KENYA LITERATURE BUREAU

RESTRICTED TENDER FOR PROPOSED SPACE OPTIMIZATION AND REORGANIZATION OF THE PRINTING PRESS AREA FOR KENYA LITERATURE BUREAU AT SOUTH C, POPO ROAD, NAIROBI

SCC/KLB/06/2019

CLOSING DATE: 14-05-2020
TIME: 10:00AM
## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABLE OF CONTENTS</td>
<td>1</td>
</tr>
<tr>
<td>SIGNATURE PAGE &amp; NOTES</td>
<td>2</td>
</tr>
<tr>
<td>PART I: INVITATION TO TENDER</td>
<td>3</td>
</tr>
<tr>
<td>PART II: INSTRUCTIONS TO TENDERERS</td>
<td>4 - 16</td>
</tr>
<tr>
<td>PART II: APPENDIX TO INSTRUCTIONS TO TENDERERS</td>
<td>17 - 18</td>
</tr>
<tr>
<td>PART II: EVALUATION CRITERIA</td>
<td>19 - 24</td>
</tr>
<tr>
<td>PART III: CONDITIONS OF CONTRACT</td>
<td>25 - 45</td>
</tr>
<tr>
<td>PART II: APPENDIX TO CONDITIONS OF CONTRACT</td>
<td>46 - 48</td>
</tr>
<tr>
<td>PART II: DRAWINGS</td>
<td>49 - 50</td>
</tr>
<tr>
<td>PART IV: STANDARD FORMS</td>
<td>51 - 75</td>
</tr>
<tr>
<td>PART II: TRADE PREAMBLES</td>
<td>76 - 78</td>
</tr>
<tr>
<td>PART V: BILL OF QUANTITIES</td>
<td>79 - 207</td>
</tr>
</tbody>
</table>

1. PARTICULAR PRELIMINARIES
2. GENERAL PRELIMINARIES
3. BUILDER’S WORKS - WAREHOUSE
4. PRIME COSTS & PROVISIONAL SUMS
5. FINAL SUMMARY

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Table of Contents

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
SIGNATURE PAGE AND NOTES

BILLS OF QUANTITIES

FOR

Kenya Literature Bureau
P.O. Box 30022 - 00100
Nairobi, Kenya

THE CONTRACT FOR THE ABOVE-MENTIONED WORK ENTERED INTO ON THE ...........DAY OF .........2020 BY THE UNDERSIGNED PARTIES REFERS TO THESE BILLS OF QUANTITIES PAGES NUMBERED AS PER THE FOLLOWING INDEX: ANNEXURES FROM “A” TO “B”

WHICH TOGETHER WITH THE AGREEMENT & SCHEDULE OF CONDITIONS OF BUILDING CONTRACT AND CONTRACT DRAWINGS SHALL BE READ AND CONSTRUED AS PART OF THE SAID CONTRACT.

THESE CONTRACT DOCUMENTS SUPERCEDE ALL ENQUIRIES, PROPOSALS, AGREEMENTS, NEGOTIATIONS AND COMMITMENTS WHETHER WRITTEN OR VERBAL, PRIOR TO THE DATE OF THE EXECUTION OF THE CONTRACT.

..................................................  ..................................................  
CONTRACTOR  EMPLOYER

.................................................. .................................................. 
DATE  DATE

.................................................. .................................................. 
WITNESS  WITNESS

.................................................. .................................................. 
DATE  DATE

Table of Contents
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
INVITATION FOR TENDERS

Name: Proposed Space Optimization & Re-Organization of Printing Area for KLB

Tender reference No.: SCC/KLB/06/2019

1. The Kenya Literature Bureau invites sealed tenders for the construction of The Proposed Space Optimization & Re-Organization of Printing Press Area for K.L.B.

2. Interested contractors must be registered in category NCA “4” and above and appear in the current Building Contractors register

3. A complete set of tender documents may be obtained by interested candidates from the Procurement, during normal working hours upon payment of a non-refundable tender fees of Ksh. 1,000.00. The document may also be viewed and downloaded from the Kenya Literature Bureau website (www.klb.co.ke). Bidders who download the tender document will not be required to pay any fee, however they will be required to send their particulars to supplies@klb.co.ke. All payments shall be made to the Account No.0124-131-8387 at KCB Moi Avenue or through MPESA PAYBILL No. 980400(Account number is the name of the firm bidding). Upon payment of the tender fee, bidders are required to obtain an official receipt from the Cash office and immediately forward their particulars to the Procurement Office for recording and for the purposes of receiving any further tender clarifications and/or addendums.

4. Prices quoted should be net inclusive of all taxes, must be in Kenya shillings and shall remain valid for 120 days from the closing date of tender.

5. Completed tender documents are to be enclosed in plain sealed envelopes marked with Tender name and reference number and deposited in the Tender Box provided at the reception area on The Kenya Literature Bureau Head Office, South C, K.L.B. Road, Nairobi, Kenya to be addressed to

The Managing Director
Kenya Literature Bureau
P.O. Box 30022 -00100, Nairobi

so as to be received on or before ....14th May 2020.................................

6. Tenders will be opened immediately thereafter in the presence of the tenderers’ representatives who choose to attend the opening at The Kenya Literature Bureau Head Office, South C, K.L.B. Road, Nairobi, Kenya.

7. Mandatory site visit on .....8th May 2020................................., attendance certificate will be signed by all representatives. All prospective Tenderers shall assemble at The Kenya Literature Bureau by...11.00...... a.m. Interested Tenderers are required to attend the mandatory pre-tender meeting.

..............................................................................................
For Kenya Literature Bureau

Invitation to Tender
Proposed Space Optimization for Kenya Literature Bureau
Nairobi

-3-
Instructions to Tenderers
INSTRUCTIONS TO TENDERERS

TABLE OF CONTENTS PAGE

<table>
<thead>
<tr>
<th>CLAUSE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General</td>
<td>6 - 8</td>
</tr>
<tr>
<td>2. Tender Documents</td>
<td>8 - 9</td>
</tr>
<tr>
<td>3. Preparation of Tenders</td>
<td>9 - 11</td>
</tr>
<tr>
<td>4. Submission of Tenders</td>
<td>11 - 12</td>
</tr>
<tr>
<td>5. Tender Opening and Evaluation</td>
<td>12 - 14</td>
</tr>
<tr>
<td>6. Award of Contract</td>
<td>14 - 16</td>
</tr>
<tr>
<td>7. Corrupt and Fraudulent Practices</td>
<td>16</td>
</tr>
</tbody>
</table>

Table of Contents

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
INSTRUCTIONS TO TENDERERS

1 General/Eligibility/Qualifications/Joint venture/Cost of tendering

1.1 The Employer as defined in the Appendix to Conditions of Contract invites tenders for Works Contract as described in the tender documents. The successful tenderer will be expected to complete the Works by the Intended Completion Date specified in the tender documents.

1.2 All tenderers shall provide the Qualification Information, a statement that the tenderer (including all members of a joint venture and subcontractors) is not associated, or has not been associated in the past, directly or indirectly, with the Consultant or any other entity that has prepared the design, specifications, and other documents for the project or being proposed as Project Manager for the Contract. A firm that has been engaged by the Employer to provide consulting services for the preparation or supervision of the Works, and any of its affiliates, shall not be eligible to tender.

1.3 All tenderers shall provide in the Form of Tender and Qualification Information, a preliminary description of the proposed work method and schedule, including drawings and charts, as necessary.

1.4 In the event that pre-qualification of potential tenderers has been undertaken, only tenders from pre-qualified tenderers will be considered for award of Contract. These qualified tenderers should submit with their tenders any information updating their original pre-qualification applications or, alternatively, confirm in their tenders that the originally submitted pre-qualification information remains essentially correct as of the date of tender submission.

1.5 Where no pre-qualification of potential tenderers has been done/ if the potential tenderers are not the minimum required for Restricted Tendering, the Procuring Entity shall on its website upload the Tender notice/ Document for any other Interested Tenderer to participate. All tenderers shall include the following information and documents with their tenders, unless otherwise stated:

(a) copies of original documents defining the constitution or legal status, place of registration, and principal place of business; written power of attorney of the signatory of the tender to commit the tenderer:

(b) total monetary value of construction work performed for each of the last five years:

(c) experience in works of a similar nature and size for each of the last five years, and details of work under way or contractually committed; and names and addresses of clients who may be contacted for further information on these contracts;

(d) major items of construction equipment proposed to carry out the Contract and an undertaking that they will be available for the Contract.

(e) qualifications and experience of key site management and technical personnel proposed for the Contract and an undertaking that they shall be available for the Contract.

(f) reports on the financial standing of the tenderer, such as profit and loss statements and auditor’s reports for the past five years;

Instructions to Tenderers
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
(g) evidence of adequacy of working capital for this Contract (access to line(s) of credit and availability of other financial resources);

(h) authority to seek references from the tenderer’s bankers;

(i) information regarding any litigation, current or during the last five years, in which the tenderer is involved, the parties concerned and disputed amount; and

(j) proposals for subcontracting components of the Works amounting to more than 10 percent of the Contract Price.

1.6 Tenders submitted by a joint venture of two or more firms as partners shall comply with the following requirements, unless otherwise stated:

(a) the tender shall include all the information listed in clause 1.5 above for each joint venture partner;

(b) the tender shall be signed so as to be legally binding on all partners;

(c) all partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms;

(d) one of the partners will be nominated as being in charge, authorized to incur liabilities, and receive instructions for and on behalf of all partners of the joint venture; and

(e) the execution of the entire Contract, including payment, shall be done exclusively with the partner in charge.

1.7 To qualify for award of the Contract, tenderers shall meet the following minimum qualifying criteria;

(a) annual volume of construction work of at least 2.5 times the estimated annual cashflow for the Contract;

(b) experience as main contractor in the construction of at least two works of a nature and complexity equivalent to the Works over the last 10 years (to comply with this requirement, works cited should be at least 70 percent complete);

(c) proposals for the timely acquisition (own, lease, hire, etc.) of the essential equipment listed as required for the Works;

(d) a Contract manager with at least five years’ experience in works of an equivalent nature and volume, including no less than three years as Manager; and

(e) liquid assets and/or credit facilities, net of other contractual commitments and exclusive of any advance payments which may be made under the Contract, of no less than 4 months of the estimated payment flow under this Contract.
1.8 The figures for each of the partners of a joint venture shall be added together to determine the tenderer’s compliance with the minimum qualifying criteria of clause 1.7 (a) and (e); however, for a joint venture to qualify, each of its partners must meet at least 25 percent of minimum criteria 1.7 (a), (b) and (e) for an individual tenderer, and the partner in charge at least 40 percent of those minimum criteria. Failure to comply with this requirement will result in rejection of the joint venture’s tender. Subcontractors’ experience and resources will not be taken into account in determining the tenderer’s compliance with the qualifying criteria, unless otherwise stated.

1.9 Each tenderer shall submit only one tender, either individually or as a partner in a joint venture. A tenderer who submits or participates in more than one tender (other than as a subcontractor or in cases of alternatives that have been permitted or requested) will cause all the proposals with the tenderer’s participation to be disqualified.

1.10 The tenderer shall bear all costs associated with the preparation and submission of his tender, and the Employer will in no case be responsible or liable for those costs.

1.11 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.

1.12 The procuring entity’s employees, committee members, board members and their relative (spouse and children) are not eligible to participate in the tender.

