of all tests shall be furnished by the Sub-Contractor to the Engineer. The Engineer will then check test with his own instruments if necessary.

#### 2.27 LIGHTING SWITCHES

These shall be mounted flush with the walls, shall be contained in steel or alloy boxes and shall be of the gangs' ratings and type shown in the drawings. They shall be as manufactured by M.K. Electrical Ltd., or other equal and approved to KS 04 – 247: 1988

#### 2.28 SOCKETS AND SWITCHED SOCKETS

These shall be flush pattern in steel/pvc box and shall be of the gangs and type specified in the drawings.

They shall be 13- Amp, 3-pin, shuttered, switched and as manufactured by "M.K. Electrical Co. Ltd.", or other approved equal to KS 04 – 246: 1987

#### 2.29 FUSED SPUR BOXES

These shall be flush, D.P switched as in steel/pvc box and of type and make specified in the drawings complete with pilot light and as manufactured by "M. K. Electrical Company Ltd", or other approved equal. KS 04 – 247: 1988

#### 2.30 COOKER OUTLETS

These shall be flush mounted with 13-A switched socket outlet and neon indicator Lamps.

The cooker control units shall be as manufactured by "M.K. Electrical Company Ltd", or other approved equal KS 04 – 247: 1988

## 2.31 CONNECTORS

Shall be specified in the drawings and appropriate rating. These shall be fitted at all conduit box lighting point outlets for jointing of looped P.V.C cables with flexible cables of specified quality.

## 2.32 LAMPHOLDERS

Shall be of extra heavy H.O skirted and shall be provided for every specified lighting fitting and shall be B.C., E.S., or G.E.S as required. All E.S. and G.E.S. holders shall be heavy brass type (except for plain pendants where the reinforced bakelite type shall be used). The screwed cap of the E.S and G.E.S. holders shall be connected to the neutral.

Where lampholders are supported by flexible cable, the holders shall have "cord grip" arrangements and in the case of metal shades earthing screws shall be provided on each of the holders.

The Sub-Contractor must order the appropriate type of holder when ordering lighting fittings, to ensure that the correct types of holders are provided irrespective of the type normally supplied by the manufacturers.

## 2.33 LAMPS

All lamps shall be suitable for normal stated supply voltage and the number and sizes of lamps detailed on the drawings shall be supplied and fixed. The Sub-Contractor must verify the actual supply voltage with the supply authority before ordering the lamps.

Tungsten filament lamps shall be manufactured in accordance with KS 04 – 112:1978 for general service lamps and KS 04 – 307:1985 for lamps other than general services. Tubular fluorescent lamps shall comply with KS 04 – 464:1982

Pearl lamps shall be used in all fittings unless otherwise specified.

## 2.34 LIGHTING FITTINGS AND STREET LIGHTING LANTERNS

This Sub-Contract shall include for the provision, handling charges, taking the delivery, safe storage, wiring (including internal wiring) assembling and erecting of all lighting fittings shown on the drawings.

All fittings and pendants shall be fixed to the conduit boxes with brass R/H screws. These to be in line with metal finish of fittings. The lighting fittings are detailed for the purpose of establishing a high standard of finish and under no circumstances will substitute fittings be permitted.

In case of rectangular shaped ceiling fittings, the extreme ends of the fittings shall be secured to suitable support in addition to the central conduit box fittings. Supports shall be provided and fixed by the Sub-Contractor.

The whole of the metal work of each lighting fittings shall be effectively bonded to earth. In the case of ball and/or knuckle joints short lengths of flexible cable shall be provided, bonded to the metal work on either side of the joints. If the above provisions are not made by the manufacturers -, the Sub-contractor shall include cost of additional work necessary in his tender. See "Flexible Cords" clause for details of internal wiring of lighting fittings.

Minimum size of internal wiring shall be 20/0.20mm (23/0067). Each lighting fitting shall be provided with number type and size of lamps as detailed on the drawings. It is to be noted that some fittings are suspended as shown on the drawings.

Where two or more points are shown adjacent to each other on the drawings, e.g. socket outlet and telephone outlet, they shall be lined up vertically or horizontally on the centre lines of the units concerned.

Normally, the units shall be lined up on vertical centre lines, but where it is necessary to mount units at low level they shall be lined up horizontally.

#### 2.35 POSITIONS OF POINTS AND SWITCHES

Although the approximate positions of all points are shown on the drawings, enquiry shall be made as to the exact positions of all M.C.B panels, lighting points, socket outlets etc, before work is actually commenced. The Sub-contractor must approach the Architect with regard to the final layout of all lights on the ceiling and walls.

The Sub-contractor must consult with the Engineer in liaison with the Clerk of Works, or the General Foreman on site regarding the positions of all points before fixing any conduit etc. The Sub-Contractor shall be responsible for all alterations made necessary by the non-compliance with the clause.

#### 2.36 STREET/SECURITY OUTDOOR LIGHTING COLUMNS:

The column shall be at a minimum of 225mm in the ground on 75mm thick concrete foundations and the pole up to 150mm shall be surrounded with concrete. The top bracket and plain section of the columns shall be common to and interchangeable with all brackets with maximum mismatching tolerance of 3mm between any pole and bracket. After manufacture and before erection the columns shall be treated with an approved mordant solution which shall be washed off and the whole allowed to dry. Thereafter, the columns shall be painted with one undercoat and two coats of gloss paint to an approved colour. All columns shall be complete with fused cut-outs.

#### 2.37 TIMING CONTROL SWITCH

These shall be installed where shown on the drawings. Photocell timing control circuits which will operate 'on' with a specified level of darkness and 'off' with a given level of light. The initial adjustment will be done with approval of the Electrical Engineer.

#### 2.38 WIRING SYSTEM FOR STREET LIGHTING

Cables shall be as indicated on the drawings, and shall be laid in a cable trench 450mm deep along the road sides and 600mm deep across the roads and 900mm away from the road kerb or 1500mm away from the edges of the road. 'Loop-in' and 'Loop-out' arrangement shall be used at every pole. Wiring to the lanterns on each pole shall be with 1.5mm<sup>2</sup> PVC twin insulated and sheathed cable with earth wire shall be laid at least 600mm below the finished road level on a compact bed of murrum at least 50mm thick and covered with a concrete surrounded 150mm thick.

#### 2.39 METAL CONTROL PILLAR

These shall be metal clad and fabricated as per contract drawings and specification. The Sub-Contractor shall supply, install, test and commission control pillars including supplying, fixing connecting switchgears as detailed on the appropriate drawings.

#### 2.40 CURRENT OPERATED EARTH LEAKAGE CIRCUIT BREAKER

Current operated earth leakage circuit breaker shall conform to B.S.S. 4293:68 rated at 240 volts D.P. 50 cycles A.C. Mains.

The breaker shall be provided with test switch and fitted in weather proof enclosure for surface mounting. The rated load current and earth fault operating current shall be as specified in the drawings. These shall be as manufactured by Crabtree, Siemens or other equal and approved.

#### 2.41 M.V. SWITCHBOARD AND SWITCHGEAR

The switchboard shall be manufactured in accordance with KS04-226 which co-ordinates the requirements for electrical power switchgear and associated apparatus. It is not intended that this K.S. should cover the requirements for specified apparatus for which separate Kenyan Standard exist. All equipment and material used in the switchboard shall be in accordance with the appropriate Kenya Standard.

The switchboard shall comprise the equipment shown on the drawings together with all current transformers, auxiliary fuses, labels, small wiring and interconnections necessary for the satisfactory operation of the switchboard.

The Switchboard shall be of the flush fronted, enclosed, metal clad type with full front or rear access as called for in the particular specifications, suitable for indoor use, sectionalized as necessary to facilitate transport and erection. The maximum height of the switchboard is to be approximately 2.0 metres. A suitable connection chamber containing all field terminals shall be provided at the top or bottom of the switchboard as appropriate.

Before manufacture, the Sub-Contractor shall submit to the consulting Engineer for approval of detailed drawings showing the layout, construction and connection of the switchboard.

All bus-bars and bus-bar connections shall consist of high conductivity copper and be provided in accordance with KS 04-226: 1985. The bus-bars shall be clearly marked with the appropriate phase and neutral colours which should be red, yellow, blue for the phases and black for neutral. The bus-bars shall be so arranged in the switchboard that the extensions to the left and right may be made in the future with ease should the need arise.

Small wiring, which will be neatly arranged and cleated, shall be executed in accordance with B.S. 158 and the insulation of the wiring shall be coloured according to the phase or neutral connection.

Switches and fuse switches, shall be in strict accordance with KS04-183:1978 Class 2 switches. Means of locking the switch in the "OFF" position shall be provided.

All fuse switches shall comply with KS04-183:1978, PARTS 2 and 3 a fault rating at least equal to the fault rating of the switchboard in which they are installed. Cartridge fuse links to KS 04-183:1978 category A.C. 46, class Q1 and fusing factor not exceeding 1.5 shall be supplied with each fused switch.

Mounting arrangements shall be such that individual complete fuse switches may be disconnected and withdrawn when necessary without extensive dismantling work.

When switches are arranged in their formation all necessary horizontal and vertical barriers shall be provided to ensure segregation from adjacent units. Means of locking the switch in the "OFF" position shall be provided.

#### 2.42 STEEL CONDUITS AND STEEL TRUNKING

Conduits shall be of heavy gauge class "B" welded to Standard specification KS 04-180:1985. In no case will conduit smaller than 20mm diameter be used on the works. Conduits installed within buildings shall be black enamelled finish except where specified otherwise. Where installed externally or in damp conditions they shall be galvanised. Conduit fittings, accessories or equipment used in conjunction with galvanised conduits shall also be galvanised or otherwise as approved by the service engineer.

Metal trunking shall be fabricated from mild steel of not less than 18 swg. All sections of trunking shall be rigidly fixed together and attached to the framework or fabric or the building at intervals of not less than 1.2m. Joint trunking shall not overhang fixing points by more than 0.5m.

All trunking shall be made electrically continuous by means of 25 x 3mm copper links across each joint and where the trunking is galvanised, the links shall be made by galvanised flat iron strips.

All trunking fittings (i.e. Bends, tees, etc) shall leave the main through completely clear of obstructions and continuously open except through walls and floors at which points suitable fire resisting barriers shall be provided as may be necessary. The inner edge of bends and tees shall be chamfered where cables larger than 35mm<sup>2</sup> are employed.

Where trunking passes through ceilings and walls the cover shall be solidly fixed to 150mm either side of ceilings and floors and 50mm either side of walls.

Screws and bolts securing covers to trunking or sections of covers together shall be arranged so that damage to cables cannot occur either when fixing covers or when installing cables in the trough.

Where trunking is used to connect switchgear or fuseboards, such connections shall be made by trunking fittings manufactured for this purpose and not by multiple conduit couplings.

Where vertical sections of trunking are used which exceed 4.5m in length, staggered tie off points shall be provided at 4.5m intervals to support the weight of cables.

Unless otherwise stated, all trunking systems shall be painted as for conduit.

Where a wiring system incorporates galvanised conduit and trunking, the trunking shall be deemed to be galvanised unless specified otherwise.

The number of cables to be installed in trunking shall be such as to permit easy drawing in without damage to the cables, and shall in no circumstances be such that a space factor of 45% is exceeded.

Conduit and trunking shall be mechanically and electrically continuous. Conduit shall be tightly screwed between the various lengths so that they butt at the socketed joints. The internal edges of conduit and all fittings shall be smooth, free from burrs and other defects.

Oil and any other insulating substance shall be removed from the screw threads; where conduits terminate in fuse-gear, distribution boards, adaptable boxes, non-spouted switchboxes, etc., they shall, unless otherwise stated, be connected thereto by means of smooth bore male brass bushes, compression washers and sockets. All exposed threads and abrasions shall be painted using an oil paint for black enameled tubing and galvanizing paint for galvanised tubing immediately after the conduits are erected. All bends and sets shall be made cold without altering the section of the conduit.

The inner radius of the bend shall not be less than four (4) times the outside diameter of the conduit. Not more than two right angle bends will be permitted without the inter-position of a draw-in-box. Where straight runs of conduit are installed, draw-in-boxes shall be provided at distances not exceeding 15m. No tees, elbows, sleeves, either of inspection or solid type, will be permitted.

Conduit shall be swabbed out prior to drawing in cables, and they shall be laid so as to drain of all condensed moisture without injury to end connections.

Conduits and trunking shall be run at least 150mm clear of hot water and steam pipes, and at least 75mm clear of cold water and other services unless otherwise approved by the services engineer.

All boxes shall conform to KS 04 – 668: 1986, to be of malleable iron, and black enamelled or galvanised according to the type of conduit specified. All accessory boxes shall have threaded brass inserts.

Box lids where required shall be heavy gauge metal, secured by means of zinc plated or cadmium plated steel screws.

All adaptable boxes and lids of the same size shall be interchangeable. Boxes used on surface work are to be tapped or drilled to line up with the conduit fixed in distance type saddles allowing clearance between the conduit and wall without the need for setting the conduit.

Where used in conjunction with mineral insulated copper sheathed cable, galvanized boxes shall be used and painted after erection.

Draw-in boxes in the floors are generally to be avoided but where they are essential they must be grouped in positions approved by the services engineer and covered and by the suitable floor traps, with non-ferrous trays and covers.

The floor trap covers are to be recessed and filled in with a material to match the floor surface.

The Sub-contractor must take full responsibility for the filling in of all covers, but the filling in material will be supplied and the filling carried out by the main building contractor.

Where buried in the ground outside the building the whole of the buried conduit is to be painted with two coats of approved bitumastic composition before covering up.

Where run on the surface, unpainted fittings and joints shall be painted with two coats of oil bound enamel applied to rust and grease free metalwork.



## 2.43 TESTING ON SITE

The Sub-contractor shall conduct during and at the completion of the installation and, if required, again at the expiration of the maintenance period, tests in accordance with the relevant section of the current edition of the Regulations for the electrical equipment of buildings issued by the I.E.E of Great Britain, the Government Electrical Specification and the Electric Supply Company's By-Laws.

- (a) Tests shall be carried out to prove that all single pole switches are installed in the 'live' conductor.
- (c) Tests shall be carried out to prove that all socket outlets and switched socket outlets are connected to the 'live' conductor in the terminal marked as such, and that each earth pin is effectively bonded to the earth continuity system. Tests shall be carried out to verify the continuity of all conductors of each 'ring' circuit.
- (d) Phase tests shall be carried out on completion of the installation to ensure that correct phase sequence is maintained throughout the installation. Triplicate copies of the results of the above tests shall be provided within 14 days of the witnessed tests and the Sub-contractor will be required to issue to the service engineer the requisite certificate upon completion as required by the regulations referred to above.
- (e) Any faults, defects or omissions or faulty workmanship, incorrectly positioned or installed parts of the installation made apparently by such inspections or tests shall be rectified by the Sub-contractor at his own expense.
- (f) The Sub-contractor shall provide accurate instruments and apparatus and all labour required to carry out the above tests. The instruments and apparatus shall be made available to the services engineer to enable him to carry out such tests as he may require.
- (g) The Sub-contractor shall generally attend on other contractors employed on the project and carry out such electrical tests as may be necessary.
- (h) The Sub-contractor shall test to the services engineer's approval and as specified elsewhere in this specification or in standards and regulations already referred to, all equipment, plant and apparatus forming part of the works and before connecting to any power or other supply and setting to work.
- (i) Where such equipment, etc., forms part of or is connected to a system whether primarily or of an electrical nature or otherwise (e.g. air conditioning system) the Sub-contractor shall attend on and assist in balancing, regulating testing and commissioning, or if primarily an electrical or other system forming part of works, shall balance, regulate, test and commission the system to the service engineer's approval.

## APPENDIX TO GENERAL SPECIFICATIONS OF MATERIALS AND WORKS

The electrical sub-contractor shall comply with the following: -

1. Government Electrical Specifications No. 1 and No. 2.
2. All requirements of Kenya Power Company Limited, and Communications Authority of Kenya (CAK).

SECTION B

PARTICULAR SPECIFICATIONS

OF

MATERIALS AND WORKS

## PARTICULAR SPECIFICATIONS

### 1.00 SITE LOCATION

The site of the proposed works is at APTC IN EMBAKASI, NAIROBI COUNTY

### 2.00 SCOPE OF WORKS

The works to be carried out under this sub-contract comprise supply, installation, testing and commissioning of the following:-

- a) Electrical Works  
This shall include conduiting, cabling, fittings and accessories.
- b) Lightning Protection  
This shall include air terminations, copper tape, junction clamps, test clamps and earthing.
- c) TV Installation  
This shall include the following:-
  - Master Antenna Television (M.A.T.V)
  - Cabling using low attenuation TV co- axial cable
  - TV outlet plates*Unless otherwise stated elsewhere in this document the television sets shall be supplied by others.*

### MATERIALS FOR THE WORKS

Materials shall be as specified in Section D and in the Bills of Quantities of this document which shall be read in conjunction with contract drawings. Alternative materials shall be accepted only after approval by the Project Manager.