1.13 The price to be charged for the tender document shall not exceed Kshs.5,000/=.

1.14 The procuring entity shall allow the tenderer to review the tender document free of charge before purchase.

2 Tender Documents

2.1 The complete set of tender documents comprises the documents listed below and any addenda issued in accordance with Clause 2.4.

(a) These Instructions to Tenderers
(b) Form of Tender and Qualification Information
(c) Conditions of Contract
(d) Appendix to Conditions of Contract
(e) Specifications
(f) Drawings
(g) Bills of Quantities
(h) Forms of Securities

2.2 The tenderer shall examine all Instructions, Forms to be filled and Specifications in the tender documents. Failure to furnish all information required by the tender documents, or submission of a tender not substantially responsive to the tendering documents in...
every respect will be at the tenderer’s risk and may result in rejection of his tender.

2.3 A prospective tenderer making an inquiry relating to the tender documents may notify the Employer in writing or by cable, telex or facsimile at the address indicated in the letter of invitation to tender. The Employer will only respond to requests for clarification received earlier than seven days prior to the deadline for submission of tenders. Copies of the Employer’s response will be forwarded to all persons issued with tendering documents, including a description of the inquiry, but without identifying its source.

2.4 Before the deadline for submission of tenders, the Employer may modify the tendering documents by issuing addenda. Any addendum thus issued shall be part of the tendering documents and shall be communicated in writing or by cable, telex or facsimile to all tenderers. Prospective tenderers shall acknowledge receipt of each addendum in writing to the Employer.

2.5 To give prospective tenderers reasonable time in which to take an addendum into account in preparing their tenders, the Employer shall extend, as necessary, the deadline for submission of tenders, in accordance with Clause 4.2 here below.

3 Preparation of Tenders

3.1 All documents relating to the tender and any correspondence shall be in English language.

3.2 The tender submitted by the tenderer shall comprise the following:

(a) These Instructions to Tenderers, Form of Tender, Conditions of Contract, Appendix to Conditions of Contract and Specifications;
(b) Tender Security;
(c) Priced Bill of Quantities;
(d) Qualification Information Form and Documents;
(e) Alternative offers where invited; and
(f) Any other materials required to be completed and submitted by the tenderers.

3.3 The tenderer shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items for which no rate or price is entered by the tenderer will not be paid for when executed and shall be deemed covered by the other rates and prices in the Bill of Quantities. All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause relevant to the Contract, as of 30 days prior to the deadline for submission of tenders, shall be included in the tender price submitted by the tenderer.

3.4 The rates and prices quoted by the tenderer shall only be subject to adjustment during the performance of the Contract if provided for in the Appendix to Conditions of Contract and provisions made in the Conditions of Contract.

3.5 The unit rates and prices shall be in Kenya Shillings.

3.6 Tenders shall remain valid for a period of sixty (60) days from the date of submission. However in exceptional circumstances, the Employer may request that the tenderers
extend the period of validity for a specified additional period. The request and the tenderers’ responses shall be made in writing. A tenderer may refuse the request without forfeiting the Tender Security. A tenderer agreeing to the request will not be required or permitted to otherwise modify the tender, but will be required to extend the validity of Tender Security for the period of the extension, and in compliance with Clause 3.7 - 3.11 in all respects.

3.7 The tenderer shall furnish, as part of the tender, a Tender Security in the amount and form specified in the appendix to invitation to tenderers. This shall be in the amount not exceeding 2 percent of the tender price.

3.8 The format of the Tender Security should be in accordance with the form of Tender Security included in Section G - Standard forms or any other form acceptable to the Employer. Tender Security shall be valid for 30 days beyond the validity of the tender.

3.9 Any tender not accompanied by an acceptable Tender Security shall be rejected. The Tender Security of a joint venture must define as “Tenderer” all joint venture partners and list them in the following manner: a joint venture consisting of “…………”, “…………”, and “…………”.

3.10 The Tender Securities of unsuccessful tenderers will be returned within 28 days of the end of the tender validity period specified in Clause 3.6.

3.11 The Tender Security of the successful tenderer will be discharged when the tenderer has signed the Contract Agreement and furnished the required Performance Security.

3.12 The Tender Security may be forfeited
(a) if the tenderer withdraws the tender after tender opening during the period of tender validity;
(b) if the tenderer does not accept the correction of the tender price, pursuant to Clause 5.7;
(c) in the case of a successful tenderer, if the tenderer fails within the specified time limit to
   (i) sign the Agreement, or
   (ii) furnish the required Performance Security.

3.13 Tenderers shall submit offers that comply with the requirements of the tendering documents, including the basic technical design as indicated in the Drawings and Specifications. Alternatives will not be considered, unless specifically allowed in the invitation to tender. If so allowed, tenderers wishing to offer technical alternatives to the requirements of the tendering documents must also submit a tender that complies with the requirements of the tendering documents, including the basic technical design as indicated in the Drawings and Specifications. In addition to submitting the basic tender, the tenderer shall provide all information necessary for a complete evaluation of the alternative, including design calculations, technical specifications, breakdown of prices, proposed construction methods and other relevant details. Only the technical alternatives, if any, of the lowest evaluated tender conforming to the basic technical requirements shall be considered.
3.14 The tenderer shall prepare one original of the documents comprising the tender documents as described in Clause 3.2 of these Instructions to Tenderers, bound with the volume containing the Form of Tender, and clearly marked “ORIGINAL”. In addition, the tenderer shall submit copies of the tender, in the number specified in the invitation to tender, and clearly marked as “COPIES”. In the event of discrepancy between them, the original shall prevail.

3.15 The original and all copies of the tender shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the tenderer, pursuant to Clause 1.5 (a) or 1.6 (b), as the case may be. All pages of the tender where alterations or additions have been made shall be initialed by the person or persons signing the tender.

3.16 Clarification of tenders shall be requested by the tenderer to be received by the procuring entity not later than 7 days prior to the deadline for submission of tenders.

3.17 The procuring entity shall reply to any clarifications sought by the tenderer within 3 days of receiving the request to enable the tenderer to make timely submission of its tender.

3.18 The tender security shall be in the amount of 0.5 - 2 per cent of the tender price.

4 Submission of Tenders

4.1 The tenderer shall seal the original and all copies of the tender in two inner envelopes and one outer envelope, duly marking the inner envelopes as “ORIGINAL” and “COPIES” as appropriate. The inner and outer envelopes shall:

(a) be addressed to the Employer at the address provided in the invitation to tender;
(b) bear the name and identification number of the Contract as defined in the invitation to tender; and
(c) provide a warning not to open before the specified time and date for tender opening.

4.2 Tenders shall be delivered to the Employer at the address specified above not later than the time and date specified in the invitation to tender. However, the Employer may extend the deadline for submission of tenders by issuing an amendment in accordance with Sub-Clause 2.5 in which case all rights and obligations of the Employer and the tenderers previously subject to the original deadline will then be subject to the new deadline.

4.3 Any tender received after the deadline prescribed in clause 4.2 will be returned to the tenderer un-opened.

4.4 Tenderers may modify or withdraw their tenders by giving notice in writing before the deadline prescribed in clause 4.2. Each tenderer’s modification or withdrawal notice shall be prepared, sealed, marked, and delivered in accordance with clause 3.13 and 4.1, with the outer and inner envelopes additionally marked “MODIFICATION” and
“WITHDRAWAL”, as appropriate. No tender may be modified after the deadline for submission of tenders.

4.5 Withdrawal of a tender between the deadline for submission of tenders and the expiration of the period of tender validity specified in the invitation to tender or as extended pursuant to Clause 3.6 may result in the forfeiture of the Tender Security pursuant to Clause 3.11.

4.6 Tenderers may only offer discounts to, or otherwise modify the prices of their tenders by submitting tender modifications in accordance with Clause 4.4 or be included in the original tender submission.

5 Tender Opening and Evaluation

5.1 The tenders will be opened by the Employer, including modifications made pursuant to Clause 4.4, in the presence of the tenderers’ representatives who choose to attend at the time and in the place specified in the invitation to tender. Envelopes marked “WITHDRAWAL” shall be opened and read out first. Tenderers’ and Employer’s representatives who are present during the opening shall sign a register evidencing their attendance.

5.2 The tenderers’ names, the tender prices, the total amount of each tender and of any alternative tender (if alternatives have been requested or permitted), any discounts, tender modifications and withdrawals, the presence or absence of Tender Security, and such other details as may be considered appropriate, will be announced by the Employer at the opening. Minutes of the tender opening, including the information disclosed to those present will be prepared by the Employer.

5.3 Information relating to the examination, clarification, evaluation, and comparison of tenders and recommendations for the award of Contract shall not be disclosed to tenderers or any other persons not officially concerned with such process until the award to the successful tenderer has been announced. Any effort by a tenderer to influence the Employer’s officials, processing of tenders or award decisions may result in the rejection of his tender.

5.4 To assist in the examination, evaluation, and comparison of tenders, the Employer at his discretion, may ask any tenderer for clarification of the tender, including breakdowns of unit rates. The request for clarification and the response shall be in writing or by cable, telex or facsimile but no change in the price or substance of the tender shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered in the evaluation of the tenders in accordance with Clause 5.7.

5.5 Prior to the detailed evaluation of tenders, the Employer will determine whether each tender (a) meets the eligibility criteria defined in Clause 1.7;(b) has been properly signed; (c) is accompanied by the required securities; and (d) is substantially responsive to the requirements of the tendering documents. A substantially responsive tender is one which conforms to all the terms, conditions and specifications of the tendering documents, without material deviation or reservation. A material deviation or reservation
is one (a) which affects in any substantial way the scope, quality, or performance of the works; (b) which limits in any substantial way, inconsistent with the tendering documents, the Employer’s rights or the tenderer’s obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other tenderers presenting substantially responsive tenders.

5.6 If a tender is not substantially responsive, it will be rejected, and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.

5.7 Tenders determined to be substantially responsive will be checked for any arithmetic errors. Errors will be corrected as follows:

(a) where there is a discrepancy between the amount in figures and the amount in words, the amount in words will prevail; and

(b) where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will prevail, unless in the opinion of the Employer, there is an obvious typographical error, in which case the adjustment will be made to the entry containing that error.

(c) In the event of a discrepancy between the tender amount as stated in the Form of Tender and the corrected tender figure in the main summary of the Bill of Quantities, the amount as stated in the Form of Tender shall prevail.

(d) The Error Correction Factor shall be computed by expressing the difference between the tender amount and the corrected tender sum as a percentage of the corrected Builder’s Work (i.e. Corrected tender sum less P.C. and Provisional Sums)

(e) The Error Correction Factor shall be applied to all Builder’s Work (as a rebate or addition as the case may be) for the purposes of valuations for Interim Certificates and valuation of variations.

(f) the amount stated in the tender will be adjusted in accordance with the above procedure for the correction of errors and, with concurrence of the tenderer, shall be considered as binding upon the tenderer. If the tenderer does not accept the corrected amount, the tender may be rejected and the Tender Security may be forfeited in accordance with clause 3.11.

5.8 The Employer will evaluate and compare only the tenders determined to be substantially responsive in accordance with Clause 5.5.

5.9 In evaluating the tenders, the Employer will determine for each tender the evaluated tender price by adjusting the tender price as follows:

(a) making any correction for errors pursuant to clause 5.7;

(b) excluding provisional sums and the provision, if any, for contingencies in the Bill of Quantities, but including Dayworks where priced competitively.

Instructions to Tenderers
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
(c) making an appropriate adjustment for any other acceptable variations, deviations, or alternative offers submitted in accordance with clause 3.12; and

(d) making appropriate adjustments to reflect discounts or other price modifications offered in accordance with clause 4.6

5.10 The Employer reserves the right to accept or reject any variation, deviation, or alternative offer. Variations, deviations, and alternative offers and other factors which are in excess of the requirements of the tender documents or otherwise result in unsolicited benefits for the Employer will not be taken into account in tender evaluation.

5.11 The tenderer shall not influence the Employer on any matter relating to his tender from the time of the tender opening to the time the Contract is awarded. Any effort by the Tenderer to influence the Employer or his employees in his decision on tender evaluation, tender comparison or Contract award may result in the rejection of the tender.

5.12 Firms incorporated in Kenya where indigenous Kenyans own 51% or more of the share capital shall be allowed a 10% preferential bias provided that they do not sub-contract work valued at more than 50% of the Contract Price excluding Provisional Sums to an non-indigenous sub-contractor.

6 Award of Contract

6.1 Subject to Clause 6.2, the award of the Contract will be made to the tenderer whose tender has been determined to be substantially responsive to the tendering documents and who has offered the lowest evaluated tender price, provided that such tenderer has been determined to be (a) eligible in accordance with the provision of Clauses 1.2, and (b) qualified in accordance with the provisions of clause 1.7 and 1.8.

This is in line with Section 86 (1) (a) of the Public Procurement and Asset Disposal Act, 2015. Which reads "The successful tender shall be the one who meets any one of the following as specified in the tender document-"

(a) The tender with the lowest evaluated price;"

6.2 Notwithstanding clause 6.1 above, the Employer reserves the right to accept or reject any tender, and to cancel the tendering process and reject all tenders, at any time prior to the award of Contract, without thereby incurring any liability to the affected tenderer or tenderers or any obligation to inform the affected tenderer or tenderers of the grounds for the action.

6.3 The tenderer whose tender has been accepted will be notified of the award prior to expiration of the tender validity period in writing or by cable, telex or facsimile. This notification (hereinafter and in all Contract documents called the “Letter of Acceptance”) will state the sum (hereinafter and in all Contract documents called the “Contract Price”) that the Employer will pay the Contractor in consideration of the
execution, completion, and maintenance of the Works by the Contractor as prescribed by the Contract. At the same time the other tenderers shall be informed that their tenders have not been successful.

The contract shall be formed on the parties signing the contract.

6.4 The Agreement will incorporate all agreements between the Employer and the successful tenderer. Within 14 days of receipt the successful tenderer will sign the Agreement and return it to the Employer.

6.5 Within 21 days after receipt of the Letter of Acceptance, the successful tenderer shall deliver to the Employer a Performance Security in the amount stipulated in the Appendix to Conditions of Contract and in the form stipulated in the Tender documents. The Performance Security shall be in the amount and specified form.

6.6 Failure of the successful tenderer to comply with the requirements of clause 6.5 shall constitute sufficient grounds for cancellation of the award and forfeiture of the Tender Security.

6.7 Upon the furnishing by the successful tenderer of the Performance Security, the Employer will promptly notify the other tenderers that their tenders have been unsuccessful.

6.8 Preference where allowed in the evaluation of tenders shall not be allowed for contracts not exceeding one year (12 months).

6.9 The tender evaluation committee shall evaluate the tender within 30 days of the validity period from the date of opening the tender.

6.10 The parties to the contract shall have it signed within 30 days from the date of notification of contract award unless there is an administrative review request.

6.11 Contract price variations shall not be allowed for contracts not exceeding one year (12 months).

6.12 Where contract price variation is allowed, the valuation shall not exceed 15% of the original contract price.

6.13 Price variation request shall be processed by the procuring entity within 30 days of receiving the request.

6.14 The procuring entity may at any time terminate procurement proceedings before contract award and shall not be liable to any person for the termination.

6.15 The procuring entity shall give prompt notice of the termination to the tenderers and on request give its reasons for termination within 14 days of receiving the request from any tenderer.

Instructions to Tenderers
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
6.16 A tenderer who gives false information in the tender document about its qualification or who refuses to enter into a contract after notification of contract award shall be considered for debarment from participating in future public procurement.

7 Corrupt and Fraudulent practices

7.1 The procuring entity requires that tenderers observe the highest standards of ethics during procurement process and execution of contracts. A tenderer shall sign a declaration that he has not and will not be involved in corrupt and fraudulent practices.
APPENDIX TO INSTRUCTIONS OF TENDERERS

The following clauses shall be amended as follows:

**Clause 1.4:** Delete the entire clause

**Clause 1.5:** To read "This invitation to tender is open to all eligible tenderers as per the invitation notice"

**Clause 1.5 (a)** For the requirement of this clause; add the following:
- i) Be registered with National Construction Authority, Category 4 and above (Evidence of current annual contractors practicing license is required)
- ii) Submit a valid Tax Compliance Certificate

**Clause 1.5 (c)** For the requirement of this clause;
- i) Omit the words "each of" appearing before the 'last five years'
- ii) Attach copies of practical completion certificates for similar works undertaken in the last five years

**Clause 1.5 (d)** required
- Delete the word 'Major' and substitute with word 'Relevant' Key equipment required to carry out the works

**Clause 1.7** Add the following after the words 'qualifying criteria'; (attach the relevant supporting documents as evidence)

**Clause 1.7 (d)** Delete the words 'contract manager' and 'manager' at the beginning and end of the sub clause and substitute with the words 'general foreman' and 'foreman' respectively
- e) Delete the figure '4' and substitute with figure '2'

**Clause 1.7 (e)** Introduce the following:-
- e) The following tenders shall also be considered non-responsive:- Incomplete and/or unsigned form of tender

**Clause 3.2** For the requirement of this clause; add the following (g) Appendix to the Instruction to Bidders

**Clause 3.6** Amend the first sentence to read as follows: "Tenders shall remain valid for a period of 120 days from the date of submission"

**Clause 3.14** Delete the entire clause and substitute with the following:

The tenderer shall prepare one original of the volume of tender documents comprising the documents as described in clause 3.2 of these instructions and clearly marked 'ORIGINAL'
**Clause 3.15**
Delete the entire words 'original and all copies' and insert the word 'original' after the word 'the'.

**Clause 4.1**
Delete the first paragraph and insert the words 'The tenderer shall seal the original of the tender documents in one envelop duly marked original.'
TENDER EVALUATION CRITERIA

After tender opening, the tenders will be evaluated in 3 stages, namely:

1. Preliminary evaluation
2. Technical evaluation
3. Financial Evaluation

1.1 PRELIMINARY EVALUATION

<table>
<thead>
<tr>
<th>S/No</th>
<th>MANDATORY REQUIREMENTS(MR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MR1</td>
<td>Valid Copy of certificate of incorporation/ Registration.</td>
</tr>
<tr>
<td>MR2</td>
<td>Valid Copy of current KRA Tax compliance certificate</td>
</tr>
<tr>
<td>MR3</td>
<td>Valid copy of NCA 4 and above registration certificate in the relevant field</td>
</tr>
<tr>
<td>MR4</td>
<td>Dully filled Stamped and signed tender questionnaire</td>
</tr>
<tr>
<td>MR5</td>
<td>Dully filled stamped and signed Confidential business questionnaire</td>
</tr>
<tr>
<td>MR6</td>
<td>Anticorruption Pledge duly signed stamped</td>
</tr>
<tr>
<td>MR7</td>
<td>Submission of original &amp; One (1) copies of tender document.</td>
</tr>
</tbody>
</table>
| MR8  | Submitted tender documents must be properly **TAPE BOUND** and paginated in the correct sequence and all pages must be initialed/signed/stamped.  
NB: Spiral Binding and use of Spring or Box Files will not be allowed and will result in automatic disqualification. |
| MR9  | Mandatory Site visit on **8th May 2020** at 10:00 am, attendance certificate will be signed by all representatives. All prospective Tenderers shall assemble at the Reception area at KLB HQs South C by **10.00** a.m. Tenders who fail to attend the mandatory pre-tender Meeting shall also be considered non-responsive. |
| MR10 | Valid Copy of Single Business permit |
| MR11 | Tender Security (Bid Bond) of Kshs. **715,000/=** in form Bank Guarantee from a reputable Bank or reputable Insurance company as approved by PPRA valid for 150 days from the date of Tender Opening. |
| MR12 | Submission of valid CR12 form showing the list directors /shareholding (issued within the last 1 year) or National Identity Card for Sole Proprietor |
| MR13 | Current annual contractors practicing license from NCA in the relevant Field |
| MR14 | Dully filled stamped and signed Form of Tender. |
| MR15 | Provide proof of Power of attorney (of Tender Signatory) |
| MR 16 | Non-debarment statement form duly signed stamped |

Tender Bid Document submitted without ANY of the above-mentioned Mandatory documents shall be
rejected by Evaluation Committee and will therefore not proceed to the technical and financial Evaluation

N.B.

The employer may seek further clarification/confirmation if necessary, to confirm authenticity/compliance of any condition of the tender.

1.2 TECHNICAL EVALUATION - Pass Mark 70 out of 100

Award of points for the Technical Evaluation will be as follows

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Maximum Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Key Personnel</td>
<td>15</td>
</tr>
<tr>
<td>(2) Contracts complete in the last five (5) years</td>
<td>15</td>
</tr>
<tr>
<td>(3) Schedules of on-going projects</td>
<td>10</td>
</tr>
<tr>
<td>(4) Schedules of contractor's equipment</td>
<td>15</td>
</tr>
<tr>
<td>(5) Sanctity of the tender document as in accordance with clause 5 of Instruction to tenderer</td>
<td>10</td>
</tr>
<tr>
<td>(6) Audited Financial Report for the last 3 years</td>
<td>15</td>
</tr>
<tr>
<td>(7) Evidence of Financial Resources</td>
<td>15</td>
</tr>
<tr>
<td>(8) Litigation History</td>
<td>5</td>
</tr>
</tbody>
</table>

**Total**

100

The detailed scoring plan shall be as shown in Table 1 overleaf:

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Points Scored</th>
<th>Max Points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key Personnel (Attach evidence)</strong></td>
<td>Director of the firm 000 Holder of degree or diploma in a relevant Engineering field - 5 000 Holder of certificate in a relevant Engineering field - 3 000 Holder of trade test certificate in relevant Engineering field - 2 000 No relevant certificate - 0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td><strong>At least 1 No. Degree/Diploma of the key personnel in relevant Engineering field</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Evaluation Criteria

Proposed Space Optimization for Kenya Literature Bureau

Nairobi
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ooo With over 10 years relevant experience - 5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>ooo With over 5 years relevant experience - 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ooo With under 5 years relevant experience - 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>At least 2 No. certificate holder of key personnel in relevant Engineering field</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ooo With over 10 years relevant experience - 5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>ooo With over 5 years relevant experience - 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ooo With under 5 years relevant experience - 2</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Contract complete in the last five (5) years; a max of 5 No. projects (Attach evidence)</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>ooo Project of similar nature, complexity and magnitude - 3 marks each</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>ooo Project of similar nature, but of lower value than the one in consideration - 2 marks each</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>ooo Project of similar magnitude - 1 mark each</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>ooo No completed project of similar nature - 0 marks</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Ongoing projects (A max of 2 No. projects) (Attach evidence)</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>ooo Project of similar nature, complexity and magnitude - 5 marks each</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>ooo Project of similar nature, but of lower value than the one in consideration - 2 marks each</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>ooo No ongoing project of similar nature - 0 marks</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>Schedules of contractor's equipment (Attach evidence of proof of ownership or lease agreement)</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>ooo For each specific equipment required in the construction work being tendered for. (Maximum No. of equipment to be considered: 5 No. - 3 marks each</td>
<td>15</td>
</tr>
<tr>
<td>5</td>
<td>Sanctity of the tender document</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>ooo Having the document intact (not tampered with in any way) - 10</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>ooo Having mutilated or modified the tender document - 0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Financial Report</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Audited financial report (last three (3) years) - 2015 - 2018</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>ooo Turn over greater or equal to 5 times the cost of the project -</td>
<td></td>
</tr>
</tbody>
</table>

Evaluation Criteria

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
### 1.3 FINANCIAL EVALUATION

Bids that pass the Technical Evaluation shall be subjected to the Financial Evaluation in two stages as follows:

1. Tender Rates and arithmetic errors
2. Tender Sums

#### 1.3.1 Tender Sums

i. Examination of Arithmetic Errors

According to Section 82 of the Public Procurement and Asset Disposal Act (2015) that 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 or by any person or entity, The committee will check the arithmetic errors and notify the winning bidder in case errors are found in the document, however no alteration of bid price will be done.
Any bidder with Arithmetic error of +, -ve will be automatically disqualified

ii. **Comparison of Rates**

Evaluation of the tender rates will constitute examination of (i) pricing consistency (same rates for similar items, price distribution amongst sections, etc.); (ii) reasonableness of pricing (comparison with prevailing market levels, inclusion of taxes [VAT, etc.] in the rates); The rates for major items will be examined and compared with the Official Estimate. The bidders who pass the test of price consistency and reasonableness, (if any) shall proceed to Financial Evaluation.