### 3.00 SPECIFICATIONS FOR LED LAMPS

All lamps (tubes, bulbs) shall be of LED type comprising of but not limited to the following features:

- i. power factor of at least 0.9 ( $\cos \phi \geq 0.9$ )
- ii. excellent efficacy (Lm/watt)
- iii. operating voltage range of 130 V- 240 V
- iv. Rated life hours  $\geq 25,000$  hours

Bidders MUST attach technical brochures and catalogues of the LED lamps to their bid documents.

SECTION C  
SCHEDULE OF UNIT RATES

## SCHEDULE OF UNIT RATES

1. The tenderer shall insert unit rates against the items in the following schedules and may add such other items as he considers appropriate.
2. The unit rates shall include for supply, transport, insurance, delivery to site, storage as necessary, assembling, cleaning, installing, connecting, profit and maintenance in defects liability and any other obligation under this contract.
3. The unit rates will be used to assess the value of additions or omissions arising from authorized variations to the contract works.
4. Where trade names or manufacturer's catalogue numbers are mentioned in the specification, the reference is intended as a guide to the type of article or quality of material required. Alternative brands of equal and approved quality will be accepted.
5. The prices quoted shall be deemed to include for all obligations under the sub-contract including but not limited to supply of materials, labour, delivery to site, storage on site, installation, testing, commissioning including 16% V.A.T and all taxes applicable at the time of tender.

SCHEDULE OF UNIT RATES

NO	DESCRIPTION	QTY	UNIT	UNIT RATES	
				KSHS	CTS
1	Trenching 750mm depth across a road, laying of cables, Hatari tiling and backfilling for underground cable		LM		
2	Trenching 600mm depth in normal soil, laying of cables, Hatari tiling and backfilling for underground cable		LM		
3	4core, 70.00mm <sup>2</sup> AL/XLPE/SWA/PVC cable to drawn in 100mm Dia. HG PVC diameter conduit.		LM		
4	Supply and Install an 18SWG steel sheets spray painted to approval adaptable box 200mmx200mm to Engineer's approval.		NO		
5	200mm x 50mm, 2 compartment powder coated 'CLIP-ON' metal type trunking as Schneider Electric Kenya, manufacture to approved colour and complete with cover, bends, outlet plates, continuity bonding and all accessories.		LM		

SECTION D  
BILLS OF QUANTITIES



## BILLS OF QUANTITIES

### A) PRICING OF PRELIMINARIES ITEMS.

Prices will be inserted against item of preliminaries in the sub-contractor's Bills of Quantities and specification. These Bills are designated as Bill No.1 in this Section. Where the sub-contractor fails to insert his price in any item he shall be deemed to have made adequate provision for this on various items in the Bills of Quantities. The preliminaries form part of this contract and together with other Bills of Quantities covers for the costs involved in complying with all the requirements for the proper execution of the whole of the works in the contract.

The Bills of Quantities are divided generally into three sections:-

#### a) Preliminaries – Bill 1

Sub-contractors preliminaries are as per those described in section C – sub-contractor preliminaries and conditions of contract. The sub-contractor shall study the conditions and make provision to cover their cost in this Bill. The number of preliminary items to be priced by the Tenderer has been limited to tangible items such as site office, temporary works and others. However the Tenderer is free to include and price any other items he deems necessary taking into consideration conditions he is likely to encounter on site.

#### b) Installation Items and Other Bills - Bill 2

The brief description of the items in these Bills of Quantities should in no way modify or supersede the detailed descriptions in the contract Drawings, conditions of contract and specifications.

The unit of measurements and observations are as per those described in clause 1.05 of the section C.

#### c) Summary

The summary contains tabulation of the separate parts of the Bills of Quantities carried forward with provisional sum, contingencies and any prime cost sums included. The sub-contractor shall insert his totals and enter his grand total tender sum in the space provided below the summary.

This grand total tender sum shall be entered in the Form of Tender provided elsewhere in this document

## B) NOTES FOR BILLS OF QUANTITIES

1. The Bills of Quantities form part of the contract documents and are to be read in conjunction with the contract drawings and general specifications of materials and works.
2. The prices quoted shall be deemed to include for all obligations under the sub-contract including but not limited to supply of materials, labour, delivery to site, storage on site, installation, testing, commissioning including 16% V.A.T and all taxes applicable at the time of tender.
- 3 All prices omitted from any item, section or part of the Bills of Quantities shall be deemed to have been included to another item, section or part.
4. The brief description of the items given in the Bills of Quantities are for the purpose of establishing a standard to which the sub-contractor shall adhere to. Otherwise alternative brands of equal and approved quality will be accepted.  
  
Should the sub-contractor install any material not specified here in before receiving approval from the Project Manager, the sub-contractor shall remove the material in question and, at his own cost, install the proper material.
5. The grand total of prices in the price summary page must be carried forward to the Form of Tender.
1. Tenderers must enclose, together with their submitted tenders, detailed manufacturer's Brochures detailing Technical Literature and specifications on the items they intend to offer.

1. Statement of Compliance

- a) I confirm compliance of all clauses of the General Conditions, General Specifications and Particular Specifications in this tender.
- b) I confirm I have not made and will not make any payment to any person, who can be perceived as an inducement to win this tender.

Signed:.....*for and on behalf of the Tenderer*

Date: .....

Official Rubber Stamp: .....

PROPOSED COMPLETION OF 3No. BLOCKS EACH OF 32No. BEDSITTER UNITS, 14No. TWO-BEDROOMED UNITS AND 4No. THREE-BEDROOMED UNITS AT APTC IN EMBAKASI, NAIROBI COUNTY

ELECTRICAL INSTALLATION WORKS

Item	Description	Qty	Unit	Rate	Amount
	<u>BILL NO. 1: TYPICAL BEDSITTER UNIT</u>				
1.00	Supply, install, test and commission the following ;-				
	<u>LIGHTING POINTS</u>				
1.01	Lighting points wired in 3X1.5 mm <sup>2</sup> SC CU cables drawn in existing concealed 20mm diameter HG P.V.C conduits for:-				
	a) one way switching	3	No.		
	b) two way switching	1	No.		
	<u>SWITCHES</u>				
1.02	10Amps, moulded switch plate as CLIPSAL or approved equivalent				
	a) one gang one way	1	No.		
	b) one gang two way	1	No.		
	c) two gang two way	1	No.		
	d) Bell switch as Schneider or other equal and approved equivalent.	1	No.		
	<u>LIGHTING FITTINGS</u>				
1.03	Lighting fittings complete with energy saving bulbs or tubes as follows:-				
	a) Pendant set comprising of ceiling rose,CG lamp holder and at least 300mm flex cable complete with 22W LED lamp as Philips or approved equivalent	2	No.		
	b) 100W Spherical Screwneck fitting as Thorn or approved equivalent	1	No.		
	c) Electric bell with all accessories as Schneider or other equal and approved equivalent.	1	No.		
2.00	<u>SOCKET OUTLETS AND OTHER POWER POINTS</u>				
2.01	a) 13 Amps. socket outlet points wired ring comprising of 3x2.5 mm sq. sc PVC Cu cables drawn in existing concealed 25mm HG PVC conduits.	3	No.		
	b) 13 Amps. switched chrome coated Twin socket outlet with neon indicator as CLIPSAL or approved equivalent	3	No.		
	SUB TOTAL C/F TO NEXT PAGE				

1NO. BEDSITTER UNIT CONT'D

Item	Description	Qty	Unit	Rate	Amount
	<i>SUB-TOTAL B/F FROM PREVIOUS PAGE</i>				
2.02	a) Cooker point comprising of 3x6mm <sup>2</sup> PVC Copper cables drawn in existing concealed 32mm dia. HG PVC conduits from the CU.	1	No		
	b) Cooker control unit complete with 45 Amps. Switched socket outlet as Crabtree or approved equivalent.	1	No		
	c) Cooker connection unit	1	No.		
2.03	a) Instant water heater point comprising wiring in 3x4.0mm <sup>2</sup> PVC-SC-CU cables in existing concealed PVC 25mm dia. Conduits.	1	No.		
	b) 32 Amps double pole switch with neon indicator as CLIPSAL or approved equivalent for item above.	1	No.		
2.04	a) TV point comprising wiring in CO-AXIAL cable drawn in existing concealed HG PVC conduit concealed PVC conduits	1	No.		
	b) TV outlet plate as Clipsal or approved equivalent	1	No.		
3.00	<u>INTERNAL POWER DISTRIBUTION</u>				
	Supply, install, test and commission the following ;-				
3.01	4 ways SP&N, flush mounted consumer unit complete with 100A integral isolator as ABB or approved equivalent complete with all accessories but excluding MCBs.	1	No.		
3.02	MCB's rated at 500Vac for item 3.01 above as Schneider or approved equivalent as the following:				
	(a) 10A, SP	1	No.		
	(b) 20A, SP	1	No.		
	(c) 32A, SP	1	No.		
	(d) 45A, SP	1	No.		
3.03	3x10 mm <sup>2</sup> SC PVC Cu submains cables drawn in existing 38mm dia. Conduit c/w all necessary installation accessories	20	LM		
A	TOTAL FOR 1NO. BEDSITTER UNIT				
B	TOTAL FOR BILL NO. 1: 32No. BEDSITTER UNITS ( A x 32) C/F TO COLLECTION PAGE				

**BILL NO. 2: TYPICAL 2BEDROOM UNIT**

Item	Description	Qty	Unit	Rate	Amount
1.00	Supply, install, test and commission the following ;-  <p align="center"><u>LIGHTING POINTS</u></p> Lighting points wired in 3X1.5 mm <sup>2</sup> SC CU cables drawn in existing concealed 20mm diameter HG P.V.C conduits for:- a) one way switching b) two way switching  <p align="center"><u>SWITCHES</u></p> 10Amps, moulded ivory switch plate as CLIPSAL or approved equivalent a) one gang two way b) two gang one way c) Bell switch as Schneider or other equal or approved equivalent.  <p align="center"><u>LIGHTING FITTINGS</u></p> Lighting fittings complete with energy saving bulbs or tubes as follows:- a) Pendant set comprising of ceiling rose,CG lamp holder and at least 300mm flex cable complete with 22W LED lamp as Philips or approved equivalent b) 100W Spherical Screwneck fitting as Thorn or approved equivalent c) Electric bell with all accessories as Schneider or other equal and approved equivalent.				
1.01		3	No.		
		3	No.		
1.02		6	No.		
		1	No.		
		1	No.		
2.03		4	No.		
		1	No.		
		1	No.		
2.00	<u>SOCKET OUTLETS AND OTHER POWER POINTS</u>				
2.01	a) 13 Amps. socket outlet points wired ring comprising of 3x2.5 mm sq. sc PVC Cu cables drawn in existing concealed 25mm HG PVC conduits.	5	No.		
	b) 13 Amps. switched chrome coated Twin socket outlet with neon indicator as CLIPSAL or approved equivalent	5	No.		
2.02	a) Cooker point comprising of 3x6mm <sup>2</sup> PVC Copper cables drawn in existing concealed 32mm dia. HG PVC conduits from the CU.	1	No		
SUB TOTAL C/F TO NEXT PAGE					

1No. 2BEDROOMED UNIT CONT'D

Item	Description	Qty	Unit	Rate	Amount
	<i>SUB-TOTAL B/F FROM PREVIOUS PAGE</i>				
	b) Cooker control unit complete with 45 Amps. Switched socket outlet as Crabtree or approved equivalent.	1	No		
	c) Cooker connection unit	1	No.		
2.03	a) Instant water heater point comprising wiring in 3x4.0mm <sup>2</sup> PVC-SC-CU cables in existing concealed PVC 25mm dia. Conduits.	1	No.		
	b) 32 Amps double pole switch with neon indicator as CLIPSAL or approved equivalent for item above.	1	No.		
2.04	a) TV point comprising wiring in CO-AXIAL cable drawn in existing concealed HG PVC conduit concealed PVC conduits	1	No.		
	b) TV outlet plate as Clipsal or approved equivalent	1	No.		
3.00	<u>INTERNAL POWER DISTRIBUTION</u>				
	Supply, install, test and commission the following :-				
3.01	4 ways SP&N, flush mounted consumer unit complete with 100A integral isolator as ABB or approved equivalent complete with all accessories but excluding MCBs.	1	No.		
3.02	MCB's rated at 500Vac for item 3.01 above as Schneider or approved equivalent as the following:				
	(a) 10A, SP	1	No.		
	(b) 20A, SP	1	No.		
	(c) 32A, SP	1	No.		
	(d) 45A, SP	1	No.		
3.03	3x10 mm <sup>2</sup> SC PVC Cu submains cables drawn in existing 38mm dia. Conduit c/w all necessary installation accessories	20	LM		
A	TOTAL FOR 1No. TYPICAL TWO-BEDROOMED UNIT				
B	TOTAL FOR BILL NO. 2: 14No. TWO-BEDROOMED UNITS ( Ax14) C/F TO COLLECTION PAGE				

**BILL No. 3: TYPICAL 3BEDROOM UNIT**

Item	Description	Qty	Unit	Rate	Amount
1.00	Supply, install, test and commission the following ;-				
	<u>LIGHTING POINTS</u>				
1.01	Lighting points wired in 3X1.5 mm <sup>2</sup> SC CU cables drawn in existing concealed 20mm diameter HG P.V.C conduits for:-				
	a) one way switching	3	No.		
	b) two way switching	5	No.		
	<u>SWITCHES</u>				
1.02	10Amps, moulded ivory switch plate as CLIPSAL or approved equivalent				
	a) one gang one way	2	No.		
	a) one gang two way	6	No.		
	b) two gang two way	2	No.		
	c) Bell switch as Schneider or other equal or approved equivalent.	1	No.		
	<u>LIGHTING FITTINGS</u>				
2.03	Lighting fittings complete with energy saving bulbs or tubes as follows:-				
	a) Pendant set comprising of ceiling rose,CG lamp holder and at least 300mm flex cable complete with 22W LED lamp as Philips or approved equivalent	5	No.		
	b) 100W Spherical Screwneck fitting as Thorn or approved equivalent	2	No.		
	c) Electric bell with all accessories as Schneider or other equal and approved equivalent.	1	No.		
2.00	<u>SOCKET OUTLETS AND OTHER POWER POINTS</u>				
2.01	a) 13 Amps. socket outlet points wired ring comprising of 3x2.5 mm sq. sc PVC Cu cables drawn in concealed 25mm HG PVC conduits.	6	No.		
	b) 13 Amps. switched chrome coated Twin socket outlet with neon indicator as CLIPSAL or approved equivalent	6	No.		
2.02	a) Cooker point comprising of 3x6mm <sup>2</sup> PVC Copper cables drawn in concealed 32mm dia. HG PVC conduits from the CU.	1	No		
SUB TOTAL C/F TO NEXT PAGE					



1No. 3BEDBEDROOMED UNIT CONT'D

Item	Description	Qty	Unit	Rate	Amount
	<i>SUB-TOTAL B/F FROM PREVIOUS PAGE</i>				
	b) Cooker control unit complete with 45 Amps. Switched socket outlet as Crabtree or approved equivalent.	1	No		
	c) Cooker connection unit	1	No.		
2.03	a) Instant water heater point comprising wiring in 3x4.0mm <sup>2</sup> PVC-SC-CU cables in concealed PVC 25mm dia. Conduits.	2	No.		
	b) 32 Amps double pole switch with neon indicator as CLIPSAL or approved equivalent for item above.	2	No.		
2.04	a) TV point comprising wiring in CO-AXIAL cable drawn in concealed HG PVC conduit concealed PVC conduits	1	No.		
	b) TV outlet plate as Clipsal or approved equivalent	1	No.		
3.00	<u>INTERNAL POWER DISTRIBUTION</u>				
	Supply, install, test and commission the following :-				
3.01	4 ways SP&N, flush mounted consumer unit complete with 100A integral isolator as ABB or approved equivalent complete with all accessories but excluding MCBs.	1	No.		
3.02	MCB's rated at 500Vac for item 3.01 above as Schneider or approved equivalent as the following:				
	(a) 10A, SP	1	No.		
	(b) 20A, SP	1	No.		
	(c) 32A, SP	1	No.		
	(d) 45A, SP	1	No.		
3.03	3x10 mm <sup>2</sup> SC PVC Cu submains cables drawn in existing 38mm dia. Conduit c/w all necessary installation accessories	20	LM		
SUB-TOTAL FOR 1No. 3BEDROOMED UNIT					
TOTAL FOR BILL No. 3: 4No. THREE-BEDROOMED UNITS C/F TO COLLECTION PAGE					