---

**Evaluation Criteria**

*Proposed Space Optimization for Kenya Literature Bureau*

*Nairobi*
**Award Criteria:**

*The firm achieving the lowest evaluated price and conforming to the requirements of the Tender will be awarded the contract in line with Section 86 of the Public Procurement and Disposal Act, 2015*

---

Particulars of performance security if applicable. 10% of contract sum

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**Kenya Literature Bureau may request for** Negotiations to negotiate on the Tenderers Bid price if - The Tender Price is deemed to be over and above the Budget/ Prevailing market rate taking account of Section 44 (2) (a) 53(3) & (8) and Provisions of Section 82 of the Public Procurement and Asset Disposal Act, 2015

---

**Evaluation Criteria**

*Proposed Space Optimization for Kenya Literature Bureau*

*Nairobi*
Conditions of Contract
# CONDITIONS OF CONTRACT

## TABLE OF CONTENTS PAGE

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Definitions</td>
<td>28 - 29</td>
</tr>
<tr>
<td>2</td>
<td>Interpretation</td>
<td>29 - 30</td>
</tr>
<tr>
<td>3</td>
<td>Language and Law</td>
<td>30</td>
</tr>
<tr>
<td>4</td>
<td>Project Manager’s Decision</td>
<td>30</td>
</tr>
<tr>
<td>5</td>
<td>Delegation</td>
<td>30</td>
</tr>
<tr>
<td>6</td>
<td>Communications</td>
<td>30 - 31</td>
</tr>
<tr>
<td>7</td>
<td>Sub-Contracting</td>
<td>31</td>
</tr>
<tr>
<td>8</td>
<td>Other Contractors</td>
<td>31</td>
</tr>
<tr>
<td>9</td>
<td>Personnel</td>
<td>31</td>
</tr>
<tr>
<td>10</td>
<td>Works</td>
<td>31</td>
</tr>
<tr>
<td>11</td>
<td>Safety and temporary works</td>
<td>31</td>
</tr>
<tr>
<td>12</td>
<td>Discoveries</td>
<td>32</td>
</tr>
<tr>
<td>13</td>
<td>Work Programme</td>
<td>32</td>
</tr>
<tr>
<td>14</td>
<td>Possession of site</td>
<td>32</td>
</tr>
<tr>
<td>15</td>
<td>Access to site</td>
<td>32</td>
</tr>
<tr>
<td>16</td>
<td>Instructions</td>
<td>32</td>
</tr>
<tr>
<td>17</td>
<td>Extension or Acceleration of Completion Date</td>
<td>32 - 33</td>
</tr>
<tr>
<td>18</td>
<td>Management Meetings</td>
<td>33</td>
</tr>
<tr>
<td>19</td>
<td>Early Warnings</td>
<td>33</td>
</tr>
<tr>
<td>20</td>
<td>Defects</td>
<td>33 - 34</td>
</tr>
<tr>
<td>21</td>
<td>Bill of Quantities</td>
<td>34</td>
</tr>
<tr>
<td>22</td>
<td>Variations</td>
<td>34 - 35</td>
</tr>
</tbody>
</table>

Table of Contents

*Proposed Space Optimization for Kenya Literature Bureau*

*Nairobi*
23. Payment certificates, currency of payments and Advance Payments 35 - 36
24. Compensation events 36 - 38
25. Price Adjustment 38 - 39
26. Retention 39
27. Liquidated Damages 39
28. Securities 40
29. Day Works 40
30. Liability and Insurance 40 - 41
31. Completion and taking over 41
32. Final Account 41
33. Termination 41 - 42
34. Payment upon termination 42 - 43
35. Release from performance 43
36. Corrupt gifts and payments of commission 43 - 44
37. Settlement of Disputes 44 - 45
38. Alternative Dispute Resolution 45

Table of Contents
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
CONDITIONS OF CONTRACT

1. Definitions

1.1 In this Contract, except where context otherwise requires, the following terms shall be interpreted as indicated;

“Bill of Quantities” means the priced and completed Bill of Quantities forming part of the tender.

“Compensation Events” are those defined in Clause 24 hereunder.

“The Completion Date” means the date of completion of the Works as certified by the Project Manager, in accordance with Clause 31.

“The Contract” means the agreement entered into between the Employer and the Contractor as recorded in the Agreement Form and signed by the parties including all attachments and appendices thereto and all documents incorporated by reference therein to execute, complete, and maintain the Works,

“The Contractor” refers to the person or corporate body whose tender to carry out the Works has been accepted by the Employer.

“The Contractor’s Tender” is the completed tendering document submitted by the Contractor to the Employer.

“The Contract Price” is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

“Days” are calendar days; “Months” are calendar months.

“A Defect” is any part of the Works not completed in accordance with the Contract.

“The Defects Liability Certificate” is the certificate issued by Project Manager upon correction of defects by the Contractor.

“The Defects Liability Period” is the period named in the Contract Data and calculated from the Completion Date.

“Drawings” include calculations and other information provided or approved by the Project Manager for the execution of the Contract.

“Dayworks” are Work inputs subject to payment on a time basis for labour and the associated materials and plant.

“Employer”, or the “Procuring entity” as defined in the Public Procurement Regulations (i.e. Central or Local Government administration, Universities, Public Institutions and Corporations, etc) is the party who employs the Contractor to carry out the Works.
“Equipment” is the Contractor’s machinery and vehicles brought temporarily to the Site for the execution of the Works.

“The Intended Completion Date” is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date may be revised only by the Project Manager by issuing an extension of time or an acceleration order.

“Materials” are all supplies, including consumables, used by the Contractor for incorporation in the Works.

“Plant” is any integral part of the Works that shall have a mechanical, electrical, chemical, or biological function.

“Project Manager” is the person named in the Appendix to Conditions of Contract (or any other competent person appointed by the Employer and notified to the Contractor, to act in replacement of the Project Manager) who is responsible for supervising the execution of the Works and administering the Contract and shall be an “Architect” or a “Quantity Surveyor” registered under the Architects and Quantity Surveyors Act Cap 525 or an “Engineer” registered under Engineers Registration Act Cap 530.

“Site” is the area defined as such in the Appendix to Condition of Contract.

“Site Investigation Reports” are those reports that may be included in the tendering documents which are factual and interpretative about the surface and subsurface conditions at the Site.

“Specifications” means the Specifications of the Works included in the Contract and any modification or addition made or approved by the Project Manager.

“Start Date” is the latest date when the Contractor shall commence execution of the Works. It does not necessarily coincide with the Site possession date(s).

“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.

“Temporary works” are works designed, constructed, installed, and removed by the Contractor which are needed for construction or installation of the Works.

“A Variation” is an instruction given by the Project Manager which varies the Works.

“The Works” are what the Contract requires the Contractor to construct, install, and turnover to the Employer, as defined in the Appendix to Conditions of Contract.

2. Interpretation

2.1 In interpreting these Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning in English Language unless specifically defined. The Project Manager
will provide instructions clarifying queries about these Conditions of Contract.

2.2 If sectional completion is specified in the Appendix to Conditions of Contract, reference in the Conditions of Contract to the Works, the Completion Date and the Intended Completion Date apply to any section of the Works (other than references to the Intended Completion Date for the whole of the Works).

2.3 The following documents shall constitute the Contract documents and shall be interpreted in the following order of priority:

1. Agreement,
2. Letter of Acceptance,
3. Contractor’s Tender,
4. Appendix to Conditions of Contract,
5. Conditions of Contract,
6. Specifications,
7. Drawings,
8. Bill of Quantities,
9. Any other documents listed in the Appendix to Conditions of Contract as forming part of the Contract.

Immediately after the execution of the Contract, the Project Manager shall furnish both the Employer and the Contractor with two copies each of all the Contract documents. Further, as and when necessary the Project Manager shall furnish the Contractor [always with a copy to the Employer] with three [3] copies of such further drawings or details or descriptive schedules as are reasonably necessary either to explain or amplify the Contract drawings or to enable the Contractor to carry out and complete the Works in accordance with these Conditions.

3. Language and Law

3.1 Language of the Contract and the law governing the Contract shall be English language and the Laws of Kenya respectively unless otherwise stated.

4. Project Manager’s Decisions

4.1 Except where otherwise specifically stated, the Project Manager will decide contractual matters between the Employer and the Contractor in the role representing the Employer.

5. Delegation

5.1 The Project Manager may delegate any of his duties and responsibilities to others after notifying the Contractor.

6. Communications

Conditions of Contract
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
6.1 Communication between parties shall be effective only when in writing. A notice shall be effective only when it is delivered.

7. Subcontracting

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

8. Other Contractors

8.1 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities etc. as listed in the Appendix to Conditions of Contract and also with the Employer, as per the directions of the Project Manager. The Contractor shall also provide facilities and services for them. The Employer may modify the said List of Other Contractors etc., and shall notify the Contractor of any such modification.

9. Personnel

9.1 The Contractor shall employ the key personnel named in the Qualification Information, to carry out the functions stated in the said Information or other personnel approved by the Project Manager. The Project Manager will approve any proposed replacement of key personnel only if their relevant qualifications and abilities are substantially equal to or better than those of the personnel listed in the Qualification Information. 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.

10. Works

10.1 The Contractor shall construct and install the Works in accordance with the Specifications and Drawings. The Works may commence on the Start Date and shall be carried out 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.

11. Safety and Temporary Works

11.1 The Contractor shall be responsible for the design of temporary works. However before erecting the same, he shall submit his designs including specifications and drawings to the Project Manager and to any other relevant third parties for their approval. No erection of temporary works shall be done until such approvals are obtained.

11.2 The Project Manager’s approval shall not alter the Contractor’s responsibility for design of the Temporary works and all drawings prepared by the Contractor for the execution of the temporary or permanent Works, shall be subject to prior approval by the Project Manager before they can be used.

11.3 The Contractor shall be responsible for the safety of all activities on the Site.
12. Discoveries

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

13. Work Program

13.1 Within the time stated in the Appendix to Conditions of Contract, 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. 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.