**BILL No. 4: COMMON BUILDING SERVICES**

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Kshs)
1.00	Supply, install, test and commission the following ;-				
	<u>LIGHTING POINTS</u>				
1.01	Lighting points wired in 3X1.5 mm <sup>2</sup> SC CU cables drawn in existing concealed 20mm diameter HG P.V.C conduits for:-				
	a) two way switching	56	No.		
	<u>SWITCHES</u>				
1.02	10Amps, moulded ivory switch plate as CLIPSAL or approved equivalent				
	a) One gang two way	2	No.		
	b) Two gang two way	8	No.		
	c) Intermediate switch	19	No.		
	<u>LIGHTING FITTINGS</u>				
2.03	Lighting fittings complete with energy saving bulbs or tubes as follows:-				
	a) 40W LED outdoor bulkhead with opal Diffuser,grill and Visor as Massive Cleveland or approved equivalent	8	No.		
	b) 36W LED 1200mm corrosion-proof florescent bulkhead as Thorn or approved equivalent	48	No.		
2.00	<u>SOCKET OUTLETS AND OTHER POWER POINTS</u>				
2.01	a) 13 Amps. socket outlet points wired ring comprising of 3x2.5 mm sq. sc PVC Cu cables drawn in concealed 25mm HG PVC conduits.	6	No.		
	b) 13 Amps. switched chrome coated Twin socket outlet with neon indicator as CLIPSAL or approved equivalent	6	No.		
2.02	Water Booster Pump wired in 6.0mm <sup>2</sup> 4Core PVC/SWA/PVC armoured cu cables drawn underground c/w with all installation accessories (Approximate distance 30m)	1	No.		
3.03	<u>MATV SYSTEM</u>				
	a) Masthead amplifier (booster) unit	1	No.		
	b) 8 Way splitter unit as Ellies or equivalent	4	No.		
	c) Combined unit as Ellies or equivalent	2	No.		
	<b>SUB TOTAL C/F TO NEXT PAGE</b>				

COMMON BUILDING SERVICES CONT'D

Item	Description	Qty	Unit	Rate	Amount
	<i>SUB-TOTAL B/F FROM PREVIOUS PAGE</i>				
	d) 5A high voltage guard as sollatec	1	No.		
	e) Security lock box made of 16SWG steel sheet with auto lacquer finish for the equipment complete with Yale locks	1	No.		
	f) Adjustable antenna mast	1	No.		
	g) DSTV System complete with all installation accessories	1	No.		
	h) 16 SWG, (300 x 300 x 100) mm galvanised steel draw box	16	No.		
4.00	<u>INTERNAL POWER DISTRIBUTION</u>				
	Supply, install, test and commission the following ;-				
4.01	4 ways SP&N, flush mounted consumer unit complete with 100A integral isolator as ABB or approved equivalent complete with all accessories but excluding MCBs.	1	No.		
4.02	MCB's rated at 500Vac for item 3.01 above as Schneider or approved equivalent as the following:				
	(a) 10A, SP	5	No.		
	(b) 20A, SP	1	No.		
	(c) 32A, SP	1	No.		
4.03	3x10 mm <sup>2</sup> SC PVC Cu submains cables drawn in existing 38mm dia. Conduit c/w all necessary installation accessories	20	LM		
5.00	<u>METERBOARD</u>				
	Meter board to accomodate 51No. KPLC meters, 1No. Consumer unit, 51No. SPN switch fuses, fabricated from 16 gauge SWG to be semi-recessed in the wall of the stair case, to be painted with one coat of primer paint and two coats of finishing paint of an approved colour and quality, complete with 300A TPN enclosed bus bars and meter viewing window in Perspex to be provided in front of the KWH meters as Schneider or approved equivalent.	2	No.		
5.01	Install inside the meter board, the following: a) 9-way SPN consumer unit for stair case and security lighting as SCHNEIDER or approved equivalent	2	No.		
	<i>SUB TOTAL C/F TO NEXT PAGE</i>				

COMMON BUILDING SERVICES CONT'D

Item	Description	Qty	Unit	Rate	Amount
	<i>SUB-TOTAL B/F FROM PREVIOUS PAGE</i>				
	b) MCB's rated at 500Vac for item 5.01(b) above as Schneider or approved equivalent as the following:				
	(i) 10A, SP	5	No.		
	(ii) 20A, SP	1	No.		
	(iii) 45A, SP	1	No.		
	(iv) Blanking plates	2	No.		
	c) 50A SPN KMBG switch fuse as Crabtree or approved equivalent complete with HRC fuse	62	No.		
	d) 250A TPN MCCB main switch as Crabtree or approved equivalent	2	No.		
	e) 100mm diameter HG PVC conduit encased in concrete surround for KPLC service line	35	M		
	g) 3x10 mm <sup>2</sup> SC PVC copper cables drawn in 38mm dia. Conduits	20	LM		
	h) 100mm diameter HG PVC conduit encased in concrete surround for KPLC service line	35	M		
	i) 3x10 mm <sup>2</sup> SC PVC copper cables drawn in 38mm dia. Conduits	20	LM		
6.00	<u>EARTHING</u>				
	a) 300 x 300 x 300mm earthing chamber complete with removable cover	2	No.		
	b) Pure copper earth rod (1500mm x 16mm)	2	No.		
	c) Driving head for earth rod	2	No.		
	d) Earth rod coupling	2	No.		
	e) 50mm <sup>2</sup> single core green PVC insulated copper earth lead	30	M		
7.00	<u>LIGHTNING PROTECTION</u>				
	a) 25x3mm copper tape down conductor supported at intervals of 1M	80	M		
	b) Galvanized steel conduit 32mm diameter at ground floor for item (a) above	4	No.		
	c) Earthing chamber 300x300mm masonry type complete with removable cover	4	No.		
	d) 16mm x 1500mm pure copper earth rod complete with clamp and all the necessary accessories	4	No.		
	e) Air termination (600mm long pure copper with spikes) mounted on brakcet as FURSE	4	No.		
	<b>TOTAL FOR BILL No. 4: COMMON BUILDING SERVICES C/F TO COLLECTION PAGE</b>				

COLLECTION PAGE

ITEM	DESCRIPTION	AMOUNT (KSHS)
1.00	Bill No. 1: 32No. Bedsitter Units	
2.00	Bill No. 2: 14No. 2 Bedroom Units	
3.00	Bill No. 3: 4No. 3 bedroomed units	
4.00	Bill No. 4: Common building services	
A	TOTAL ESTIMATE FOR ELECTRICAL WORKS FOR 1No. BLOCK	
B	SUB-TOTAL ESTIMATE FOR ELECTRICAL WORKS FOR 3No. BLOCKS (Ax3)	
5.00	Povisional Sum for Outdoor Lighting	1,200,000
6.00	Povisional Sum for Kenya Power Service Line Connection	2,500,000
7.00	Allow Contingency sum of 1,000,000/-	1,000,000
	TOTAL ESTIMATE FOR ELECTRICAL WORKS FOR 3No. HOUSING BLOCKS	

Total Amount in Words (Kenya Shillings).....

.....

Bidder's Name & Official Stamp .....

P.O. Box.....

Signature.....Date.....

PIN NO.....V.A.T Certificate NO.....

Witness.....Address.....

Signature of Witness.....Date.....

SECTION E  
TECHNICAL SCHEDULE  
OF  
ITEMS TO BE SUPPLIED

# TECHNICAL SCHEDULE

The technical schedule shall be submitted by tenderers to facilitate and enable the Project Manager to evaluate the tenders, especially where the tenderer intends to supply or has based his

tender sum on equipment which differs in manufacture, type or performance from the specifications indicated by the Project Manager.

Any tender without this shall be disqualified.

TECHNICAL SCHEDULE OF ITEMS TO BE SUPPLIED  
(To be completed by Tenderer)

ITEM	DESCRIPTION	TYPE/MAKE	COUNTRY OF ORIGIN
1.	Distribution Boards/ Consumer Units		
2.	Lighting switches		
3.	Socket outlets		
4	Lighting fittings; a) 1200mm, IP65 twin LED fitting 48W with a Neutral White (4000°K) color temperature emitting up to 4,320 lumens b) LED ceiling light surface mounted 6" surface mounted 18W, IP44 with warm white output		
5	Electrical cables		
6	MCCBs		
7	MCBs		



TESTING & COMMISSIONING GUIDE  
FOR  
ELECTRICAL INSTALLATION WORKS ON SITE

Issued by:

The Chief Engineer (Electrical),  
Ministry of Lands, Public works, Housing & Urban Development,  
State Department for Public Works,  
P. O.BOX 41191 – 00100 GPO,  
NAIROBI.

MINISTRY OF LANDS, PUBLIC WORKS, HOUSING & URBAN DEVELOPMENT

STATE DEPARTMENT FOR PUBLIC WORKS

(DIRECTORATE OF ELECTRICAL ENGINEERING)

TESTING AND COMMISSIONING OF ELECTRICAL INSTALLATION WORKS ON SITE.

PROJECT NAME.....

W.P ITEM No.....JOB No.....

PROJECT SITE.....

CLIENT.....

The sub-contractor shall test in accordance with the relevant section of IET regulations, Rule 3 of the Electrical Power Act for additional tests not covered by the regulations, Government Electrical specifications I & II and the Kenya Power Company Ltd by-laws.

A PRELIMINARY CHECKS

The Engineer shall check to establish the following data:-

ITEM	DESCRIPTION		REMARKS
(i)	Type of installation (New/Renovation/Addition/ to existing installation)		
(ii)	a) Power supply 240V/415V/11KV		.....
	b) Frequency of the mains supply		.....
	c) Installation power factor		.....
(iii)	Method of Metering (New /Monitoring/Existing meter)		
(iv)	Are Testing/Measuring instruments available		
(v)	Are there maintenance/operational manuals for specialized systems (if any)		
(vi)	List of 'as installed drawings'	Drg No.	Description

**B TESTS**

ITEM	TEST DESCRIPTION	OBSERVATIONS/ RESULTS	REMARKS
1	Tests shall be carried out to ensure:		
	a) All fuses and single pole switches are installed in live conductor		
	b) All outlets and switched socket outlets are connected to 'LIVE' conductor in the Terminal marked so and each earth pin effectively bonded to earth continuity system		
	c) Verify continuity of all final conductors of each 'Ring' circuit. (0.05 to 0.8Ω)	.....Ohms	
	d) All radial circuits emanate from respective distribution boards/consumer units and that they do not supply any other Equipment		
	e) The correct phase sequence is maintained throughout the installation		
	f) Effective 'Discrimination' in the arrangement of protective devices. i.e. a fault in the furthest power point/Lighting point should not blow or trip Fuses/MCBs respective in the Meter board.		
2	Inspect to ensure:		
	a) No terminal in the Ceiling Rose is 'LIVE' when the corresponding switch is in the off position.		
	b) All conduit termination conduit boxes, Consumer unit, DB's and Adaptable boxes have smooth edges and are properly bushed.		
	c) All fixed metal works close to Electrical installation are bonded to earth continuity conductor.		
	d) All Fuse ways and Circuit breakers for final sub circuits are properly labeled		

B TESTS CONT'D

ITEM	TEST DESCRIPTION	OBSERVATIONS/ RESULTS	REMARKS
3	<p>Carry out the following tests:</p> <p>a) Insulation Resistance tests</p> <p>    i) Between phases</p> <p>        a) R -Y .....MΩ</p> <p>        b) R -B .....MΩ</p> <p>        c) B-Y .....MΩ</p> <p>    ii) Phase to Neutral</p> <p>        a) R - N .....MΩ</p> <p>        b) R - N .....MΩ</p> <p>        c) B - N .....MΩ</p> <p>    iii) Phase to Earth</p> <p>        a) R - E .....MΩ</p> <p>        b) R -E .....MΩ</p> <p>        c) B -E .....MΩ</p> <p>Minimum thresholds for above and for:</p> <p>    i) ELV circuits (SELV &amp; PELV) = 0.25 MΩ</p> <p>    ii) LV Circuits up to 500V = 0.5 MΩ</p> <p>    iii) LV Circuits above 500V = 1 MΩ</p>		
	<p>b) Earth continuity conductor impedance (0.005 to 2Ω)</p>	<p>.....Ohms</p>	
	<p>c) Earth fault Loop impedance (0 - 2000 Ω)</p>	<p>.....Ohms</p>	
	<p>d) Earth Electrode resistance (Less than 4Ω)</p>	<p>.....Ohms</p>	
	<p>e) Earth Lead resistance (Less than 4Ω)</p>	<p>.....Ohms</p>	
	<p>f) The operation of protection MCCBS &amp; MCBS (Tripping under faulty conditions)</p>		
	<p>g) Check the mechanical toggling (make &amp; break) of all the switches to installed accessories.</p>		
4	<p>Underground cabling, Check for:</p> <p>i) Continuity of the phases</p> <p>ii) Factory tests done (avail certification)</p> <p>iii) Proper termination</p> <p>iv) Route markers</p>		

B TESTS CONT'D

ITEM	TEST DESCRIPTION	OBSERVATIONS/ RESULTS	REMARKS	
5	Installed load			
	i) Lighting points (No.)			
	ii) Socket outlets (No.)			
	iii) Motors (Give rating)			
	iv) Other machines (Attach list if more)			
	Item	Description	Rating	
6	Type of Earthing: TN-C/TN-S/ TN-C-S/TT/IT.			
7	LV switchboard: The board shall be checked to ascertain the following			
	i) Rating of the switchboard			
	ii) Rating of main incomer MCCB			
	iii) Form of construction (1/2B/3B/4)			
	iv) Degree of protection (IP rating)			
	v) Nameplates for identification of all circuits entering/leaving switchgear			
	vi) Proper Electrical & Mechanical operation of functional parts i.e MCCBs, Indicating meters, CTs & VTs .			
	vii) Check cable terminations, type & terminals			
	viii) General comments on the appearance of the finished mechanical assembly including welding, full nuts & tightness of bolted parts.			
8	Fireman's switch.			
	i) Make and manufacturer			
	ii) The rating of the switch			
	iii) Test for the Electrical and Mechanical operation of the switch			
	iv) State the types of loads supported by the maintained board on the switch.			
	** see foot note			



**SECTION B**  
**GENERAL MECHANICAL SPECIFICATIONS**

**SECTION B**

**GENERAL MECHANICAL SPECIFICATION**

<b>CLAUSE</b>	<b>DESCRIPTION</b>	<b>PAGE</b>
1	GENERAL.....	MECH 9
2	QUALITIES OF MATERIALS.....	MECH 9
3	REGULATIONS AND STANDARDS.....	MECH 9
4	ELECTRICAL REQUIREMENTS.....	MECH 9
5	TRANSPORT AND STORAGE.....	MECH 10
6	SITE SUPERVISION.....	MECH 10
7	INSTALLATIONS.....	MECH 10
8	TESTING.....	MECH 10
9	COLOUR CODING.....	MECH 11
10	WELDING.....	MECH 11-12



## GENERAL MECHANICAL SPECIFICATION

### 1 General

This section specifies the general requirement for plant, equipment and materials forming part of the Sub-contract Works and shall apply except where specifically stated elsewhere in the Specification or on the Contract Drawings.

### 2 Quality of Materials

All plant, equipment and materials supplied as part of the Sub-contract Works shall be new and of first-class commercial quality, shall be free from defects and imperfections and where indicated shall be of grades and classifications designated herein.

All products or materials not manufactured by the Sub-contractor shall be products of reputable manufacturers and so far as the provisions of the Specification is concerned shall be as if they had been manufactured by the Sub-contractor.

Materials and apparatus required for the complete installation as called for by the Specification and Contract Drawings shall be supplied by the Sub-contractor unless mention is made otherwise.

Materials and apparatus supplied by others for installation and connection by the Sub-contractor shall be carefully examined on receipt. Should any defects be noted, the Sub-contractor shall immediately notify the Engineer.

Defective equipment or that damaged in the course of installation or tests shall be replaced as required to the approval of the Engineer.