The Contractor shall submit to the Project Manager for approval an updated program at intervals no longer than the period stated in the Appendix to Conditions of Contract. If the Contractor does not submit an updated program within this period, the Project Manager may withhold the amount stated in the said Appendix 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. 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.

14. Possession of Site

14.1 The Employer shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date stated in the Appendix to Conditions of Contract, the Employer will be deemed to have delayed the start of the relevant activities, and this will be a Compensation Event.

15. Access to Site

15.1 The Contractor shall allow the Project Manager and any other person authorised 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.

16. Instructions

16.1 The Contractor shall carry out all instructions of the Project Manager which are in accordance with the Contract.

17. Extension or Acceleration of Completion Date

17.1 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. 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 in writing 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 caused by such failure shall not be considered in assessing the new (extended) Completion Date.

17.2 No bonus for early completion of the Works shall be paid to the Contractor by the Employer.

18. Management Meetings

18.1 A Contract management meeting shall be held monthly and attended by the Project Manager and the Contractor. Its business shall be to review the plans for the remaining Work and to deal with matters raised in accordance with the early warning procedure. The Project Manager shall record the minutes of management meetings and provide copies of the same to those attending the meeting and the Employer. The responsibility of the parties for actions to be taken shall be decided by the Project Manager either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

19. Early Warning

19.1 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.

19.2 The Contractor shall cooperate with the Project Manager in making and considering proposals on 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 instructions of the Project Manager.

20. Defects

20.1 The Project Manager shall inspect the Contractor’s work and notify the Contractor of any defects that are found. Such inspection 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. Should the defect be found, the cost of uncovering and making good shall be borne by the Contractor. However, if there is no defect found, the cost of uncovering and making good shall be treated as a variation and added to the Contract Price.

20.2 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

Conditions of Contract
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
Appendix to Conditions of Contract. The Defects Liability Period shall be extended for as long as defects remain to be corrected.

20.3 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. If the Contractor has not corrected a defect within the time specified in the Project Manager’s notice, the Project Manager will assess the cost of having the defect corrected by other parties and such cost shall be treated as a variation and be deducted from the Contract Price.

21. Bills Of Quantities

21.1 The Bills of Quantities shall contain items for the construction, installation, testing and commissioning of the Work to be done by the Contractor. The Contractor will be paid for the quantity of the Work done at the rate in the Bills of Quantities for each item.

21.2 If the final quantity of the Work done differs from the quantity in the Bills of Quantities for the particular item by more than 25 percent and provided the change exceeds 1 percent of the Initial Contract price, the Project Manager shall adjust the rate to allow for the change.

21.3 If requested by the Project Manager, the Contractor shall provide the Project Manager with a detailed cost breakdown of any rate in the Bills of Quantities.

22. Variations

22.1 All variations shall be included in updated programs produced by the Contractor.

22.2 The Contractor shall provide the Project Manager with a quotation for carrying out the variations when requested to do so. The Project Manager shall assess the quotation, which shall be given within seven days of the request or within any longer period as may be stated by the Project Manager and before the Variation is ordered.

22.3 If the work in the variation corresponds with an item description in the Bills of Quantities and if in the opinion of the Project Manager, the quantity of work is not above the limit stated in Clause 21.2 or the timing of its execution does not cause the cost per unit of quantity to change, the rate in the Bills 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 Bills of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of Work.

22.4 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.

22.5 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.
22.6 The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning.

22.7 When the Program is updated, the Contractor shall provide the Project Manager with an updated cash flow forecast.

23. Payment Certificates, Currency of Payments and Advance Payments

23.1 The Contractor shall submit to the Project Manager monthly applications for payment giving sufficient details of the Work done and materials on Site and the amounts which the Contractor considers himself to be entitled to. The Project Manager shall check the monthly application and certify the amount to be paid to the Contractor within 14 days. The value of Work executed and payable shall be determined by the Project Manager.

23.2 The value of Work executed shall comprise the value of the quantities of the items in the Bills of Quantities completed, materials delivered on Site, variations and compensation events. Such materials shall become the property of the Employer once the Employer has paid the Contractor for their value. Thereafter, they shall not be removed from Site without the Project Manager’s instructions except for use upon the Works.

23.3 Payments shall be adjusted for deductions for retention. The Employer shall pay the Contractor the amounts certified by the Project Manager within 30 days of the date of issue of each certificate. If the Employer makes a late payment, the Contractor shall be paid simple interest on the late payment in the next payment. Interest shall be calculated on the basis of number of days delayed at a rate three percentage points above the Central Bank of Kenya’s average rate for base lending prevailing as of the first day the payment becomes overdue.

23.4 If an amount certified is increased in a later certificate or as a result of an award by 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.

23.5 Items of the Works for which no rate or price has been entered in will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.

23.6 The Contract Price shall be stated in Kenya Shillings. All payments to the Contractor shall be made in Kenya Shillings and foreign currency in the proportion indicated in the tender, or agreed prior to the execution of the Contract Agreement and indicated therein. The rate of exchange for the calculation of the amount of foreign currency payment shall be the rate of exchange indicated in the Appendix to Conditions of Contract. If the Contractor indicated foreign currencies for payment other than the currencies of the countries of origin of related goods and services the Employer reserves the right to pay the equivalent at the time of payment in the currencies of the countries of such goods and services. The Employer and the Project Manager shall be notified promptly by the Contractor of any changes in the expected foreign currency requirements of the Contractor during the execution of the Works as indicated in the Schedule of Foreign Currency Requirements and the foreign and local currency portions of the balance of the Contract Price shall then be amended by agreement between Employer and the Contractor in order

Conditions of Contract

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
to reflect appropriately such changes.

23.7 In the event that an advance payment is granted, the following shall apply:-

(a) On signature of the Contract, the Contractor shall at his request, and without furnishing proof of expenditure, be entitled to an advance of 10% (ten percent) of the original amount of the Contract. The advance shall not be subject to retention money.

(b) No advance payment may be made before the Contractor has submitted proof of the establishment of deposit or a directly liable guarantee satisfactory to the Employer in the amount of the advance payment. The guarantee shall be in the same currency as the advance.

(c) Reimbursement of the lump sum advance shall be made by deductions from the Interim payments and where applicable from the balance owing to the Contractor. Reimbursement shall begin when the amount of the sums due under the Contract reaches 20% of the original amount of the Contract. It shall have been completed by the time 80% of this amount is reached.

The amount to be repaid by way of successive deductions shall be calculated by means of the formula:

\[ R = \frac{A(x^1-x^{11})}{80-20} \]

Where:

- \( R \) = the amount to be reimbursed
- \( A \) = the amount of the advance which has been granted
- \( x^1 \) = the amount of proposed cumulative payments as a percentage of the original amount of the Contract. This figure will exceed 20% but not exceed 80%.
- \( x^{11} \) = the amount of the previous cumulative payments as a percentage of the original amount of the Contract. This figure will be below 80% but not less than 20%.

(d) with each reimbursement the counterpart of the directly liable guarantee may be reduced accordingly.

24. Compensation Events
24.1 The following issues shall constitute Compensation Events:

(a) The Employer does not give access to a part of the Site by the Site Possession Date stated in the Appendix to Conditions of Contract.

(b) The Employer modifies the List of Other Contractors, etc., in a way that affects the Work of the Contractor under the Contract.

(c) The Project Manager orders a delay or does not issue drawings, specifications or instructions required for execution of the Works on time.

(d) The Project Manager instructs the Contractor to uncover or to carry out additional tests upon the Work, which is then found to have no defects.

(e) The Project Manager unreasonably does not approve a subcontract to be let.

(f) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Letter of Acceptance from the information issued to tenderers (including the Site investigation reports), from information available publicly and from a visual inspection of the Site.

(g) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Employer or additional work required for safety or other reasons.

(h) Other contractors, public authorities, utilities, or the Employer does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.

(i) The effects on the Contractor of any of the Employer’s risks.

(j) The Project Manager unreasonably delays issuing a Certificate of Completion.

(k) Other compensation events described in the Contract or determined by the Project Manager shall apply.

24.2 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.

24.3 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 will assume that the Contractor will react competently and promptly to the event.

24.4 The Contractor shall not be entitled to compensation to the extent that the Employer’s
interests are adversely affected by the Contractor not having given early warning or not having co-operated with the Project Manager.

24.5 Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the Appendix to Conditions of Contract.

24.6 The Contractor shall give written notice to the Project Manager of his intention to make a claim within thirty days after the event giving rise to the claim has first arisen. The claim shall be submitted within thirty days thereafter.

Provided always that should the event giving rise to the claim of continuing effect, the Contractor shall submit an interim claim within the said thirty days and a final claim within thirty days of the end of the event giving rise to the claim.

25. Price Adjustment

25.1 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 tenders for the Contract and the date of Completion. The adjustment shall be the change in the amount of tax payable by the Contractor.

25.2 The Contract Price shall be deemed to be based on exchange rates current at the date of tender submission in calculating the cost to the Contractor of materials to be specifically imported (by express provisions in the Contract Bills of Quantities or Specifications) for permanent incorporation in the Works. Unless otherwise stated in the Contract, if at any time during the period of the Contract exchange rates shall be varied and this shall affect the cost to the Contractor of such materials, then the Project Manager shall assess the net difference in the cost of such materials. Any amount from time to time so assessed shall be added to or deducted from the Contract Price, as the case may be.

25.3 Unless otherwise stated in the Contract, the Contract Price shall be deemed to have been calculated in the manner set out below and in sub-clauses 25.4 and 25.5 and shall be subject to adjustment in the events specified thereunder;

(i) The prices contained in the Contract Bills of Quantities shall be deemed to be based upon the rates of wages and other emoluments and expenses as determined by the Joint Building Council of Kenya (J.B.C.) and set out in the schedule of basic rates issued 30 days before the date for submission of tenders. A copy of the schedule used by the Contractor in his pricing shall be attached in the Appendix to Conditions of Contract.

(ii) Upon J.B.C. determining that any of the said rates of wages or other emoluments and expenses are increased or decreased, then the Contract Price shall be increased or decreased by the amount assessed by the Project Manager based upon the difference, expressed as a percentage, between the rate set out in the schedule of basic rates issued 30 days before the date for submission of tenders and the rate published by the J.B.C. and applied to the quantum of labour incorporated within the amount of Work remaining to be executed at the date of publication of such increase or decrease.
(iii) No adjustment shall be made in respect of changes in the rates of wages and other emoluments and expenses which occur after the date of Completion except during such other period as may be granted as an extension of time under clause 17.0 of these Conditions.

25.4 The prices contained in the Contract Bills of Quantities shall be deemed to be based upon the basic prices of materials to be permanently incorporated in the Works as determined by the J.B.C. and set out in the schedule of basic rates issued 30 days before the date for submission of tenders. A copy of the schedule used by the Contractor in his pricing shall be attached in the Appendix to Conditions of Contract.

25.5 Upon the J.B.C. determining that any of the said basic prices are increased or decreased then the Contract Price shall be increased or decreased by the amount to be assessed by the Project Manager based upon the difference between the price set out in the schedule of basic rates issued 30 days before the date for submission of tenders and the rate published by the J.B.C. and applied to the quantum of the relevant materials which have not been taken into account in arriving at the amount of any interim certificate under clause 23 of these Conditions issued before the date of publication of such increase or decrease.

25.6 No adjustment shall be made in respect of changes in basic prices of materials which occur after the date for Completion except during such other period as may be granted as an extension of time under clause 17.0 of these Conditions.

25.7 The provisions of sub-clause 25.1 to 25.2 herein shall not apply in respect of any materials included in the schedule of basic rates.

26. Retention

26.1 The Employer shall retain from each payment due to the Contractor the proportion stated in the Appendix to Conditions of Contract until Completion of the whole of the Works. On Completion of the whole of the Works, half the total amount retained shall be repaid to the Contractor and the remaining half when the Defects Liability Period has passed and the Project Manager has certified that all defects notified to the Contractor before the end of this period have been corrected.

27. Liquidated Damages

27.1 The Contractor shall pay liquidated damages to the Employer at the rate stated in the Appendix to Conditions of Contract for each day that the actual Completion Date is later than the Intended Completion Date. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not alter the Contractor’s liabilities.

27.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rate specified in Clause 23.30

Conditions of Contract
Proposed Space Optimization for Kenya Literature Bureau
Nairobi

-39-
28. Securities

28.1 The Performance Security shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount and form and by a reputable bank acceptable to the Employer, and denominated in Kenya Shillings. The Performance Security shall be valid until a date 30 days beyond the date of issue of the Certificate of Completion.

29. Dayworks

29.1 If applicable, the Dayworks rates in the Contractor’s tender shall be used for small additional amounts of Work only when the Project Manager has given written instructions in advance for additional work to be paid for in that way.

29.2 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.

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

30. Liability and Insurance

30.1 From the Start Date until the Defects Correction Certificate has been issued, the following are the Employer’s risks:

(a) The risk of personal injury, death or loss of or damage to property (excluding the Works, Plant, Materials and Equipment), which are due to;

   (i) use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable result of the Works, or

   (ii) negligence, breach of statutory duty or interference with any legal right by the Employer or by any person employed by or contracted to him except the Contractor.

(b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Employer or in Employer’s design, or due to war or radioactive contamination directly affecting the place where the Works are being executed.

30.2 From the Completion Date until the Defects Correction Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is the Employer’s risk except loss or damage due to;

(a) a defect which existed on or before the Completion Date.

(b) an event occurring before the Completion Date, which was not itself the Employer’s risk
(c) the activities of the Contractor on the Site after the Completion Date.

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

The Contractor shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts stated in the Appendix to Conditions of Contract for the following events;
(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.

30.4 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 required to rectify the loss or damage incurred.

30.5 If the Contractor does not provide any of the policies and certificates required, the Employer may effect the insurance which the Contractor should have provided and recover the premiums from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.

30.6 Alterations to the terms of an insurance shall not be made without the approval of the Project Manager. Both parties shall comply with any conditions of insurance policies.

31. Completion and taking over

31.1 Upon deciding that the Works are complete, the Contractor shall issue a written request to the Project Manager to issue a Certificate of Completion of the Works. The Employer shall take over the Site and the Works within seven [7] days of the Project Manager’s issuing a Certificate of Completion.

32. Final Account

32.1 The Contractor shall issue the Project Manager with a detailed account of the total amount that the Contractor considers payable to him by the Employer 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 30 days of receiving the Contractor’s account if it is correct and complete. If it is not, the Project Manager shall issue within 30 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. The Employer shall pay the Contractor the amount due in the Final Certificate within 60 days.

33. Termination

Conditions of Contract
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
33.1 The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract. These 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 authorised 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 Contractor is declared bankrupt or goes into liquidation other than for a reconstruction or amalgamation;

(d) a payment certified by the Project Manager is not paid by the Employer to the Contractor within 30 days (for Interim Certificate) or 60 days (for Final Certificate) of issue.

(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.

33.2 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 Clause 33.1 above, the Project Manager shall decide whether the breach is fundamental or not.

33.3 Notwithstanding the above, the Employer may terminate the Contract for convenience.

33.4 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. The Project Manager shall immediately thereafter arrange for a meeting for the purpose of taking record of the Works executed and materials, goods, equipment and temporary buildings on Site.

34. Payment Upon Termination

34.1 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 and delivered to Site up to the date of the issue of the certificate. Additional liquidated damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be a debt payable by the Contractor.

34.2 If the Contract is terminated for the Employer’s convenience or because of a fundamental breach of Contract by the Employer, the Project Manager shall issue a certificate for the value of the Work done, materials ordered, the reasonable cost of removal of equipment, repatriation of the Contractor’s personnel employed solely on the Works, and the Contractor’s costs of protecting and securing the Works.
34.3 The Employer may employ and pay other persons to carry out and complete the Works and to rectify any defects and may enter upon the Works and use all materials on the Site, plant, equipment and temporary works.

34.4 The Contractor shall, during the execution or after the completion of the Works under this clause remove from the Site as and when required, within such reasonable time as the Project Manager may in writing specify, any temporary buildings, plant, machinery, appliances, goods or materials belonging to or hired by him, and in default the Employer may (without being responsible for any loss or damage) remove and sell any such property of the Contractor, holding the proceeds less all costs incurred to the credit of the Contractor. Until after completion of the Works under this clause the Employer shall not be bound by any other provision of this Contract to make any payment to the Contractor, but upon such completion as aforesaid and the verification within a reasonable time of the accounts therefore the Project Manager shall certify the amount of expenses properly incurred by the Employer and, if such amount added to the money paid to the Contractor before such determination exceeds the total amount which would have been payable on due completion in accordance with this Contract the difference shall be a debt payable to the Employer by the Contractor; and if the said amount added to the said money be less than the said total amount, the difference shall be a debt payable by the Employer to the Contractor.

35. Release from Performance

35.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Employer or the Contractor, the Project Manager shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop Work as quickly as possible after receiving this certificate and shall be paid for all Work carried out before receiving it.

36. Corrupt gifts and payments of commission

The Contractor shall not;

(a) Offer or give or agree to give to any person in the service of the Employer any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other Contract for the Employer or for showing or forbearing to show favour or disfavour to any person in relation to this or any other contract for the Employer.

(b) Enter into this or any other contract with the Employer in connection with which commission has been paid or agreed to be paid by him or on his behalf or to his knowledge, unless before the Contract is made particulars of any such commission and of the terms and conditions of any agreement for the payment thereof have been disclosed in writing to the Employer.

Any breach of this Condition by the Contractor or by anyone employed by him or acting on his behalf (whether with or without the knowledge of the Contractor) shall be an offence under the provisions of the Public Procurement and Asset Disposal Act, 2015.

Conditions of Contract

Proposed Space Optimization for Kenya Literature Bureau
37. Settlement Of Disputes

37.1 In case any dispute or difference shall arise between the Employer or the Project Manager on his behalf and the Contractor, either during the progress or after the completion or termination of the Works, such 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 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

On the request of the applying party. The institution written to first by the aggrieved party shall take precedence over all other institutions.

37.2 The arbitration may be on the construction of this Contract or on any matter or thing of whatsoever nature arising thereunder or in connection therewith, including any matter or thing left by this Contract to the discretion of the Project Manager, or the withholding by the Project Manager of any certificate to which the Contractor may claim to be entitled to or the measurement and valuation referred to in clause 23.0 of these conditions, or the rights and liabilities of the parties subsequent to the termination of Contract.

37.3 Provided that no arbitration proceedings shall be commenced on any dispute or difference where notice of a dispute or difference 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.

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

37.5 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:

37.5.1 The appointment of a replacement Project Manager upon the said person ceasing
to act.

37.5.2 Whether or not the issue of an instruction by the Project Manager is empowered by these Conditions.

37.5.3 Whether or not a certificate has been improperly withheld or is not in accordance with these Conditions.

37.5.4 Any dispute or difference arising in respect of war risks or war damage.

37.6 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 Employer and the Contractor agree otherwise in writing.

37.7 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.

37.8 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.

37.9 The award of such Arbitrator shall be final and binding upon the parties.

38. Alternative Dispute Resolution

38.1 In pursuant to clause 37 of these Conditions of Contract, it shall be a condition that no dispute shall be referred to arbitration unless and until the matter has been dealt with through Alternative Dispute Resolution (ADR) mechanism.

38.2 The person or persons to conduct the Alternative Resolution shall be agreed upon between the parties.

38.3 The Alternative Dispute Resolution shall involve Reconciliation, Mediation or Adjudication.
APPENDIX TO CONDITIONS OF CONTRACT

THE EMPLOYER IS

Name: The Kenya Literature Bureau
Address: P.O. Box 30022 - 00100
Name of Authorised Representative: The Managing Director

THE PROJECT MANAGER IS

Name: The Chief Architect, State Department of Public Works
Address: P.O. Box 30743, Nairobi
Telephone: 2723101
Facsimile: 2716738

The name (and identification number) of the Contract is:
Proposed Space Optimization & Re-Organization of Printing Press Area for KLB

The Works consist of:
The works generally consist of demolition works of the walls in the main warehouse; construction of a concrete plinth; Services include plumbing, drainage and electrical installation.

The Start Date shall be:
Agreed with the Project Manager

The Intended Completion Date for the whole of the Works shall be:
Agreed with the Project Manager

The following documents shall also form part of the Contract:
As listed in Clause 2.3 of the Conditions of Contract

The Contractor shall submit a revised program for the Works within 14 days of the delivery of the Letter of Acceptance.
The Site Possession Date shall Be:
Agreed with the Project Manager

The Site is located at:
The Kenya Literature Bureau, South C, K.L.B. Road, Nairobi, Kenya and is defined in drawings.

The Defects Liability period is 180 days.

Other Contractor, utilities etc., to be engaged by the Employer on the Site Include those for the execution of:
1. None

The minimum insurance cover shall be:
1. The minimum cover for insurance of the Works and of Plant and Materials in respect of the Contractor's fault design is Contractors all risk policy
2. The minimum cover for loss or damage to Equipment is NIL
3. The minimum of insurance of other property is ksh. 500,000.00
4. The minimum cover for personal injury or death insurance
   - For the Contractor's employees is AS PER LAWS APPLICABLE
   - And for other people is AS PER LAWS APPLICABLE

The following events shall also be Compensation Events:
1. NONE (ONLY AS LISTED IN CLAUSE 24 OF THE CONDITIONS OF CONTRACT)

The period between Program updates is 14 days.

The amount to be withheld for late submission of an updated Program is WHOLE CERTIFICATE

The proportion of payments retained is 10 percent.

The limit of payments retained is 10 percent.

The Price Adjustment Clause shall apply.

The liquidated damages for the whole of the Works is Kshs. 20,000 per week or part thereof

The Performance Security shall be for the following minimum amounts equivalent as a percentage of the

Contract Price five percent (5%)

The Completion Period for the Works is ________________ weeks.

Appendix to Conditions of Contract
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
The schedule of basic rates used in pricing by the Contractor is as attached [Contractor to attach].

Advance Payment shall not be granted.
Drawings
DRAWINGS

Note:

1. See separate booklet for a list of drawings, actual plans including Site plans
Standard Forms
STANDARD FORMS

(i) Form of Invitation for Tenders
(ii) Form of Tender
(iii) Letter of Acceptance
(iv) Form of Agreement
(v) Form of Tender Security
(vi) Performance Bank Guarantee
(vii) Bank Guarantee for Advance Payment
(viii) Qualification Information
(ix) Tender Questionnaire
(x) Confidential Business Questionnaire
(xi) Statement of Foreign Currency Requirement
(xii) Details of Sub-Contractors
(xiii) Request for Review Form
(xiv) Anti-Corruption Declaration Commitment/Pledge
(xv) Non-Debarment Statement Form
FORM OF INVITATION FOR TENDERS

(Date)

To: [name of Contractor]

[address]

Dear Sirs:

Reference: PROPOSED SPACE OPTIMIZATION & RE-ORGANIZATION OF THE PRINTING PRESS AREA

We hereby invite you and other interested tenderers to submit a tender for the execution and completion of the above Contract.