### 3 Regulations and Standards

The Sub-contract Works shall comply with the current editions of the following:

- a) The Kenya Government Regulations.
- a) The United Kingdom Institution of Electrical Engineers (IEE) Regulations for the Electrical Equipment of Buildings.
- b) The United Kingdom Chartered Institute of Building Services Engineers (CIBSE) Guides.
- c) British Standard and Codes of Practice as published by the British Standards Institution (BSI)
- e) The Local Council By-laws.
- f) The Electricity Supply Authority By-laws.
- g) Local Authority By-laws.
- h) The Kenya Building Code Regulations.
- i) The Kenya Bureau of Standards

### 4 Electrical Requirements

Plant and equipment supplied under this Sub-contract shall be complete with all necessary motor starters, control boards, and other control apparatus. Where control panels incorporating several starters are supplied, they shall be complete with a main isolator.

The supply power up to and including local isolators shall be provided and installed by the Electrical Sub-contractor. All other wiring and connections to equipment shall form part of this Sub-contract and be the responsibility of the Sub-contractor.

The Sub-contractor shall supply three copies of all schematic, cabling and wiring diagrams for the Engineer's approval.

The starting current of all electric motors and equipment shall not exceed the maximum permissible starting currents described in the Kenya Power and Lighting Company (KPLC) By-laws.  
All electrical plant and equipment supplied by the Sub-contractor shall be rated for the supply voltage and frequency obtained in Kenya, that is 415 Volts, 50Hz, 3-Phase or 240Volts, 50Hz, 1-phase.

Any equipment that is not rated for the above voltages and frequencies shall be rejected by the Engineer.

5 **Transport and Storage**

All plant and equipment shall, during transportation be suitably packed, crated and protected to minimize the possibility of damage and to prevent corrosion or other deterioration.

On arrival at site all plant and equipment shall be examined and any damage to parts and protective priming coats made good before storage or installation.

Adequate measures shall be taken by the Sub-contractor to ensure that plant and equipment do not suffer any deterioration during storage.

Prior to installation all piping and equipment shall be thoroughly cleaned.

If, in the opinion of the Engineer any equipment has deteriorated or been damaged to such an extent that it is not suitable for installation, the Sub-contractor shall replace this equipment at his own cost.

6 **Site Supervision**

The Sub-contractor shall ensure that there is an English-speaking supervisor on the site at all times during normal working hours.

7 **Installation**

Installation of all special plant and equipment shall be carried out by the Sub-contractor under adequate supervision from skilled staff provided by the plant and equipment manufacturer or his appointed agent in accordance with the best standards of modern practice and to the relevant regulations and standards described under Clause 2.03 of this Section.

8 **Testing**

8.1 **General**

The Sub-contractor's attention is drawn to Part 'C' Clause 1.38 of the "Preliminaries and General Conditions".

8.2 **Material Tests**

All material for plant and equipment to be installed under this Sub-contract shall be tested, unless otherwise directed, in accordance with the relevant B.S Specification concerned.

For materials where no B.S. Specification exists, tests are to be made in accordance with the best modern commercial methods to the approval of the Engineer, having regard to the particular type of the materials concerned.

The Sub-contractor shall prepare specimens and performance tests and analyses to demonstrate conformance of the various materials with the applicable standards.

If stock material, which has not been specially manufactured for the plant and equipment specified is used, then the Sub-contractor shall submit satisfactory evidence to the Engineer that such materials conform to the requirements stated herein in which case tests of material may be partially or completely waived.

Certified mill test reports of plates, piping and other materials shall be deemed acceptable.

### 8.3 Manufactured Plant and Equipment – Work Tests

The rights of the Engineer relating to the inspection, examination and testing of plant and equipment during manufacture shall be applicable to the Insurance Companies or Inspection Authorities so nominated by the Engineer.

The Sub-contractor shall give two weeks' notice to the Engineer of the manufacturer's intention to carry out such tests and inspections.

The Engineer or his representative shall be entitled to witness such tests and inspections. The cost of such tests and inspections shall be borne by the Sub-contractor.

Six copies of all test and inspection certificates and performance graphs shall be submitted to the Engineer for his approval as soon as possible after the completion of such tests and inspections.

Plant and equipment which is shipped before the relevant test certificate has been approved by the Engineer shall be shipped at the Sub-contractor's own risk and should the test and inspection certificates not be approved; new tests may be ordered by the Engineer at the Sub-contractor's expense.

### 8.4 Pressure Testing

All pipe work installations shall be pressure tested in accordance with the requirements of the various sections of this Specification. The installations may be tested in sections to suit the progress of the works but all tests must be carried out before the work is buried or concealed behind building finishes. All tests must be witnessed by the Engineer or his representative and the Sub-contractor shall give 48 hours' notice to the Engineer of his intention to carry out such tests.

Any pipe work that is buried or concealed before witnessed pressure tests have been carried out shall be exposed at the expense of the Sub-contractor and the specified tests shall then be applied.

The Sub-contractor shall prepare test certificates for signature by the Engineer and shall keep a progressive and up-to-date record of the section of the work that has been tested.

### 08.5 Shop drawings

Before manufacture or fabrication is commenced the contractor shall submit Two copies of detailed drawings of all water tanks, fire hose reel pump, water booster pump and any other equipment including their components showing all pertinent information including sizes, capacities, construction details, etc., as may be required to determine the suitability of the equipment for the approval of the Engineer. Approval of the detailed drawings shall not relieve the contractor of the full responsibility of errors or the necessity of checking the drawings himself or of furnishing the materials and equipment and performing the work required by the plans and specifications.

### 9 Colour Coding

Unless stated otherwise in the Particular Specification all pipe work shall be color coded in accordance with the latest edition of B.S 1710 and to the approval of the Engineer or Architect.

### 10 Welding

#### 10.1 Preparation

Joints to be made by welding shall be accurately cut to size with edges sheared, flame cut or machined to suit the required type of joint. The prepared surface shall be free from all visible defects such as lamination, surface imperfection due to shearing or flame cutting operation, etc., and shall be free from rust scale, grease and other foreign matter.

#### 10.2 Method

All welding shall be carried out by the electric arc processing using covered electrodes in accordance with



B.S. 639.

Gas welding may be employed in certain circumstances provided that prior approval is obtained from the Engineer.

10.3 Welding Code and Construction

All welded joints shall be carried out in accordance with the following Specifications:

a) Pipe Welding

All pipe welds shall be carried out in accordance with the requirements of B.S.806.

b) General Welding

All welding of mild steel components other than pipework shall comply with the general requirements of B.S. 1856.

10.4.1 Welders Qualifications

Any welder employed on this Sub-contractor shall have passed the trade tests as laid down by the Government of Kenya.

The Engineer may require to see the appropriate certificate obtained by any welder and should it be proved that the welder does not have the necessary qualifications the Engineer may instruct the Sub- contractor to replace him by a qualified welder.

SECTION C  
PARTICULAR SPECIFICATIONS FOR PLUMBING AND DRAINAGE  
SPECIFICATIONS

**GENERAL SPECIFICATIONS FOR PLUMBING AND DRAINAGE  
INSTALLATION WORK**

**PARTICULAR PLUMBING AND DRAINAGE SPECIFICATIONS**

<b>CLAUSE No.</b>	<b>DESCRIPTION</b>	<b>PAGE</b>
1.1	General.....	MECH 15
1.2	Materials and standards.....	MECH 15
1.2.1	Pipework and Fittings.....	MECH 15
1.2.2	Valves.....	MECH 16
1.2.3	Waste Fitment Traps.....	MECH 17
1.2.4	Pipe Supports.....	MECH 17
1.2.5	Sanitary Appliances.....	MECH 19
1.2.6	Pipe Sleeves.....	MECH 15
1.3	Installation.....	MECH 15
1.3.1	General.....	MECH 15
1.3.2	Above Ground Installation.....	MECH 15
1.4	Testing Inspection.....	MECH 19
1.4.1	Site Tests – Pipework Systems.....	MECH 19
1.4.2	Site Test – Performance.....	MECH 20
1.5	sterilization of Hot and Cold-Water System.....	MECH 20

## **1.1 GENERAL** **SITE LOCATION**

The site of the proposed works is at **AP Training School Embakasi, Nairobi County**

### **SCOPE OF WORKS**

The works to be carried out under this sub-contract comprise Supply, installation, testing and commissioning of the following: -

- a) **Plumbing and Drainage**
- b) **Sanitary Fittings**
- c) **Fire Services**
- d) **Water Tanks and reticulation**

### **BROCHURES FOR DEVICES**

For consideration and qualification tenderers shall, at their own cost, provide colored manufacturer's brochures detailing technical literature and specifications where applicable

This section specifies the general requirements for plant, equipment and materials forming part of the plumbing and drainage installations.

## **1.2 MATERIALS AND STANDARDS**

### **1.2.1 Pipework and Fittings**

Pipework materials are to be used as follows:

#### **i. Galvanized Steel Pipework**

Galvanized steel pipe works up to 65mm nominal bore shall be manufactured in accordance with B.S. 1387 Medium Grade, with tapered pipe threads in accordance with B.S. 21. All fittings shall be malleable iron and manufactured in accordance with B.S. 143.

Pipe joints shall be screwed and socketed and sufficient coupling unions shall be allowed so that fittings can be disconnected without cutting the pipe. Running nipples and long screws shall not be permitted unless exceptionally approved by the Engineer.

Galvanized steel pipe work, 80mm nominal bore up to 150mm nominal bore shall be manufactured to comply in all respects with the specification for 65mm pipe, except that screwed and bolted flanges shall replace unions and couplings for the jointing of pipes to valves and other items of plant. All flanges shall comply with the requirements of B.S. 10 to the relevant classifications contained hereinafter under Section 'C' of the Specification.

Galvanizing shall be carried out in accordance with the requirements of B.S. 1387 and B.S. 143 respectively.

#### **ii. Copper Tubing**

All copper tubing shall be manufactured in accordance with B.S. 2871 from C.160 'Phosphorous De-oxidized Non-Arsenical Copper' in accordance with B.S. 1172.

Pipe joints shall be made with soldered capillary fittings and connections to equipment shall be with compression fittings manufactured in accordance with B.S. 864.

#### **iii. PPR piping**

Polypropylene Random (PP-R) 20 pipework to DIN 8077 with joints, couplings, reducers, tees, adaptors, pipe fixing clips etc all to DIN 16962 and DIN 16928. Pipe jointing shall be by polyfusion or use of electric coupling. Where pipework is not chased proper anchoring using approved fixtures shall be done. No pipework shall be left exposed to the sun. Rates must allow for all Metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints, support raceways, isolating sheaths, elastic materials,



expansion arms and bends, crossovers, couplings, clippings, connectors, joints etc. as required in the running lengths of pipework and also where necessary, for pipe fixing clips, holder bats plugged and screwed for the proper and satisfactory functioning of the system.

b) **P.V.C. (Hard) Pressure Pipes and Fittings**

All P.V.C. pipes and fittings shall be manufactured in accordance with B.S. 3505: 1968.

**Jointing**

The method of jointing to be employed shall be that of solvent welding, using the pipe and manufacturer's approved cement. Seal ring joint shall be introduced where it is necessary to accommodate thermal expansion.

**Testing**

Pipelines shall be tested in sections under an internal water pressure normally one and a half times the maximum allowable working pressure of the class of pipe used. Testing shall be carried out as soon as practical after laying and when the pipeline is adequately anchored. Precautions shall be taken to eliminate all air from the test section and to fill the pipe slowly to avoid risk of damage due to surge.

c) **A.B.S. Waste System**

Where indicated on the Drawings and Schedules, the Sub-contractor shall supply and fix A.B.S. waste pipes and fittings.

The pipes, traps and fittings shall be in accordance with the relevant British Standards, including B.S. 3943, and fixed generally in accordance with manufacturer's instructions and B.S. 5572: 1978.

Jointing of pipes shall be carried out by means of solvent welding, the manufacturer's instructions and B.S. 5572: 1978.

Jointing of pipes shall be carried out by means of solvent welding. The manufacturer's recommended method of joint preparation and fixing shall be followed.

Standard brackets, as supplied for use with this system, shall be used wherever possible. Where the building structure renders this impracticable the Sub-contractor shall provide purpose made supports, centers of which shall not exceed one meter.

Expansion joints shall be provided as indicated.

Supporting brackets and pipe clips shall be fixed on each side of these joints.

e) **PVC Soil System**

The Sub-contractor shall supply and fix PVC soil pipes and fittings as indicated on the Drawings and Schedules.

Pipes and fittings shall be in accordance with relevant British Standards, including B.S. 4514 and fixed to the manufacturer's instructions and B.S. 5572.

The soil system shall incorporate synthetic rubber gaskets as provided by the manufacturer whose fixing instructions shall be strictly adhere to.

Connections to WC pans shall be effected by the use of a WC connector, gasket and cover, fixed to suit pan outlet. Suitable supporting brackets and pipe clips shall be provided at maximum of one-meter centers.

The Sub-contractor shall be responsible for the joint into the Gully Trap on Drain as indicated on the Drawings.

1.2.2 **Valves**

a) **Draw-off Taps and Stop Valves (Up to 50mm Nominal Bore)**

Draw-off taps and valves up to 50mm nominal bore, unless otherwise stated or specified for attachment or connection to sanitary fitment shall be manufactured in accordance with the requirements of B.S.1010.

b) **Gate Valves**

All gate valves 80mm nominal bore and above, other than those required for fitting to buried water mains shall be of cast iron construction, in accordance with the requirements of B.S. 3464. All gate valves required for fitting to buried water mains shall be of cast iron construction in accordance with the requirements of B.S.1218.

All gate valves up to and including 65mm nominal bore shall be of bronze construction in accordance with the requirements of B.S. 1952.

The pressure classification of all valves shall depend upon the pressure conditions pertaining to the site of works.



c) **Globe Valves**

All globe valves up to and including 65mm nominal bore shall be of bronze construction in accordance with the requirements of B.S.3061.

The pressure classification of all globe valves shall depend upon the pressure conditions pertaining to the site of works.

**1.2.3 Waste Fitment Traps**

a) **Standard and Deep Seal P & S Traps**

Where standard or deep seal traps are specified, they shall be manufactured in suitable non-ferrous materials in accordance with the full requirements of B.S. 1184.

In certain circumstances, cast iron traps may be required for cast iron baths and in these instances bath traps shall be provided which are manufactured in accordance with the full requirements of B.S.1291.

b) **Anti-Syphon Traps**

Where anti-syphon traps are specified, these shall be similar or equal to the range of traps manufactured by Greenwood and Hughes Limited, Deacon Works Littlehampton, Sussex, England.

The trade name for traps manufactured by this company is 'Grevak'.

**1.2.4 Pipe Supports**

a) **General**

This sub-clause deals with pipe supports securing pipes to the structure of buildings for above ground application.

The variety and type of support shall be kept to a minimum and their design shall be such as to facilitate quick and secure fixings to metal, concrete, masonry or wood.

Consideration shall be given, when designing supports, to the maintenance of desired pipe falls and the restraining of pipe movements to a longitudinal axial direction only.

The Sub-contractor shall supply and install all steelwork forming part of the pipe support assemblies and shall be responsible for making good damage to builder's work associated with the pipe support installation.

The Sub-contractor shall submit all his proposals for pipe supports to the Engineer for approval before any erection works commence.

b) **Steel and Copper Pipes and Tubes**

Pipe runs shall be secured by clips connected to pipe angles, wall brackets, or trapeze type supports. 'U' bolts shall not be used as a substitute for pipe clips without the prior approval of the Engineer.

An approximate guide to the maximum permissible supports spacing in meters for steel and copper pipe and tube is given in the following table for horizontal runs.

Size Nominal Bores	Copper Tube to B.S. 659	Steel Tube to B.S. 1387
15mm	1.25m	2.0m
20mm	2.0m	2.5m
25mm	2.0m	2.5m
32mm	2.5m	3.0m
40mm	2.5m	3.0m
50mm	2.5m	3.0m
65mm	3.0m	3.5m
80mm	3.0m	3.5m
100mm	3.0m	4.0m
125mm	3.0m	4.5m
150mm	3.5m	4.5m

The support spacing for vertical runs shall not exceed one and a half times the distances given for horizontal runs.

### C) Expansion Joints and Anchors

Where practicable, cold pipework systems shall be arranged with sufficient bends and changes of direction to absorb pipe expansion providing that the pipe stresses are contained within the working limits prescribed in the relevant B.S. specification.

Where piping anchors are supplied, they shall be fixed to the main structure only.

Details of all anchor design proposals shall be submitted to the Engineer for approval before erection commences.

The Sub-contractor when arranging his piping shall ensure that no expansion movements are transmitted directly to connections and flanges on pumps or other items of plant.

The Sub-contractor shall supply flexible joints to prevent vibrations and other movements being transmitted from pumps to piping systems or vice versa.