A complete set of tender documents may be purchased by you from The Kenya Literature Bureau Head Office, South C, K.L.B. Road, Nairobi, Kenya upon payment of a non-refundable fee of Kshs. 1,000/= . All payments shall be made to the Account No.0124-131-8387 at KCB Moi Avenue or through MPESA PAYBILL No. 980400(Account number is the name of the firm bidding).

The document may also be viewed and downloaded from the Kenya Literature Bureau website (www.klb.co.ke). Bidders who download the tender document will not be required to pay any fee, however they will be required to send their particulars to supplies@klb.co.ke.

All tenders must be accompanied by 1 Original and 1 copy of the same and a security in the form and amount specified in the tendering documents, and must be delivered to The Kenya Literature Bureau Head Office, South C, K.L.B. Road, Nairobi, Kenya on or before 14th May 2020 at 10.00am. Tenders will be opened immediately thereafter, in the presence of tenderers’ representatives who choose to attend.

Yours faithfully,

[Authorised Signature]

[Name and Title]

Standard Forms
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
FORM OF TENDER

(Date)

To:    Kenya Literature Bureau
       P.O. Box 30022 - 00100
       Nairobi, Kenya

Re:    PROPOSED SPACE OPTIMIZATION & RE-ORGANIZATION OF THE PRINTING PRESS AREA
       FOR K.L.B.

Dear Sir,

1. In accordance with the Conditions of Contract, Specifications, Drawings and Bill of Quantities for
   the execution of the above named Works, we, the undersigned offer to construct, install and
   complete such works and remedy any defects therein for the sum of Ksh. _
   
   _ (Amount in figures) Kenya Shillings _
   
   _ (Amount in words)

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 Appendix to Conditions of
   Contract.

3. We agree to abide by this tender under _ (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.

5. We understand that you are not bound to accept the lowest or any tender you may receive.

Standard Forms
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
Dated this ___________ day of ___________ 20__

Signature in the capacity of duly authorized to sign tender
for and on behalf of (Name of Employer) of _
(Address of Employer)

Witness:  Name: _

Address: _

Signature: _

Date: _

Standard Forms
Proposed Space Optimization for Kenya Literature Bureau
Nairobi

-55-
LETTER OF ACCEPTANCE

(Date)

To: (Name of Contractor)

(Address of the Contractor)

Dear Sir,

This is to notify you that your Tender dated for the execution of The Proposed Space Optimization and Re-Organization of the Printing Press Area for K.L.B for the execution of (name of the Contract and identification number, as given in the Tender Documents) for the Contract Price of Kshs. (amount in figures) Kenya Shillings (amount in Words) in accordance with the Instructions to Tenderers is hereby accepted.

You are hereby instructed to proceed with the execution of the said Works in accordance with the Contract documents:

Authorized Signature: 

Name and Title of Signatory: 

Attachment : Agreement
FORM OF AGREEMENT

THIS AGREEMENT, made the day of 20 between of The Kenya Literature Bureau of (or whose office is situated at) K.L.B. Head Office, K.L.B. Road, South C (herein after called “the Employer”) of the one part AND (or whose registered office is situated at) (hereinafter called “the Contractor”) of the other part.

WHEREAS THE Employer is desirous that the Contractor executes The Proposed Space Optimization and Re-Organization of the Printing Press Area - SCC/KLB/06/2019 located at K.L.B. Road, South C and the Employer has accepted the tender submitted by the Contractor for the execution and completion of such works and the remedying of any defects therein for the Contract Price of Ksh. (Amount in figures) Kenya Shillings (Amount in words)

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.

2. The following documents shall be deemed to form and shall be read and construed as part of this Agreement i.e.

   (i) Letter of Acceptance
   (ii) Form of Tender
   (iii) Conditions of Contract Part I
   (iv) Conditions of Contract Part II and Appendix to Conditions of Contract
   (v) Specifications
   (vi) Drawings
   (vii) Priced Bills of Quantities

3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.

4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties thereto have caused this Agreement to be executed the day and year first before written.

Standard Forms
Proposed Space Optimization for Kenya Literature Bureau
Nairobi

-57-
Bill of Quantities

The common Seal of: ________________________________

Was hereunto affixed in the presence of: ________________________________

Signed Sealed, and Delivered by the said: ________________________________

Binding Signature of Employer: ________________________________

Binding Signature of Contractor: ________________________________

In the presence of (i) Name: ________________________________

Address: ________________________________

Signature: ________________________________

(ii) Name: ________________________________

Address: ________________________________

Signature: ________________________________

Standard Forms
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
FORM OF TENDER SECURITY

WHEREAS (hereinafter called “the Tenderer”) has submitted his tender dated for the construction of _ (Name of Contract)

KNOW ALL PEOPLE by these presents that WE having our registered office at (hereinafter called “the Bank”), are bound unto The Kenya Literature Bureau (hereinafter called “the Employer”) in the sum of Kshs. _ for which payment well and truly to be made to the said Employer, the Bank binds itself, its successors and assigns by these presents sealed with the Common Seal of the said Bank this Day of _ 20_.

THE CONDITIONS of this obligation are:

1. If after tender opening the tenderer withdraws his tender during the period of tender validity specified in the instructions to tenderers

   Or

2. If the tenderer, having been notified of the acceptance of his tender by the Employer during the period of tender validity:

   (a) fails or refuses to execute the form of Agreement in accordance with the Instructions to Tenderers, if required; or
   (b) fails or refuses to furnish the Performance Security, in accordance with the Instructions to Tenderers;

We undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including thirty (30) days after the period of tender validity, and any demand in respect thereof should reach the Bank not later than the said date.

.................................................. ..................................................
(Date) (Signature of the Bank)

.................................................. ..................................................
(witness) (Seal)
PERFORMANCE BANK GUARANTEE

(Date)

To: Kenya Literature Bureau
   P.O. Box 30022 - 00100
   Nairobi, Kenya

Dear Sir,

WHEREAS (hereinafter called “the Contractor”) has undertaken, in pursuance of Contract No. SCC/KLB/06/2019 dated to execute The Proposed Space Optimization & Re-Organization of Printing Press Area (hereinafter called “the Works);

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee:

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of Kshs. (amount of Guarantee in figures) Kenya Shillings (amount in Guarantee in words) and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of Kenya Shillings (amount of Guarantee in words) as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change, addition or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this Guarantee, and we hereby waive notice of any change, addition, or modification.

This guarantee shall be valid until the date of issue of the Certificate of Completion.

SIGNATURE AND SEAL OF THE GUARANTOR:

Name of Bank: 

Address: 

Date: 

Standard Forms
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
BANK GUARANTEE FOR ADVANCE PAYMENT

(Date)

To: Kenya Literature Bureau
     P.O. Box 30022 - 00100
     Nairobi, Kenya

Gentlemen,

Ref: PROPOSED SPACE OPTIMIZATION & RE-ORGANIZATION OF PRINTING PRESS AREA

In accordance with the provisions of the Conditions of Contract of the above-mentioned Contract, We (name and address of the Contractor) (hereinafter called “the Contractor”) shall deposit with Kenya Literature Bureau a bank guarantee to guarantee his proper and faithful performance under the said Contract in an amount of Kshs. (amount of Guarantee in figures) Kenya Shillings (amount of guarantee in words).

We, [bank or financial institution], as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to Kenya Literature Bureau on his first demand without whatsoever right of objection on our part and without his first claim to the Contractor, in the amount not exceeding Kshs. (amount of Guarantee in figures) Kenya Shillings (amount of Guarantee in words), such amount to be reduced periodically by the amounts recovered by you from the proceeds of the Contract.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between Kenya Literature Bureau and the Contractor, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

No drawing may be made by you under this guarantee until we have received notice in writing from you that an advance payment of the amount listed above has been paid to the Contractor pursuant to the Contract.

This guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until Kenya Literature Bureau receives full payment of the same amount from the Contract.

Standard Forms
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
SCC/KLB/06/2019
Bill of Quantities

Yours faithfully,

Signature and Seal: __________________________

Name of the Bank or financial institution: 

Address: __________________________

Date: __________________________

Standard Forms
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
QUALIFICATION INFORMATION

1. Individual Tenderers or Individual Members of Joint Ventures
   1.1 Constitution or legal status of tenderer (attach copy or Incorporation Certificate);

   Place of registration: ______________________________

   Principal place of business: ______________________________

   Power of attorney of signatory of tender: __

1.2 Total annual volume of construction work performed in the last five years

<table>
<thead>
<tr>
<th>Year</th>
<th>Volume</th>
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<tbody>
<tr>
<td></td>
<td>Currency</td>
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</table>

1.3 Work performed as Main Contractor on works of a similar nature and volume over the last five years. Also list details of work under way or committed, including expected completion date.

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Name of Client and Contact Person</th>
<th>Type of work performed and year of completion</th>
<th>Value of Contract</th>
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</table>

1.4 Major items of Contractor’s Equipment proposed for carrying out the Works. List all information requested below.

Standard Forms

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
SCC/KLB/06/2019

Bill of Quantities

<table>
<thead>
<tr>
<th>Item of Equipment</th>
<th>Description Make and Age (years)</th>
<th>Condition (new, good, poor) and number available</th>
<th>Owned, leased (from whom?) or to be purchased (from whom?)</th>
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</table>

1.5 Qualifications and experience of key personnel proposed for administration and execution of the Contract. Attach biographical data.

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Years of experience (general)</th>
<th>Years of experience in proposed position</th>
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</table>

1.6 Financial reports for the last five years: balance sheets, profit and loss statements, auditor’s reports, etc. List below and attach copies.

1.7 Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List below and attach copies of supportive documents.

1.8 Name, address and telephone, telex and facsimile numbers of banks that may provide reference if contacted by the Employer.

Standard Forms

Proposed Space Optimization for Kenya Literature Bureau
Nairobi

-64-
1.9 Statement of compliance with the requirements of Clause 1.2 of the Instructions to Tenderers.

1.10 Proposed program (work method and schedule) for the whole of the Works.

2 Joint Ventures

2.1 The information listed in 1.1 - 1.10 above shall be provided for each partner of the joint venture.

2.2 The information required in 1.11 above shall be provided for the joint venture.

2.3 Attach the power of attorney of the signatory(ies) of the tender authorizing signature of the tender on behalf of the joint venture.

2.4 Attach the Agreement among all partners of the joint venture (and which is legally binding on all partners), which shows that:
   a) all partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms;
   b) one of the partners will be nominated as being in charge, authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture; and
   c) the execution of the entire Contract, including payment, shall be done exclusively with the partner in charge.

Standard Forms

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
TENDER QUESTIONNAIRE

1. Full names of tenderer

2. Full address of tenderer to which tender correspondence is to be sent (unless an agent has been appointed below)

3. Telephone number(s) of tenderer

4. Telex address of tenderer

5. Name of tenderer’s representative to be contacted on matters of the tender during the tender period.

6. Details of Tenderer’s nominated agent (if any) to receive tender notices. This is essential if the tenderer does not have his registered address in Kenya (name, address, telephone, telex)

Signature of Tender
CONFIDENTIAL BUSINESS QUESTIONNAIRE

You are requested to give the particulars indicated in Part1 and either Part 2(a), 2 (b) or 2(c) and 2(d) whichever applies to your type of business.

You are advised that it is a serious offence to give false information on this Form.