#### 1.2.5 Sanitary Appliances

All sanitary appliances supplied and installed as part of the Sub-contract works shall comply with the general requirements of B.S. Code of Practice 305 and the particular requirements of the latest B.S. Specifications. They shall be as described in the bill of quantities.

#### 1.2.6 Pipe Sleeves

Main runs of pipework are to be fitted with sleeves where they pass through walls and floors. Generally, the sleeves shall be of P.V.C. except where they pass through the structure, where they shall be mild steel. The sleeves shall have 6mm – 12mm clearance all around the pipe or for insulated pipework all around the installation. The sleeve will then be packed with slag wool or similar.

### 1.3 INSTALLATION

#### 1.3.1 General

Installation of all pipework, valves, fittings and equipment shall be carried out under adequate supervision from skilled staff to the relevant codes and standards as specified herein. The Sub-contractor shall be responsible to the Main Contractor for ensuring that all builders work associated with his piping installation is carried out in a satisfactory manner to the approval of the Engineer.

#### 1.3.2 Above Ground Installation

a) Water Services

Before any joint is made, the pipes shall be hung in their supports and adjusted to ensure that the joining faces are parallel and any falls which shall be required are achieved without springing the pipe.

Where falls are not shown on the Contract Drawings or stated elsewhere in the Specification, pipework shall be installed parallel to the lines of the buildings and as close to the walls, ceilings, columns, etc., as is practicable.

All water systems shall be provided with sufficient drain points and automatic air vents to enable them to function correctly.

Valves and other user equipment shall be installed with adequate access for operation and maintenance. Where valves and other operational equipment are unavoidably installed beyond normal reach or in such Position as to be difficult to reach from a small step ladder, extension spindles with floor or wall pedestals shall be provided.

Screwed piping shall be installed with sufficient number of unions to facilitate easy removal of valves and fittings, and to enable alterations of pipework to be carried out without the need to cut the pipe.

Full allowances shall be made for the expansion and contraction of pipework, precautions being taken to ensure that any force produced by the pipe movements are not transmitted to valves, equipment or plant. All screwed joints to piping and fittings shall be made with P.T.F.E. tape.

The test pressure shall be maintained by the pump for about one hour and if there is any leakage, it shall be measured by the quantity of water pumped into the main in that time. A general leakage of 4.5 litres per 25mm of diameter, per 1.6 kilometres per 24 hours per 30 metres head, may be considered reasonable but any visible individual leak shall be repaired.

Sanitary Services

Soil, waste and vent pipe system shall be installed in accordance with the best standard of modern practice as described in B.S. 5572 to the approval of the Engineer.

The Sub-contractor shall be responsible for ensuring that all ground waste fittings are discharged to a gully trap before passing to the sewer via a manhole.

The Sub-contractor shall provide all necessary rodding and inspection facilities within the draining system in positions where easy accessibility is available.

Where a branch requires rodding facilities in a position to which normal access is unobtainable, then that branch shall be extended so as to provide a suitable purpose made rodding eye in the nearest adjacent wall or floor to which easy access is available.

The vent stacks shall terminate above roof level and where stack passes through roof, a weather skirt shall be provided. The Sub-contractor shall be responsible for sealing the roof after installation of the stacks.

The open end of each stack shall be fitted with a plastic coated or galvanized steel wire guard.

Access for rodding and testing shall be provided at the foot of each stack.

c) Sanitary Appliances

All sanitary appliances associated with the Sub-contract works shall be installed in accordance with the best standard of modern practice as described in C.P. 305 to the approval of the Engineer.

**1.4 TESTING AND INSPECTION**

**1.4.1 Site Tests – Pipework Systems**

a) Above Ground Internal Water Services Installation

All water service pipe system installed above ground shall be tested hydraulically for a period of ten hours to not less than one and half times to design working pressure.

If preferred, the Sub-contractor may test the pipelines in sections. Any such section found to be satisfactory need not be the subject of a further test when system has been completed, unless specifically requested by the Engineer.

During the test, each branch and joint shall be examined carefully for leaks and any defects revealed shall be made good by the Sub-contractor and the section re-tested.

The Sub-contractor shall take all necessary precautions to prevent damage occurring to special valves and fittings during the tests. Any item damaged shall be repaired or replaced at the Sub-contractor's expenses.



#### **b) Above Ground Soil Waste and Ventilation System**

All soil, waste and ventilating pipe system forming part of the above ground installation, shall be given appropriate test procedures as described in B.S. 5572, 1972.

Smoke tests on above ground soil, waste and ventilating pipe system shall not be permitted.

Pressure tests shall be carried out before any work which is to be concealed is finally enclosed.

In all respects, tests shall comply with the requirements of B.S. 5572.

#### **1.4.2 Site Test – Performance**

Following satisfactory pressure test on the pipework system operational tests shall be carried out in accordance with the relevant B. S. Code of practice on the systems as a whole to establish that special valves, gauges, control, fittings, equipment and plant are functioning correctly to the satisfaction of the Engineer.

All hot water pipework shall be installed with pre-formed fibre glass lagging to a thickness of 25mm where the pipe runs above a false ceiling or in areas where the ambient temperature is higher than normal with the result that pipe "sweating", due

to condensation will cause nuisance.

All lagged pipes which run in a visible position after erection shall be given a canvas cover and prepared for painting as follows:

- Apply a coating of suitable filler until the canvas weave disappears and allow to dry.
- Apply two coats of an approved paint and finish in suitable gloss enamel to colors approved by the Engineer.

All lagging for cold and hot water pipes erected in crawlways, ducts and above false ceiling which after erection are not visible from the corridors of rooms, shall be covered with a reinforced aluminium foil finish banded in colours to be approved by the Engineer.

In all respects, unless otherwise stated, the hot and cold-water installation shall be carried out in accordance with the best standard of modern practice and described in C.P.342 and C.P.310 respectively to the approval of the Engineer.

The test pressure shall be applied by means of a manually operated test pump or, in the case of long main or mains of large diameter, by a power-driven test pump which shall not be left unattended. In either case precautions shall be taken to ensure that the required pressure is not exceeded.

Pressure gauges should be recalibrated before the tests.

The Sub-contractor shall be deemed to have included in his price for all test pumps, and other equipment required under this specification.

The test pressure shall be one and a half times the maximum working pressure except where a pipe is manufactured from a material for which the relevant B.S. specification designates a maximum test pressure.

#### **1.5: STERILISATION OF COLD-WATER SYSTEM**

All water distribution system shall be thoroughly sterilized and flushed out after the completion of all tests and before being fully commissioned for handover.

The sterilization procedures shall be carried out by the Sub-contractor in accordance with the requirements of B.S. Code of Practice 301, Clause 409 and to the approval of the Engineer.

**SECTION D**  
**PARTICULAR SPECIFICATION FOR FIRE SERVICES.**

## PARTICULAR SPECIFICATIONS FOR PORTABLE FIRE EXTINGUISHER AND HOSE REEL INSTALLATIONS

### 1 GENERAL

The particular specification details the requirements for the supply and installation and commissioning of the Portable Fire Extinguishers and Boosted Hose Reel System. The Sub-contractor shall include for all appurtenances and appliances not necessarily called for in this specification or shown on the contract drawings but which are necessary for the completion and satisfactory functioning of the works.

If in the opinion of the Sub-contractor there is a difference between the requirements of the Specifications and the Contract Drawings, he shall clarify these differences with the Engineer before tendering.

### 2 SCOPE OF WORKS

The Sub-contractor shall supply, deliver, erect, test and commission all the portable fire extinguishers and Hose Reel which are called for in these Specifications and as shown on the Contract Drawings.

### 3 WATER/CO2 EXTINGUISHERS

These shall be 9-litre water filled CO2 cartridge operated portable fire extinguishers and shall comply with B.S. 1382: 1948 and to the requirements of B.S.4523: 1977. Unless manufactured with stainless steel, bodies shall have all internal surfaces completely coated with either a lead tin, lead alloy or zinc applied by hot dipping. There shall be no visibly uncoated areas.

The extinguishers shall be clearly marked with the following:

- a) Method of operation.
- b) The words 'WATER TYPE' (GAS PRESSURE) in prominent letters.
- c) Name and address of the manufacturer or responsible vendor.
- d) The nominal charge of the liquid in imperial gallons and litters.
- e) The liquid level to which the extinguisher is to be charged.
- f) The year of manufacture.
- g) A declaration to the effect that the extinguisher has been tested to a pressure of 24.1 bar (350 psi).
- h) The number of British Standard 'B.S.' 1382 or B.S. 5423: 1977.

### 4 PORTABLE CARBON DIOXIDE FIRE EXTINGUISHERS

These shall be portable carbon dioxide fire extinguishers and shall comply with B.S. 3326: 1960 and B.S. 5423: 1977.

The body of extinguisher shall be a seamless steel cylinder manufactured to one of the following British Standards; B.S. 401 or B.S. 1288.

The filling ratio shall comply with B.S. 5355 with valves fittings for compressed gas cylinders to B.S.341. Where a hose is fitted it shall be flexible and have a minimum working pressure of 206.85 bar (3000 p.s.i.). The hose is not to be under internal pressure until the extinguisher is operated.

The nozzle shall be manufactured of brass gunmetal, aluminum or stainless steel and may be fitted with a suitable valve for temporarily stopping the discharge if such means are not incorporated in the operating head.

The discharge horn shall be designed and constructed so as to direct the discharge and limit the entrainment of air. It shall be constructed of electrically non-conductive material.

The following markings shall be applied to the extinguishers: -

- a) The words "Carbon Dioxide Fire Extinguisher" and to include the appropriate nominal gas content.
- b) Method of operation.
- c) The words "Re-charge immediately after use".
- d) Instructions for periodic checking.
- e) The number of the British Standard B.S. 3326: 1960 or B.S. 5423.
- f) The manufacturers name or identification markings



## 5 DRY CHEMICAL POWDER PORTABLE FIRE EXTINGUISHER

The portable dry powder fire extinguishers shall comply with BS3465: 1962 and BS 5423. The body shall be constructed to steel not less than the requirements of BS 1449 or aluminum to BS 1470: 1972 and shall be suitably protected against corrosion.

The dry powder charge shall be not-toxic and retain its free-flowing properties under normal storage conditions. Any pressurizing agent used as an expellant shall be in dry state; in particular, compressed air.

The discharge tube and gas tube if either is fitted shall be made of steel, brass, copper or other not less suitable material. Where a hose is provided it shall not exceed 1,060mm and shall be acid and alkali resistant. Provision shall be made for securing the nozzle when not in use.

The extinguisher shall be clearly marked with the following information

- a) The word "Dry Powder Fire Extinguisher"
- b) Method of operation in prominent letters.
- c) The working pressure and the weight of the powder charge in Kilogram.
- d) Manufacturers name or identification mark
- e) The words "RECHARGE AFTER USE" if rechargeable type.
- f) Instructions to regularly check the weight of the pressure container (gas Cartridge) or inspect the pressure indicator on stored pressure types when fitted, and remedy any loss indicated by either.
- g) The year of manufacture.
- h) The Pressure to which the extinguisher was tested.
- i) The number of this British Standard BS 3465 or BS 5423: 1977.
- j) When appropriate complete instructions for charging the extinguisher shall be clearly marked on the extinguisher or otherwise be supplied with the refill.

## 6 AIR FOAM FIRE EXTINGUISHER

These shall be of 9 litres capacity complete with refills cartridges and wall fixing brackets and complying with B.S. 5423 with the following specifications: -

Cylinder: to B.S. 1449

Necking: to be 76mm outside diameter steel EN 3A 2<sup>3</sup>/<sub>4</sub> X 8TPI female thread.

Head cap: to be plastic moulding acetyl resin.

CO<sub>2</sub> Cylinder: to be 75gm P.V.C coated.

Internal Finish: to be polythene lining on phosphate coating.

External finish: to be phosphated - One coat primer paint and one coat stove enamel B.S. 381 C.

## 7 FIRE BLANKET

The fire blanket shall be made from cloth woven with pre-asbestos yarn or any other fire proof material and to measure 1800 x 1210 mm and shall be fitted with special tapes folded so as to offer instantaneous single action to release blanket from storing jacket.

## 8 Signage-Fire Instruction /Fire Exit

### 8.1 Fire Instruction Notice

Print fire instruction on the Perspex plates with White Colour

Background measuring 510mm length x 380mm width x 4mm thick as follows;

#### FIRE INSTRUCTION NOTICE

In the event of fire;

1. Raise the alarm by actuating the nearest alarm system point, Sound Siren /gong or Shout Fire
2. Attack fire using the nearest available equipment
3. Call nearest fire Brigade or Police 999 and inform your switchboard (PABX) Operator
4. Ensure that all personnel not involved in firefighting evacuation to safety outside the building.
5. Close but DO NOT LOCK doors behind as you leave.
6. Evacuate the building using stairs or fire escapes. Do not use Lifts/escalators. Walk calmly. Avoid panic. Do not stop or return for personal belongings.
7. Assemble as per floor outside the building for roll call.

#### 8.2 Fire Exit Sign

Print Fire Exit signs on the Perspex plate, 4mm thick, with white colour background as follows: -

1. Lettering IN RED COLOUR of not less than 50mm in height.
2. A pendant sign bearing words, FIRE EXIT and with a directional arrow.

The sign must be capable of being read from both approaches to exit and so is double sided.



## SPECIFICATIONS FOR INSTALLATION OF THE HOSE REEL SYSTEM

### 1. INTRODUCTION

The general specification details the requirements for the supply, installation and commissioning of the hose reel installation. The hose reel installation shall comply in all respects to the requirements set out in C.O.P. 5306 PART 1: 1976, AND BS 5274.

### 2. CLIMATIC CONDITIONS

- a) The following climatic condition apply at the site of the works and all plant equipment, apparatus, materials and installations shall be suitable for these conditions.
- b) Where not otherwise stated, all ratings of plant, equipment apparatus shall be interpreted as site rating and NOT sea level or other ratings.
- c) Maximum temperature °C
- d) Minimum Temperature °C
- e) Average Temperature °C
- f) Range of Relative Humidity %
- g) Altitude M
- h) Latitude °S
- i) Longitude °E
- j) Rainfall extremely heavy at certain period of the year.

### 3. FIRE HOSE REEL PUMPS

The fire pumpset shall be a fully automatic package unit. The unit shall consist of pumps of appropriate duty at a given head

The complete specification of the package pump set to be as follows: -

#### 4.1 Pumps (Specify)

##### *Pump Materials*

Suction and Discharge Casing to be made Grey Iron. Shafts, conveyors, diffusers, impellers and the external elements made from Stainless Steel.

##### *Motors* (Specify)

***Mechanical Seal*** (Specify)

***Baseframe***

Welded fabrication from Mild Steel sections. With facility for lifting unit. **15.1.5**

***Pipework***

Medium gauge Galvanized Pipework to B.S. 1387 and Galvanized fittings to B.S. 143/1256. All Pipework to terminate with B.S 4504 NP. 16 Flanges. Flexible connections to be affixed to suction and discharge connections.

***Valve***

Pump Isolating Valves, Butterfly valve to B.S. 5155 with Cast Iron nylon coated disc and black air true liner. Non-Return Valve vertical lift type to be manufactured from Cast Iron with nitrile seal.

***Control Panel***

Standard Panel cubicle to be manufactured to IP. 55 standards, containing Starters of appropriate ratings

Panel to include power On Light, Run and Trip Lights, Hand/Off/Auto switches, duty pump selector switch, disconnect switch and line and control circuit fuses, switches to conform to IP. 54.

Safety features to include 24 volts low voltage controls except for starter coils. Panel mounted on vibration isolators to minimize vibration to electrical equipment.

***Pressure Switch:***

Differential adjustment type switch manufactured to IP.14 standards. Multi-pump sequencing control to be affected from a single pressure instrument, utilizing control circuitry specially for pressure boosting applications.

***Dial Bottom Connection***

to B.S. 1780 calibrated in Bars and KPa.

### ***Membrane Tank***

Fabricated Steel construction housing a natural rubber diaphragm, ideally suited for drinking water applications. Precharged with Nitrogen to correct pressure at test stage.

The panel shall incorporate HRC main fuses and thermal overloads for the pump motors, timer control unit for minimum run period, start relay incorporating timing element for standby pump delay and one set of voltage free changeover contacts to give remote alarm/indication for the indicator lights motioned.

### ***Pipework***

The Pipework for the hose reel installation shall be galvanized wrought steel tubing "Medium" Grade Class "B" to BS 1387:1967 with pipe threads to BS 21.

### ***Pipe Fittings***

The pipe fittings shall be wrought steel pipe fittings welded or seamless fittings conforming to BS 1740 Part 1971 or malleable iron fittings to BS 143.

All changes in direction will be standard bends or long radius fittings. No. elbows will be permitted.

### ***Flanges***

The flanges shall comply with BS 4504: 1969. All flanges shall comply to a nominal pressure rating of 16 bar (P.N. 16) and shall be of either cast iron or steel.

### ***Gaskets***

The gaskets for the use with flanges to BS 4304: 1969 shall comply with BS 4865 part 1 : 1072 for pressure up to and not exceeding 64 bar.

### ***Non-return Valves***

The non-return valves up to and including 80mm diameter shall be to BS 5153: 1974 with flanges to BS 4504 P.N. 16.

### ***Gate Valves***

The gate valves up to and including 80mm shall be as Crane NO. D151 non-rising stem and wedge disc to BS 21 taper thread.

### *Sleeves*

Where pipework passes through walls, floors or ceilings, a sleeve shall be provided one diameter larger than the diameter of the pipe, the space between to be packed with mineral wool, to the Engineer's approval.

### *Floor and ceiling plates*

Where pipe pass through floors, walls or ceilings, floor, wall and ceiling plates shall be secured around the pipe. The plates shall be of stainless-steel construction and will serve no other purpose than to present a net finish, to the exposed installation.

### *Hose reels*

The hose reels to the installation shall consist of recess and no-recess automatic hose reels.

All the above hose reels shall comply with BS 5274: 1976 and BS 3169: 1970 and is to requirements C.P. 5306 Part I: 1976.

The hose reels shall be supplied and installed complete with first-aid non-kinking hose 30 metres long, with nylon spray/jet/shut-off nozzle fitted. A screw down chrome plated globe valve to BS 1010 to the inlet to the reel.

The orifice to the nozzle is to be not less than 4.3 mm to maintain a minimum flow of 0.4L/s to the jet.

### *Earthing*

The hose reel installation shall be electrically earthed by a direct earth connection.

### *Finish Painting*

Upon completion of testing and commissioning of the hose reel installation the pipework shall be primed and finish painted with 2 No. coats of paint to the Engineer's requirements.

### *Testing and Commissioning*

The hose reel system is to be flushed out before testing to ensure that no builders' debris has entered the system. The system is to be then tested to one and half times the working pressure of the installation to the approval of the Engineer. Simulated fault condition of the pumping equipment, is to be carried out before acceptance of the system by the Engineer and Architect.

***Instruction Period***

The Sub-Contractor shall allow in his contract sum for instructing of use of the equipment to the clients maintenance staff. The period of instruction may be within the contract period but may also be required after the contract period has expired.

The period of time required shall be stipulated by the Client but will not exceed seven days in which time the Clients staff shall be instructed in the operation and maintenance of the equipment.

**SECTION E**

**PARTICULAR SPECIFICATION FOR STEEL WATER TANKS AND  
BOOSTER PUMPS**



## **PARTICULAR SPECIFICATION FOR THE DESIGN, SUPPLY AND ERECTION OF GALVANISED STEEL WATER STORAGE TANKS AND BOOSTER PUMPS**

### **1.0 DESCRIPTION OF SITE**

The contractor is deemed to have visited the site at **AP TRAINING COLLEGE EMBAKASI** and if unable to locate it or its details apply to the Principal Secretary, State Department for Public Works.

No claims will be allowed for the traveling or other expenses, which may be incurred by the sub-contractor's works. However, the sub-contractor may allow that he may have to, during contract time, do part of the works and therefore three visits may be catered for.

### **2.0 SCOPE OF CONTRACT**

The work to be carried out under, this sub-contract comprises the designs, manufacture, supply, delivery, erection, together with testing and commissioning of Water tanks as here-in specified and shown on the contract drawings.

All work shall be performed in straightforward manner by competent workmen under skilled supervision to the entire satisfaction of the project manager.

### **3.0 COMPLIANCE WITH REGULATIONS.**

The sub-contractor shall comply in all respects to the provisional and regulations of the By-laws of the Local Authority, Kenya Building Code, as 449 Part B5 1964. BS 4211, CP2 chapters V part 1 and 2 MOPW Structural steel work specification (1973) code of practice for design and construction of buildings and structures in Relation to Earthquake (1972) wherever applicable to the contract works.

The State Department for Public Works, Structural Department are responsible for the design of the foundation subject to giving approval of the sub-contractor's design of the tower and due allowance should be given for this work to be carried out in sub-contractor programmed of works. The main contractor is responsible for the construction of the foundation in accordance to approved designs.

### **3.1 STRUCTURAL DRAWINGS AND CALCULATIONS**

2No copies of general arrangement and fabrication drawings properly dimensioned and detailed showing the whole tower and its accessories together with 2No copies of the structural calculations complying with all the relevant BS and CP are to be submitted for approval prior to the commencement of the work.

The calculation is to indicate the maximum downward and upward loads on the foundations for the State Department for Public Works, to design the foundation.

#### 4.0 STEEL WATER TANKS SPECIFICATIONS

- a) The tanks shall be pressed steel sectional tanks complying in all respects to BS 1564 Types 1 or 2. The jointing materials shall be non-toxic and non-insulable to water and the tank cover shall be joined throughout the tank top ensuring that the joint is both water proof and dust proof.
- b) Cover framing and members shall be designed to withstand super-imposed loading complying with the requirement complying with the requirements of CP2 Chapter V part 1 and BS 149 Part 2.
- c) All internal stays are to be provided as required by the tank manufacture and the Sub-contractor shall be responsible for ensuring the stays are adequate in number and position and properly tightened. These are to be manufactured from steel to BS 4360, Grade 43 A.
- d) All Bolts, nuts and washers used in the construction should comply with BS 4190. The contractor to allow in his pricing, for a complete set of spanners, spare bolts and Washers for maintenance purposes.
- e) Access manhole with hinged cover together with a filtered vent outlet shall be installed.
- f) The Sub-contractor is to notify the Project Manager of the type of panel he is proposing to use and the manufacturer who is to be approved.
- g) The inflow and outflow connection shall be as shown on the drawing.
- h) The outflow supply pipe shall be at least 50mm above the tank bottom while the inflow pipe shall be 200mm below the tank rim. The overflow pipe shall be about 1000mm long, away from the tank. The drain pipe shall be at the lowest part of the tank.

#### 4.1 HIGH LEVEL TANK

Tank Capacity - 48,000 liters

Preferred Dimensions; 4.00 x 400 x 3.00 meters high

Plate thickness: 6mm

Tank to be supplied with:

- a) 80 mm diameter inflow connection
- b) 100 mm diameter outflow connection
- c) 100 mm diameter washout pipe
- d) 100 mm diameter overflow pipe
- e) 1No. level regulator
- f) 2No. Water level indicator
- g) 1No. Steel cover and manhole
- h) 1No. Internal ladder
- i) 1No. External ladder to ground level with cage



## 4.2 PIPEWORK

The sub-contractor shall supply and fix all pipe work and fitting up to ground level as detailed on the drawing or in this specification. All pipe work shall be adequately supported and secured to the tank structure. The washout pipe will have a bend leading to a reasonable place where the drainage will not interfere with the structure.

The following pipe work shall be used depending on the condition: -

- (a) Medium Grade Galvanized steel and must conform with BS 1987 1967 class 'B'
- (b) PP-R pipe work to be manufactured in accordance with the current European standards i.e. DIN 8077 and DIN 8078 for PN 20 tubing, with metallic joints to DIN 8076, joints and fittings for tubing to DIN 16962.

The sub-contractor shall provide high pressure ball valve capable of coping with the maximum area's local water supply pressure.

## 4.3 Access Ladder

Internal ladder shall be supplied for the tank and shall be fixed adjacent at the manhole but easily removable for cleaning the inside of the tank (i.e., hooked connection).

The tanks shall be provided with an external ladder leading to the manhole and complying with BS 4211. The stringers shall be parallel, minimum width 15 inches apart and of flat bar of minimum dimensions 1½" by 2/8 inches. The rungs shall be of round bars not less than ¾ inches diameter and the distance between centers shall be 9 – 10 inches. The external ladder shall be fitted with safety hoofs made to conform with BS 4211.

## 4.4 Platform

The tower is to have a periphery walkway at tank level having minimum width of 600mm clear between the edge of the tank and the inside of the protective safety handrail. The platform is to be provided with a steel chequered plate floor of similar approved and to be completely sealed so as not to allow anybody or items such as bolts and spanners to fall on persons on the ground.

All loading for the design of such platform is to be provided in the structural calculations.

## 4.5 Painting

The tank shall be painted inside with one coat of bituminous non-toxic paint (or any other equivalent and approved) and on the outside with coat of primer before erection. After erection, the tank inside shall be painted with two coats of aluminium paint. The other structures shall be cleaned and painted one coat lead oxide or red lead before erection and two coats of aluminium paints after erection.

All the painting shall be approved by the Engineer.

## 4.6 Erection

The sub-contractor shall erect the tank complete, on foundation prepared and designed by others and with all necessary pipes, ladders, tower etc. as listed herein and shown on the drawing.

The main contractor shall prepare the foundation to the sub-contractor's Specifications and forward to State Department of Public Works, Structural Department's for approval.

## BRITISH STANDARD SPECIFICATIONS FOR GALVANISED PRESSED STEEL SECTIONAL RECTANGULAR TANKS

### Scope

This British Standard specifies requirement for pressed steel sectional rectangular tanks, working under a pressure not greater than the static head corresponding to the depth of the tanks, built up of pressed steel plates 1220 mm square used to contain cold water, hot water, potable liquids, certain oils and chemicals. Tanks may be constructed as follows:

- (a) with external flanges;
- (b) with internal bottom flanges, external side and end flanges.

Two types are specified:

Type 1. With a combined double flange at an angle of  $45^\circ$  and  $90^\circ$  to the plane of the plate on all four sides. The plates of type 1 tanks are hot pressed complete.

Type 2. With a single flange at an angle of  $90^\circ$  to the plane of the plate on each of two, three or four sides, depending on its position in the tank. Type 2 tanks are cold pressed, with the flange corners welded.

This standard does not provide for tanks subject to earth or other external pressure other than wind pressure.

NOTE. For an illustration of a typical tank external flanges see figure 8. For approximate weights and full nominal capacities (without freeboard) of open top tanks see tables 1 to 4.

Tanks can also be assembled with all flanges internal with the addition of other components, but because of the difficulty of assembling and maintaining this type of tank they are not preferred.

All tanks can be supplied with open or closed top. Information on erection and supports is also included.

#### **Information to be supplied with the enquiry and order**

The following information, as appropriate, should be supplied by the purchaser with his enquiry or order.

(a) Type of tank required (clause 1), type of cover (if any), number and position and type of manhole(s), number of divisions if required.

(b) Capacity required in litres or dimensions in millimeters in multiples of 1220 mm and whether any provision is to be made for future extension and if any level indicators are required.

(c) Limiting conditions, if any, as to space and accessibility for erection, and whether the tank will be erected in a building or exposed to the weather and the height above ground level it is to be installed.

(d) Nature and density of liquid for which the tank is required. If corrosive, particulars to be given. If water, state whether hard or soft. The rate of filling and emptying the tank, head fluctuations and cycles per day.

(e) Maximum and minimum temperatures and approximate rate of fluctuation and position of heating elements.

(f) Any special requirements as to jointing material and as to internal and external coating or lagging.

#### **NOTE:**

In the absence of any special requirements one coat of suitable priming paint will be applied to protect the tank during delivery and erection. A minimum of two further coats should be applied after erection.

(g) Particulars of connections and drilling required and precise location on tank with dimensioned sketches, having regard to possible future requirements.

(h) Whether external access ladders are required and, if so, particulars to be given.

(i) Details of any existing or proposed supporting structure and height of bottom of tank above ground level so that the necessary scaffolding arrangements can be made to comply with statutory safety regulations.

(j) Whether transverse supporting bearers are required and, if so, particulars as to span and end support to be given.

(k) Whether the tank is to be used for other than a stationary application.

(l) Whether inspection will be made by the representative of the purchaser at the works of the manufacturer.

(m) Whether erection is to be carried out by the manufacturer at site; if so, information as to site conditions and accessibility to be given by the purchaser.

#### **Working temperatures**

For the purpose of this standard cold liquids are defined as those having a temperature not exceeding  $38^\circ\text{C}$  and hot liquids are defined as those having a temperature exceeding  $38^\circ\text{C}$  but less than  $100^\circ\text{C}$ .

In the case of tanks to hold hot liquids, care shall be taken in use to avoid excessive vibration or turbulence. Tanks for temperatures higher than  $100^\circ\text{C}$  should be the subject of mutual arrangement between the purchaser and the manufacturer.

## Materials

5.1 The steel used in the manufacture of the plates, stays, cleats and pads for connections shall conform to the requirements of BS 4360: 1972 grade 43A or BS 1449: Part 1: 1972 material HR 14.

5.2 Bolts, studs, nuts and washers shall be made from steel complying with the requirements of BS 4190. Bolts and nuts shall be hexagonal, black finish, screwed ISO metric complying with the requirements of BS 4190, where applicable. Washers shall comply with the requirements of BS 4320: 1968 from '1'.

## Dimensions of unit plates

The nominal size of unit plates shall be 1200 mm square, the actual overall dimensions depending upon the particular manufacturer of the plates. The size of tanks shall be specified as multiples of the nominal dimension.

## Thickness of unit plates

For cold liquids with a density not exceeding 1.0 the nominal thickness of the plate from which the unit plates are pressed shall be not less than:

Pressed Steel Sectional Water Tank  
Standard Thickness for 1.22m x 1.22m Tank Panel

Type	1.22m (H)	2.44m (H)	3.66m (H)	4.88m (H)
4th side panels				5mm
3rd side panels			5mm	5mm
2nd side panels		5mm	5mm	5mm
1st side panels	5mm	5mm	5mm	6mm
Bottom panels	5mm	5mm	5mm	6mm

Standard Thickness for 1m x 1m Tank Panel

Type	1.0m (H)	2.0m (H)	3.0m (H)	4.0m (H)
4th side panels				2.5mm
3rd side panels			2.5mm	2.5mm
2nd side panels		2.5mm	2.5mm	3.0mm
1st side panels	2.5mm	2.5mm	3.0mm	3.0mm
Bottom panels	2.5mm	2.5mm	3.0mm	3.0mm



## 6.0 BOOSTER PUMPS

A set of 2 No. electrically operated pumps DUTY AND STANDBY capable of pumping - Litres per second (- gallons per minute) of water against - metres static head shall be installed. The pumps to be as - (specify preferred model) or equal and approved.

Each pump shall be directly driven by a three-phase motor, the pump motor being mounted on a common base.

Pump casing shall be manufactured from good quality cast iron and impellers, shafts and other material in contact with water shall be of corrosion resistant metal. The pumps shall be suitable for pumping filtered water treated for human consumption.

The motor shall be completely protected against possible damage due to entry of water, dust etc. they shall be fitted with glands for the entry of PVC armoured cables with overall PVC sheath. The completed cable connection to the motor terminal box shall be proof against ingress of water or dust.

The pump shall be mounted on concrete plinth which shall be constructed by the main contractor in accordance with specifications from the sub-contractor.

Holes for holding down bolts shall be left in concrete and after the concrete has cured the pumps shall be placed in position and bolts grounded into position. A grout shall be floated under pump motor base to ensure an even surface for the pump to rest upon.

## 7.0 ELECTRICAL WORKS

It shall be the responsibility of the sub-contractor to provide all electrical wiring between all items of his sub-contract works to ensure the correct functioning of his equipment. The sub-contractor's electric works shall start from nearest electrical isolator.

## 8.0 CONTROL PANEL

The sub-contractor shall provide an electric control panel and shall be responsible for its fixing and satisfactory operation. The panel shall be fabricated from minimum thickness. 1.2mm steel sheet and finished grey stoved enamel. The panel shall be wall mounted with a removable hinged front access panel. Motor control switch gear shall be of approved type. The panel shall have an integral isolator.

Pump changeover shall be automatic alternating after each duty cycle. A green 'running' red 'trip' lamp shall be provided for each pump. The control system (float switches etc.) shall be energized when a pump is started.

The motor system shall be wired so that they operate only automatically as called for by the switches except that starter push button shall be connected so as to enable the pumps to be started and run and cease to run when the push button is allowed to its normal position.

An emergency stop button shall be located adjacent to each pump.

The level regulator shall be wired and set in such a manner that the duty pumps shall be called to start when the high-level tank is full.

The electrode in the low-level tank shall override instructions from high level regulator and stop when the water is approximately 600mm high.

Where a three-phase motor is used, a single phasing protector shall be provided if the motor does not have one.

A phase failure relay shall be installed in 3 phase - operated pumps.

## **9.0 TESTING**

Testing shall be done by filling the tank with water after erection. The water will be from the local supply and the main contractor shall apply from the Authority for connection.

In cases where water is already on site and being used by the client, the contractor will make necessary arrangements and reimburse the client amount equivalent to volume of water used.

Testing shall be witnessed by the Project Manager or his representative.

## **10.0 GUARANTEE**

The sub-contractor shall guarantee the tanks against leaks, and the tower for a period of (12) months from the testing date. Any damage incurred due to bad workmanship shall be made good by the contractor. All prices shall be in Kenya shillings and shall be inclusive of all taxes and duties current at the time of tendering.

STATEMENT OF COMPLIANCE

- a) I confirm compliance of all clauses of the General Conditions, General Specifications and Particular Specifications in this tender.
  
- b) I confirm I have not made and will not make any payment to any person, which can be perceived as an inducement to win this tender.

Signed: ..... *for and on behalf of the Tenderer*

Date: .....

Official Rubber Stamp: .....

**SECTION F**  
**BILLS OF QUANTITIES & SCHEDULE OF UNIT RATES**

## BILL OF QUANTITIES

### BILLS No. 1

#### A) PRICING OF PRELIMINARIES ITEMS.

Prices will be inserted against item of preliminaries in the sub-contractor's Bills of Quantities and specification. These Bills are designated as Bill 1 in this Section. Where the sub-contractor fails to insert his price in any item, he shall be deemed to have made adequate provision for this on various items in the Bills of Quantities. The preliminaries form part of this contract and together with other Bills of Quantities covers for the costs involved in complying with all the requirements for the proper execution of the whole of the works in the contract.

The Bills of Quantities are divided generally into three sections: -

#### Preliminaries – Bill 1

Sub-contractors' preliminaries are as per those described in section C – sub-contractor preliminaries and conditions of contractor. The sub-contractor shall study the conditions and make provision to cover their cost in this Bill. The number of preliminary items to be priced by the Tenderer have been limited to tangible items such as site office, temporary works and others. However, the Tenderer is free to include and price any other items he deems necessary taking into consideration conditions he is likely to encounter on site.

#### Installation Items – Other Bills

The brief description of the items in these Bills of Quantities should in no way modify or supersede the detailed descriptions in the contract Drawings, conditions of contract and specifications.

The unit of measurements and observations are as per those described in clause 1.05 of the section C.

#### (c) Summary

The summary contains tabulation of the separate parts of the Bills of Quantities carried forward with provisional sum, contingencies and any prime cost sums included. The sub-contractor shall insert his totals and enter his grand total tender sum in the space provided below the summary.

This grand total tender sum shall be entered in the Form of Tender provided elsewhere in this document



**BILL No. 1  
PRELIMINARIES AND GENERAL CONDITIONS**

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
1	Discrepancies clause 1.02				
2	Conditions of sub-contract Agreement clause 1.03				
3	Payments clause 1.04				
4	Site location clause 1.06				
5	Scope of Contract Works clause 1.08				
6	Extent of the Contractor's Duties clause 1.09				
7	Firm price contract clause 1.12				
8	Variation clause 1.13				
9	Prime cost and provisional sum clause 1.14 (insert profit and attendance, which is a percentage of expended PC or provisional sum.)				
10	Bond clause 1.15				
11	Government Legislation and Regulations clause 1.16				
12	Import Duty and Value Added Tax clause 1.17 (Note this clause applies for materials supplied only. VAT will also be paid by the sub-contractor as allowed in the summary page)				
13	Insurance company Fees clause 1.18				
14	Provision of services by the Main contractor clause 1.19				
15.	Samples and Materials Generally clause 1.21				
SUB-TOTAL CARRIED TO PAGE MECH 43					

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
16	Supplies clause 1.20				
17	Bills of Quantities clause 1.23				
18	Contractor's Office in Kenya clause 1.24				
19	Builder's Work clause 1.25				
20	Setting to work and Regulating system clause 1.29				
21	Identification of plant components clause 1.30				
22	Working Drawings clause 1.32				
23	Record Drawings (As Installed) and Instructions clause 1.33	3	NO	10,000	30,000
24	Maintenance Manual clause 1.34				
25	Hand over clause 1.35				
26	Painting clause 1.36				
27	Testing and Inspection – manufactured plant clause 1.38				
28	Testing and Inspection –Installation clause 1.39				
29	Storage of Materials clause 1.41				
30	Initial Maintenance clause 1.42				
<b>SUB-TOTAL CARRIED TO PAGE MECH 43</b>					

ITEM	DESCRIPTION	QTY	UNIT	RATE (KSHS)	AMOUNT (KSHS)
31	Attendance Upon Tradesmen, etc. (Insert percentage only) clause 1.58				
32	Local and other Authorities notices and fees clause 1.60				
33	Temporary Works clause 1.63				
34	Patent Rights clause 1.64				
35	Mobilization and Demobilization Clause 1.65				
36	Extended Preliminaries Clause 1.66(see appendix on page C- 24)				
37	Supervision by Engineer and Site Meetings Clause 1.67	1	ITEM	200,000	200,000.00
38	Allow for profit and Attendance for the above				
39	Amendment to Scope of Sub-contract Works Clause 1.68				
40	Contractor Obligation and Employers Obligation clause 1.69(see appendix page C- 24)				
41	Any other preliminaries;				
	Subtotal above				
	Subtotal brought forward from page MECH 41				
	Subtotal brought forward from page MECH 42				
<b>TOTAL FOR SCHEDULE NO. 1- PRELIMINARIES CARRIED FORWARD TO PRICE MAIN MECHANICAL SUMMARY PAGE 55</b>					

**SANITARY FITTINGS, PLUMBING AND DRAINAGE, FIRE FIGHTING SERVICES, WATER  
TANKS & BOOSTER PUMPS AND WATER RETICULATION.**

APTC, EMBAKASI

Item	Description	Qty	Unit	Rate (KShs)	Amount (KShs)
A	Allow for cleaning of existing kitchen sink to engineers approval <b>Sanitary Fittings</b> Supply, deliver, install, test and commission the following sanitary appliances complete with all the accessories including all connections to the services, waste, jointing to water supply overflows, supports and all plugging and screwing to walls and floors. <b>Note:</b> (i) All sanitary fittings shall be in approved colour. (ii) The Model and Ref No. indicated is only a guide to the type and quality of fittings. (iii) Equivalent and Approved models may be acceptable. <b>ALL ITEMS TO BE PRICED</b>	54	No		
B	<b>Water Closet (WC) Suite</b> Close-coupled WC suite ('S' or 'P'-trap) in approved colour complete with horizontal outlet to BS 3402. Dual flush 4/2.6 litre valveless low level ceramic cistern and fittings including siphon, 15mm diameter side inlet ball valve, 20mm diameter side overflow, plastic flush bend, dual flush system, inlet connection, chrome-plated lever and heavy plastic seat and cover with metal top fixed (chrome plated) hinges. As Standard Model .	54	No.		
C	<b>Wash hand basin (WHB)-Wall Hang</b> Wall Hang wash hand basin size 450 x 405mm with one tap hole, 32mm diameter plastic plated waste with plug and chain, monobloc basin tap as Cobra monobloc press action tap or approved equivalent and heavy duty plastic bottle trap (32mm 'P' trap) with 75mm seal. As Standard Model .	24	No.		
D	<b>WHB tap</b> Half turn tap as pegler-Prestex. As Standard Model .	54	No		
E	<b>Kitchen Sink</b> Single Bowl Single Drainer, (SBSD) stainless steel sink, size 1000x500mm, bowl size 420mmx360mm complete with overflow, waste fittings, plugs, chain stays and 40mm diameter plastic bottle trap with 75mm deep seal .	0	No.		
F	<b>Sink tap</b> Quarter turn chrome plated lever control deck mounted . As Standard Model	50	No		
G	<b>Bottle Trap</b> Chrome plated bottle trap(32mm 'P' trap) with 75mm seal to match existing kitchen sinks.	50	No		
<b>Total c/f to the next page</b>					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
Total b/f from previous page					
A	<b>Robe Hook</b> Robe hook in Satin Aluminium to be mounted by concealed screws to wall wedges. As Standard Model	140	No.		
B	<b>Toilet Roll Holder</b> Semi y recessed toilet roll holder in Vitreous China of size 165 x 165mm in approved colour. As Standard Model	54	No.		
C	<b>Towel Rail</b> 20mm diameter x600mm long approved chromium plated towel rail, plugged and screwed to the wall. As Standard Model	4	No.		
D	<b>Toilet Brush and Holder</b> Wall mounted toilet brush holder and brush of approved colour as As Standard Model	0	No.		
E	<b>Shower heater</b> Install Concealed Instantaneous shower as Lorenzetti or equal and approved with a matching chrome plated swivel shower head	54	No		
F	<b>Shower rose</b> Exposed Plastic shower fittings with shower rose to engineers approval. As Standard Model	0	No		
G	<b>Shower Rail with Curtain</b> High quality chrome plated 1500mm long curtain rail complete with 2 NO wall plates hooks and rollers, approved medium quality 1800x1000mm shower curtain.	0	No		
H	<b>Bathroom tap</b> Toilet bib tap as Peglar heavy duty with star handle	54	No.		
I	<b>Soap Dish</b> Semi recessed built in soap tray in vitreous china of size 150 x 150mm in approved colour as Standard Model	54	No		
J	<b>Mirror</b> 6mm thick polished plate glass silver backed mirror with bevelled edges, size 610 x 610mm, Plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	54	No		
K	<b>Mirror</b> 6mm thick polished plate glass silver backed mirror with bevelled edges, size 1200 x 610mm, Plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	4	No		
Total for sanitary fittings for (1) block					
Total for sanitary fittings for (3) blocks c/f to summary page					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	<b>Internal Plumbing</b>				
A	Allow for Pressure testing and leakage tests for all internal plumbing pipe work that has been concealed and not concealed to Engineers approval .	1	item		
B	Allow for removal and relocation of damaged and unusable internal plumbing pipe work previously done.	1	item		
C	Allow for redesigning of plumbing works to allow installation of water meters in each unit.	0	item		
	<b>PPR PIPES</b>				
	Supply, deliver and install Polypropylene Random (PP-R) 20 pipework to DIN 8077 with joints, couplings, reducers, tees, adaptors, pipe fixing clips etc all to DIN 16962 and DIN 16928 Pipe jointing shall be by polyfusion or use of electric coupling. Where pipework is not chased proper anchoring using approved fixtures shall be done. No pipework shall be left exposed to the sun. Rates must allow for all Metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints, support raceways, isolating sheaths, elastic materials, expansion arms and bends, crossovers, couplings, clippings, connectors, joints etc. as required in the running lengths of pipework and also where necessary, for pipe fixing clips, holder bats plugged and screwed for the proper and satisfactory functioning of the system.				
D	25mm dia. Pipe cased in walls/floors and in ducts	600	Lm		
E	32mm Ditto	300	Lm		
F	40mm Ditto	0	Lm		
G	50mm Ditto	0	Lm		
	<b>Extra-over</b>				
	<b>90° Bend</b>				
H	20mm diameter bend	216	No.		
I	25mm Ditto	180	No.		
J	32mm Ditto	150	No.		
K	40mm Ditto	0	No.		
L	50mm Ditto	0	No.		
	<b>Equal Tees</b>				
M	25mm diameter equal tee	150	No.		
N	32mm Ditto	150	No.		
O	40mm Ditto	0	No.		
P	50mm Ditto	0	No.		
Q	25x1/2" male threaded tee	100	No.		
R	Concealed Stop Corks	54	No.		
<b>Total c/f to the next Page</b>					



Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
<b>Total b/f from previous page</b>					
<b>Reducers</b>					
A	25x20mm diameter reducer	120	No.		
B	32x25mm Ditto	120	No.		
C	40x32mm Ditto	0	No.		
D	50x40mm Ditto	0	No.		
E	20x1/2" male threaded bend	120	No.		
<b>Sockets</b>					
F	50mm diameter	0	No.		
G	40mm diameter	0	No.		
H	32mm diameter	50	No.		
I	25mm diameter	70	No.		
J	20mm diameter	70	No.		
<b>Unions</b>					
K	50mm diameter	0	No.		
L	40mm diameter	0	No.		
M	32mm diameter	54	No.		
N	25mm diameter	54	No.		
<b>Adaptors</b>					
O	50mm diameter	0	No.		
P	40mm diameter	0	No.		
Q	32mm diameter	15	No.		
R	25mm diameter	35	No.		
S	15mm diameter x 300mm long Chrome plated flexible	162	No.		
<b>Angle Valve</b>					
T	15mm angle valve as Cobra or equal and approved	162	No.		
<b>Gate valve</b>					
U	50mm diameter medium pressure screw down full way non rising stem wedge gate valve with wheel and head joint to steel tubing, as Pegler or approved equivalent.	0	No.		
V	40mm ditto	0	No.		
W	32mm ditto	54	No.		
X	25mm ditto	108	No.		
<b>Water Meter</b>					
Y	20mm diameter water meter as Kent or equal and approved equivalent	0	No.		
<b>Splash area bibtap</b>					
Z	1/2" heavy duty bibtap, as pegler or equal and approved	8	No.		
AA	Allow for testing and commissioning of the system to satisfaction of the Engineer	1	item		
<b>Total for internal plumbing for (1) block</b>					
<b>Total for internal plumbing for (3) blocks c/f to summary page</b>					

Item	Description	Qty	Unit	Rate (Kshs)	Amount Kshs)
	<b>Internal Drainage</b>				
A	Allow for removal of previously installed floor traps	0	No.		
B	Allow for drain ,air and water tests of previously installed drainage pipework.	1	No.		
	Supply, deliver and fix the following uPVC soil andwaste systems to BS4514 and 5225 with fittings fixed in accordance to the manufactureres printed instructions and BS 5572 and manufactured by 'KEY TERRAIN' as described. Pipe work shall be Medium grade (Class D) All UPVC brances, Tees,reducers etc are to be formed in accordance to the manufactureres printed instnction. The installationsto have the various sizes of connectors, adaptors,sockets, reducers holdbats, clips etc as required for satisfactory functions.Prices for pipework shall include the cost for couplings, connectors and jointing to fittings appliances etc				
	<b>UPVC and muPVC pipe work</b>				
C	100mm heavy duty golden brown pipe class D	0	Lm		
D	100mm heavy duty grey pipe class D	0	Lm		
E	50mm ditto	150	Lm		
F	40mm ditto	120	Lm		
G	32mm ditto	0	Lm		
	<b>Extra over UPVC and muPVC pipework</b>				
	<b>Bends</b>				
H	100mm diameter long radius bend	0	No.		
I	100mm diameter short radius bend	0	No.		
J	50mm diameter sweep bend	54	No.		
K	40mm Ditto	20	No.		
L	32mm Ditto	0	No.		
M	50mm 45° Bend	54	No.		
N	40mm 45° Bend	24	No.		
O	32mm 45° Bend	0	No.		
	<b>Reducers</b>				
P	40x32mm diameter reducer	0	No.		
Q	50x40mm Ditto.	12	No.		
R	<b>Single Branch Connector</b> 100mm diameter single branch connector	54	No.		
	<b>Boss Connector</b>				
S	100x50mm Boss connector	0	No.		
T	100x40mm Ditto.	0	No.		
U	W.C. connector Bend	54	No.		
	<b>Tees</b>				
V	50mm diameter sweep tees	24	No.		
W	40mm Ditto.	34	No.		
X	32mm Ditto.	54	No.		
Y	<b>Access cap</b>				
Z	100mm access cap	0	No.		
AA	50mm ditto	27	No.		
AB	40mm ditto	54	No.		
AC	32mm ditto	23	No.		
	<b>Weathering Slates and Vent Cows</b>				
AD	100mm diameter vent cowl	4	No.		
AE	100mm diameter weathering slate	4	No.		
AF	<b>Gully trap</b> Gully trap chamber size 250x250mm, approximately 400mm deep in 150mm block work with cement mortar joints, on 150mm thick mass concrete slab,plastered inside, 100mm trap and hopper. 40mm thick, 250x250mm p.c.c. cover to gully trap chamber and provided with 40mm ventilating hole	6	No.		
AG	<b>Floor Trap</b> 100 x 50mm diameter floor trap and grating	116	No.		
<b>Total for internal Drainage for (1) block</b>					
<b>Total for internal Drainage for (3) blocks c/f to summary page</b>					



Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	<b>Rain Water Harvesting Reticulation</b> Supply and installation of high pressure pipes, class D and fittings with screwed & socketed joint. Rates must allow for all Metal/plastic threaded adaptors where required for the connection of valves, sockets, sliding and fixed joints, support raceways, isolating sheaths, elastic materials, expansion arms and bends, crossovers, couplings, clippings, connectors, joints etc where necessary, for pipe fixing clips, holder bats plugged and screwed for the proper and satisfactory functioning of the system.				
A	<b>Excavation</b> Excavate trench for uPVC rainwater pipework not exceeding 1500mm deep and 750mm deep on average, part refill and ram, and surplus cart away.	125	Lm		
B	<b>Heavy UPVC, Class 4</b> 100mm diameter UPVC pipework	75	Lm		
C	75mm diameter UPVC pipework	50	Lm		
	<b>PVC fittings extra-over pipework for the following:-</b>				
D	100mm diameter spigot socket bend	4	No		
E	75mm diameter sweep bend	4	No		
F	Rainwater outlet complete with plastic grating	6	No		
	<b>Tees with Access Plug</b>				
G	100mm equal tee	4	No		
H	75mm equal tee	4	No		
I	<b>Reducers</b> 100x75mm diameter reducer	2	No		
	<b>Rubber Adaptor and Joints</b>				
J	150mm diameter ring seal joints for joining pipes	4	No		
K	100mm diameter ring seal joints for joining pipes	4	No		
L	<b>Adaptor to buried drain pipe</b> 150x100mm adaptor to buried drain pipe	6	No		
	<b>Rainwater Gulley</b>				
M	600x450x600mm deep inspection gulley complete with 14 s.w.g cover with handle & frame.	3	No		
N	Soil Trap Chamber with three chambers size 1800x900x900mm deep with 100mm concrete (1:3:6) base 100mm block sides rendered all round in cement and sand (1:4) and with approved hinged and flanged cast iron cover and frame including all necessary excavation, disposal and formwork. It shall have a basket for removing the leaflets and other debris from the water.	1	No		
O	<b>Water Storage Tank - Rainwater Ground Tank</b> Cylindrical plastic water storage tank of capacity 10,000 litres, as 'Roto' or approved equivalent	2	No.		
<b>Total for Rain water collection for one (1) block</b>					
<b>Total for Rain water collection for (3) blocks c/f to summary page</b>					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	<b>Fire Services</b>				
	<b>Portable Fire Extinguishers</b>				
	Supply, deliver, install, test and commission the following portable fire extinguishers and conforming to BS EN 3 / BS 1449.				
A	9 litres water portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	8	No		
B	5 Kg carbon dioxide gas portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	8	No		
C	6kg dry chemical powder portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	8	No		
D	9" (225mm) manual operated alarm bell (Gong)	8	No		
E	<b>Fire Blanket</b>				
	Fire blanket made of cloth woven with pre-asbestos yarn or any other fire proof material and to measure 1800 x 1210 mm. It shall be fitted with special tapes folded so as to offer instantaneous single action to release blanket from storing jacket to BS 1721.	0	No.		
F	<b>Fire Notices</b>				
	Allow for fire signage and fire instructions as directed by the Project Engineer.	8	No		
<b>Total for fire services for (1) block</b>					
<b>Total for fire services for (3) block e/f to summary page</b>					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	<b>Water Reticulation</b>				
	Supply, deliver and install the following plumbing fittings in positions indicated on the contract drawings or as shall be instructed by the Engineer. Tenderers should allow for all fittings, jointings couplings including unions and clamps where necessary for the proper functioning of the installation when pricing.				
	Supply, deliver and install Polypropylene Random (PP-R) 20 pipework to DIN 8077 with joints, couplings, reducers, tees, adaptors, pipe fixing clips etc all to DIN 16962 and DIN 16928. Pipe jointing shall be by polyfusion or use of electric coupling. Where pipework is not chased proper anchoring using approved fixtures shall be done. No pipework shall be left exposed to the sun. Rates must allow for all Metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints, support raceways, isolating sheaths, elastic materials, expansion arms and bends, crossovers, couplings, clippings, connectors, joints etc. as required in the running lengths of pipework and also where necessary, for pipe fixing clips, holder bats plugged and screwed for the proper and satisfactory functioning of the system.				
	<b>Excavations</b>				
A	Excavate trench in hard soil/murram 600mm wide and depth not exceeding 1000mm deep and average 750mm deep, prepare bed with red soil/murram of particle size not more than 20 mm to a depth of 750mm. Bed shall be approved by Engineer before laying of pipes. Fill with same material as above and compact in layers of 75 mm. Cart away surplus soil.	230	Lm		
	<b>Pipe work-PPR</b>				
B	32mm diameter PPR pipe	50	Lm		
C	40mm diameter PPR pipe	100	Lm		
D	50mm diameter PPR pipe	50	Lm		
E	65mm diameter PPR pipe	30	Lm		
	<b>Bends</b>				
F	32mm diameter bend	7	No		
G	40mm diameter bend	10	No		
H	50mm diameter bend	3	No		
I	65mm diameter bend	2	No		
	<b>Tees</b>				
J	32mm diameter tee	0	No		
K	40mm diameter tee	0	No		
L	50mm diameter tee	0	No		
M	65mm diameter tee	2	No		
	<b>Reducers</b>				
N	32 x 25mm diameter reducer	54	No		
O	40 x 32mm diameter reducer	54	No		
P	50 x 40mm diameter reducer	4	No		
	<b>Valves</b>				
R	32mm diameter gate valve	0	No		
S	40mm diameter gate valve	0	No		
T	50mm diameter gate valve	2	No		
U	65mm diameter gate valve	2	No		
	<b>Air Release Valves</b>				
V	50mm diameter air release valve	2	No		
	<b>Drain Valves</b>				
W	50mm diameter drain valve	2	No		
	Total c/f to the next Page				

Item	Description	Qty	unit	Rate (Kshs)	Amount Kshs)
<b>Total b/f from previous page</b>					
A	<b>Fire hydrant</b> Supply, deliver and install a 65mm diameter screw down type fire hydrant conforming to BS 750:1977 complete with copper alloy spindle complying with requirements of BS 2874 and having a thread machined of trapezoidal form, cast iron spindle cap secured to the spindle by an M12 hexagonal socket set screw to BS 4168. A tapered key suitable for the spindle cap, a screwed outlet with cast iron cap attached to the hydrant body by a chain. All other necessary accessories necessary for the proper functioning of the hydrant. The hydrant to be as 'Greenfield' type or equal and approved.	2	No		
B	Hydrant Key and cover	2	No		
<b>Water Connection</b>					
C	Allow for water supply , reticulation and connection from the MAWASCO water main supply	0	Item		
<b>Testing and commissioning</b>					
D	Allow for flushing and sterilizationof the external water reticulation system as required to the satisfaction of the Engineer	1	Item		
E	Allow for setting to work, testing and commissioning of the whole external water reticulation system to the satisfaction of the Engineer	1	Item		
<b>Total Water Reticulation &amp; Fire Hydrant carried to Summary Page</b>					

Item	Description	Qty	unit	Rate (Kshs)	Amount (Kshs)
<b>Low Level Water Tank</b>					
A	Assemble a low level water Tank made of galvanised pressed steel sectional tanks plates, 6mm thick plates (Type 1 or 2) and of size 1000mm x 1000mm capacity of tank to be approximately 48000litres and of preferred dimensions 4000mm x 4000mm x 3000mm. The tank to rest of dwarf walls erected by others. The tank to be complete with tank cover, mosquito proof inspection vent, internal stays, including applying two coats of non-toxic bituminous paint on the inside and two coats of aluminum paint on the outside.	1	No.		
B	Water level indicators (one in litres, other in gallons)	2	No.		
C	Internal ladder	1	No.		
D	External ladder	1	No.		
E	Level regulator	1	No.		
F	100x8mm thick steel plate	124	Lm		
<b>High Level Water Tank</b>					
G	Supply, deliver and Assemble a High level water tanks, made of galvanised pressed steel sectional tank plates 6mm thick plates (type 1 and 4) and of 48,000 litres and of preferred dimensions 6000mm x 4000mm x 2000mm. The Tank to come complete with tank cover, mosquito proof inspection vent, internal stays, jointing material, bolts and nuts including applying two coats of non-toxic bituminous paint on the inside and two coats of aluminum paint on the outside	1	No.		
H	Level regulator	1	No.		
I	Water level indicator	1	No.		
J	Internal ladder	1	No.		
K	External ladder for tank platform	1	No.		
L	Steel platform with features described in the particular specifications	1	No.		
M	Tower ladder and protection cage of 18m high	1	No.		
N	Steel tower 18m high with features as described in the particular specifications	1	No.		
O	Allow for electrical works wiring and fitting to pumps, control panel and float switches from Isolator provided by others	1	Item		
<b>Pipework-PPR</b>					
P	100mm dia. PPR pipe	50	Lm		
Q	80mm dia. - ditto-	20	Lm		
R	50mm dia. - ditto-	20	Lm		
<b>Bends/Elbows</b>					
R	50mm dia. Bend/Elbows	5	No.		
S	80mm dia. - ditto -	2	No.		
<b>Tees</b>					
T	50mm dia.	5	No.		
U	80mm ditto	3	No.		
V	100x50mm dia.	2	No.		
<b>Gate valve</b>					
W	100mm diameter medium pressure screw down full way non rising stem wedge gate valve with wheel and head joint to steel tubing, as 'Pegler' or approved equivalent.	6	No.		
X	50 mm ditto	4	No.		
Y	80 mm ditto	2	No.		
<b>Non Return Valve</b>					
Z	50mm dia flanged non return valve	2	No.		
ZA	80mm dia ditto	2	No.		
Total c/f to the next Page					
Item	Description	Qty	unit	Rate (Kshs)	Amount (Kshs)

Total b/f from previous page					
A	<p><b>Booster Pumps</b></p> <p>Supply, deliver and install electrically driven twin booster pumps capable of delivering 3.0 litres/sec against a total static head of 30metres with a 3-phase power source. The pump to be as PEDOROLLO model or equal and approved equivalent pumps to be installed on an anti-vibration mounted platform.</p>	1	Set		
B	<p>Supply, deliver and install a control panel with removable front access cover, motor control gear, internal buttons with automatic change over "running" and "trip" neon lights control system,</p>	1	Item		
Total High ,Low & Booster Pumps c/f to Summary Page					

SUMMARY PAGE PAGE FOR MECHANICAL WORKS -AP CAMP EMALI		
Item	Description	Amount (Kshs)
1	Total brought forward for prelinenerics .....	
2	Total brought forward for Sanitary fittings .....	
3	Total brought forward for internal plumbing .....	
4	Total brought forward for drainage .....	
5	Total brought forward for rain water Collection .....	
6	Total brought forward for Fire services .....	
7	Total brought forward for Water Reticulation & Hydrant system .....	
8	Total brought forward for high level & low level water tanks and Booster pumps .....	
9	Contingency .....	1,064,940
<b>Total for Mechanical works Carried Forward to MAIN DOCUMENT</b>		
Amount in Words ..... ..... Tenderer's Name and Stamp ..... Postal Address: ..... Sub Contract Period ..... Signature: ..... Date: ..... Pin No..... VAT Certificate: ..... Witness ..... Date: ..... Signature ..... Address: .....		



**SCHEDULE OF UNIT RATES**

1. The tenderer shall insert unit rates against the items in the following schedules and may add such other items as he considers appropriate.
2. The unit rates shall include for supply, transport, insurance, delivery to site, storage as necessary, assembling, cleaning, installing, connecting, profit and maintenance in defects liability and any other obligation under this contract.
3. The unit rates will be used to assess the value of additions or omissions arising from authorized variations to the contract works.
4. Where trade names or manufacturer's catalogue numbers are mentioned in the specification, the reference is intended as a guide to the type of article or quality of material required. Alternative brands of **equal** and **approved** quality will be accepted.

ITEM	DESCRIPTION	UNIT	RATE (KShs)
1.	Plastic water storage tank 5000 litres capacity	No.	
2.	75mm PPR (oxystable) pipe	LM	
3.	63mm -ditto-	LM	
4.	40mm -ditto-	LM	
5.	Standard 1.2m x 1.2m x 6mm thick pressed steel tank plates	No.	
6.	50 mm gate valve (pegler)	No.	
7.	Close coupled water closet,white	No.	
8.	Countertop 'Duravit Caro' wash hand basin	CM	
9.	Towel disposal unit	No.	
10.	Tissue dispenser	No.	
11.	Instant shower fitting	No.	



12.	HPDE pipe-50mm dia	Lm.	
13.	HPDE pipe-65mm dia	Lm.	
14.	HPDE pipe-100mm dia	Lm	
15.	HPDE pipe-32mm dia	Lm	
16.	75mm gate valve	No.	
17.	32m gate valve	No.	
18.	Single Phase pump	No.	
19.	Fire Ball Extinguisher	No.	
20.	Hose Reel	No.	

(To be completed by the Tenderer)

SECTION G  
TECHNICAL SCHEDULE OF ITEMS TO BE SUPPLIED

### TECHNICAL SCHEDULE

1. The technical schedule shall be submitted by tenderers to facilitate and enable the Project Manager to evaluate the tenders, especially where the tenderer intends to supply or has based his tender sum on equipment which differs in manufacture, type or performance from the specifications indicated by the Project Manager/Engineer.
2. This schedule shall form part of the technical evaluation criterion, and tenderers are therefore advised to complete the schedule as they shall be considered non responsive.

**NB.** The tenderer must complete in full the technical schedule. Apart from the information required in the technical schedule, the tenderer **MUST SUBMIT LEGIBLE** comprehensive manufacturer's technical brochures and performance details for all items listed in this schedule and **CLEARLY HIGHLIGHT THE SPECIFIC REQUIRED ITEM ONLY.**

S/NO	DESCRIPTION	MANUFACTURER	COUNTRY OF ORIGIN	REMARKS (Catalogue No. etc.)
A	Gate Valves			
B	Pipes GI			
C	Wash hand basin (Pedestal)			
D	Kitchen Sink			
E	Kitchen sink taps			
F	Shower Curtains			
G	Water Closet			
H	Soap Dish			
I	Robe hook			
J	Towel Rail			
K	Portable Fire Extinguishers			
L	Angle Valve			
M	Plastic water tanks			
N	Pipes GI			
O	Toilet roll holder			
P	Pressed steel water tank			
Q	Booster pumps			
R	Pump control panel			
S	Fire Hydrant			
T	Fire Blanket			

Catalogue must be attached for all the items in the schedule of material above

**PROVISIONAL SUMS**

PROPOSED COMPLETION OF 3No. 4 STOREY BLOCKS OF 32No. BEDSITTER UNITS, 14No. TWO BEDROOM AND 4No. THREE BEDROOM UNITS AT AP TRAINING COLLEGE EMBAKASI, NAIROBI COUNTY WP. ITEM NO.

ITEM	DESCRIPTION	AMOUNT ksh
	<p><b><u>PROVISIONAL SUMS</u></b>  <b><u>The following provisional items are to be measured on completion of the works and priced in accordance with rates contained in these Bills of Quantities or pro-rata thereto or deducted in whole if not required.</u></b></p> <p><b><u>Provisional sum for:</u></b></p> <p>A Allow a provisional sum of Kenya Shillings One Hundred Thousand only (Ksh. 100,000.00) for making good run down elements in the 3No. Existing blocks(300,000.00 per block) to be expended in whole or part as per the project manager's instructions.</p> <p>B Allow a provisional sum of Kenya Shillings Four Million, Five Hundred Thousand only (Ksh. 4,500,000.00) for contingencies to be expended in whole or part as per the project manager's instructions.</p>	<p>300,000.00</p> <p>4,500,000.00</p>
	<b>Total Provisional Sums carried to Grand Summary</b>	<b>4,800,000.00</b>

## GRAND SUMMARY

ITEM	DESCRIPTION		SHS	SHS
		PAGE	FOR OFFICIAL USE	FOR CONTRACTOR'S USE
1	PARTICULAR PRELIMINARIES	PP/11		
2	GENERAL PRELIMINARIES	GP/14		
3	BLOCKS BUILDER'S WORK:- i) Block One-	BW/13		
	ii) Block Two-	BW/12		
	iii) Block Three-	BW/13		
4	CIVIL WORKS	CIV/7		
5	ELECTRICAL WORKS	D - 12		
6	MECHANICAL WORKS	Mech-56		
7	PROVISIONAL SUMS	PS/1		
	TOTAL CARRIED TO FORM OF TENDER KSHS			

AMOUNT OF TENDER IN WORDS;.....  
 .....  
 TENDERER'S SIGNATURE AND STAMP;.....  
 ADDRESS;.....  
 DATE;.....  
 WITNESS NAME AND SIGNATURE;.....  
 ADDRESS;.....  
 DATE;.....