Part 1 - General

BusinessName........................................................................................................................................

Location of business premises: ....................... Country/Town..............................................................

Plot No. .................................................. Street/Road: ..........................................................

Postal Address: ........................................ Tel. No: .............................................................

Nature of Business: ..........................................................................................................................

Current Trade Licence No.: ....................... Expiring date: ..........................................................

Maximum value of business which you can handle at any time: Ksh. ..............................................

Name of your bankers: ..........................................................................................................................

Branch: ............................................................................................................................................

Part 2(a) - Sole Proprietor

Your name in full: ................................................................. Age: ..................

Nationality: ........................................ Country of Origin: ..........................................................

Citizenship details: ..........................................................................................................................

Standard Forms

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
Part 2(b) - Partnership

Give details of partners as follows:

<table>
<thead>
<tr>
<th>Name in full</th>
<th>Nationality</th>
<th>Citizenship</th>
<th>Details</th>
<th>Shares</th>
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Part 2(c) - Registered Company

Private or public:........................................................................................................

State the nominal and issued capital of the company:

Nominal Kshs: ........................................
Issued Kshs: ........................................

Give details of all the director as follows:

<table>
<thead>
<tr>
<th>Name in full</th>
<th>Nationality</th>
<th>Citizenship</th>
<th>Details</th>
<th>Shares</th>
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Standard Forms

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
Part 2(d) - Interest in the Firm:

Is there any person/persons in The Kenya Literature Bureau who has interest in this firm?

Yes/No ........................................ (Delete as necessary).

I certify that the above information is correct.

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

*Attach proof of citizenship
STATEMENT OF FOREIGN CURRENCY REQUIREMENTS

(See Clause 23] of the Conditions of Contract)

In the event of our Tender for the execution of Proposed Space Optimization & Re-Organization of Printing Press Area being accepted, we would require in accordance with Clause 21 of the Conditions of Contract, which is attached hereto, the following percentage:

(Figures) (Words)

of the Contract Sum, (Less Fluctuations) to be paid in foreign currency.

Currency in which foreign exchange element is required:

Date: The Day of 20_

Enter 0% (zero percent) if no payment will be made in foreign currency.

Maximum foreign currency requirement shall be (percent) of the Contract Sum, less Fluctuations. (percent) of

........................................

(Signature of Tenderer)
**DETAILS OF SUB-CONTRACTORS**

If the Tenderer wishes to sublet any portion of the Works under any heading, he must give below details of the sub-contractors he intends to employ for each portion.

Failure to comply with this requirement may invalidate the tender.

1. **Portion of works to be sublet:** ...............................................................
   - **(i)** Full name of Sub-contractor
     And address of head office: ..............................................................
   - **(ii)** Sub-contractor’s experience of similar works carried out in the last 3 years with Contract value:
     ............................................................
     ............................................................
     ............................................................

2. **Portion of works to be sublet:** ...............................................................
   - **(i)** Full name of Sub-contractor
     And address of head office: ..............................................................
   - **(ii)** Sub-contractor’s experience of similar works carried out in the last 3 years with Contract value:
     ............................................................
     ............................................................
     ............................................................

..........................................................................................
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(Signature of Tenderer)  (Date)
LETTER OF NOTIFICATION OF AWARD

Kenya Literature Bureau
P.O. Box 30022 - 00100
Nairobi, Kenya

To: 

RE: Tender No.: SCC/KLB/06/2019

Tender Name: Proposed Space Optimization & re-Organization of Printing Press Area

This is to notify that the contract/s stated below under the above-mentioned tender have been awarded to you.

......................................................................................................................
......................................................................................................................

1. Please acknowledge receipt of this letter of notification signifying your acceptance.

2. The contract/contracts shall be signed by the parties within 30 days of the date of this letter but not earlier than 14 days from the date of the letter.

3. You may contact the officer(s) whose particulars appear below on the subject matter of this letter of notification of award.

(FULL PARTICULARS)
......................................................................................................................
......................................................................................................................

SIGNED FOR ACCOUNTING OFFICER

Standard Forms
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
REPUBLIC OF KENYA
PUBLIC PROCUREMENT ADMINISTRATIVE REVIEW BOARD

APPLICATION NO OF 20
BETWEEN
-
APPLICANT
AND
Kenya Literature Bureau

Request for review of the decision of the Kenya Literature Bureau of dated the_
_ day of 20 in the matter of Tender No. SCC/KLB/06/2019 of 20

REQUEST FOR REVIEW

I/We , the above named Applicant(s), of address: Physical address_

Fax No. Tel. No. Email , hereby request the Public Procurement Administrative Review Board to review the whole/part of the above
tioned decision on the following grounds, namely: -

1. ______________________________

2. ______________________________

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

1. ______________________________

2. ______________________________

etc.

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

Standard Forms
Proposed Space Optimization for Kenya Literature Bureau
Nairobi

-73-
ANTI-CORRUPTION DECLARATION COMMENT/PLEDGE

(Section 62, 65 and 66 of the PPAD Act, 2015)

I/We/Messrs ................................................................. of Street, Building, P.O. Box .................................................................

Contact/Phone/Email .................................................................

Declare the Public Procurement is based on a free and fair competitive tendering process which should not be open to abuse.

I/We ................................................................. declare that I/We will not offer or facilitate, directly or indirectly, any inducement or reward to any public officer, the relations or business associates, in connection with Tender/Tender No. Proposed Space Optimization and Re-Organization of the Printing Press Area for Kenya Literature Bureau at South C, KLB Road, Nairobi (SCC/KLB/06/2019) for or in the subsequent performance of the contract if I/we am/are successful.

Authorized Signature: .................................................................

Name and Title of Signatory: .................................................................

Standard Forms

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
NON-DEBARMENT STATEMENT FORM

I/We/Messrs .......................................................... of Street/Avenue,

............. Building, P.O. Box ............... Code ........., of ........... (Town), .............

(Nationality), Phone .............. E-mail .............. declare that I/we/messrs .........................

are not debarred from participating in public procurement by the Public Procurement Oversight

Authority pursuant to section 115 of the Public Procurement and Disposal Act, 2005.

Dated this ............. day of 20........

Authorized Signature: ..........................................................

Official Stamp: ..........................................................

Name and Title of Signatory: ..........................................................
Trade Preambles
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
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.

No Joinery shall be fitted/installed without sample approvals.
F. 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. No ironmongery shall be fitted/installed without sample approvals.

G. 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

H. PLASTERWORK AND OTHER FINISHES
All finishings shall be as described in these Bills of Quantities.

Prices for pavings 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.

I. 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.

J. 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.

K. TILES, CERAMICS, PORCELAIN, GRANITO ETC
No tiles shall be fitted/installed without sample approvals. No claim shall be allowed on the grounds that the bidder priced an inferior quality

L. CURTAINS & COVERS, ETC
The bidder shall be deemed to have priced the best materials for this esteemed office. No curtains & covers shall be fitted/installed without sample approvals.

No claim shall be allowed on the grounds that the bidder priced an inferior quality.
Bill of Quantities

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
<table>
<thead>
<tr>
<th>TABLE OF CONTENTS</th>
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<tbody>
<tr>
<td>TABLE OF CONTENTS</td>
<td>80</td>
</tr>
<tr>
<td>NOTES FOR PREPARING BILL OF QUANTITIES</td>
<td>81 - 83</td>
</tr>
<tr>
<td>SECTION I: PRELIMINARIES</td>
<td>84 - 104</td>
</tr>
<tr>
<td>SPECIFICATIONS</td>
<td>105 - 192</td>
</tr>
<tr>
<td>SECTION II: WAREHOUSE</td>
<td>193 - 196</td>
</tr>
<tr>
<td>SECTION III: PRIME COSTS AND PROVISIONAL SUMS</td>
<td>197 - 200</td>
</tr>
<tr>
<td>FINAL SUMMARY</td>
<td>201 - 202</td>
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</tbody>
</table>
NOTES FOR PREPARING BILL OF QUANTITIES

1.1 The objectives of the Bills of Quantities are;

(a) to provide sufficient information on the quantities of Works to be performed to enable tenders to be prepared efficiently and accurately; and

(b) when a Contract has been entered into, to provide a priced Bill of Quantities for use in the periodic valuation of Works executed.

(c) In order to attain these objectives, Works should be itemized in the Bill of Quantities in sufficient detail to distinguish between the different classes of Works, or between Works of the same nature carried out in different locations or in other circumstances which may give rise to different considerations of cost. Consistent with these requirements, the layout and content of the Bill of Quantities should be as simple and brief as possible.

2.1 The Bills of Quantities should be divided generally into the following sections:

(a) Preliminaries.

The preliminaries should indicate the inclusiveness of the unit prices, and should state the methods of measurement which have been adopted in the preparation of the Bill of Quantities and which are to be used for the measurement of any part of the Works.

The number of preliminary items to be priced by the tenderer should be limited to tangible items such as site office and other temporary works, otherwise items such as security for the Works which are primarily part of the Contractor’s obligations should be included in the Contractor’s rates.

(b) Work Items

(i) The items in the Bills of Quantities should be grouped into sections to distinguish between those parts of the Works which by nature, location, access, timing, or any other special characteristics may give rise to different methods of construction, or phasing of the Works, or considerations of cost. General items common to all parts of the Works may be grouped as a separate section in the Bill of Quantities.

(ii) Quantities should be computed net from the Drawings, unless directed otherwise in the Contract, and no allowance should be made for bulking, shrinkage or waste. Quantities should be rounded up or down where appropriate.

(iii) The following units of measurement and abbreviations are recommended for use.
(iv) The commencing surface should be identified in the description of each item for Work involving excavation, boring or drilling, for which the commencing surface is not also the original surface. The excavated surface should be identified in the description of each item for Work involving excavation for which the excavated surface is not also the final surface. The depths of Work should be measured from the commencing surface to the excavated surface, as defined.

(c) **Daywork Schedule**

A Daywork Schedule should be included if the probability of unforeseen work, outside the items included in the Bill of Quantities, is relatively high. To facilitate checking by the Employer of the realism of rates quoted by the tenderers, the Daywork Schedule should normally comprise:

(i) a list of the various classes of labour, and materials for which basic Day work rates or prices are to be inserted by the tenderer, together with a statement of the conditions under which the Contractor will be paid for Work executed on a Day work basis; and

(ii) a percentage to be entered by the tenderer against each basic Day work Subtotal amount for labour, materials and plant representing the Contractor’s profit, overheads, supervision and other charges.

(d) **Provisional Quantities and Sums**

(i) Provision for quantity contingencies in any particular item or class of Work with a high expectation of quantity overrun should be made by entering specific “Provisional Quantities” or “Provisional Items” in the Bill of Quantities, and not by increasing the quantities for that item or class of Work beyond those of the Work normally expected to be required. To the extent not covered above, a general provision for physical contingencies (quantity overruns) should be made by including a “Provisional Sum” in the Summary of the Bill of Quantities. Similarly, a contingency allowance for possible price increases should be provided as a “Provisional Sum” in the

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**Bill of Quantities**

*Proposed Space Optimization for Kenya Literature Bureau*

*Nairobi*
Summary of the Bill of Quantities. The inclusion of such provisional sums often facilitates budgetary approval by avoiding the need to request periodic supplementary approvals as the future need arises.

(ii) Provisional sums to cover specialized works normally carried out by Nominated Sub Contractors should be avoided and instead Bills of Quantities of the specialised Works should be included as a section of the main Bills of Quantities to be priced by the Main Contractor. The Main Contractor should be required to indicate the name (s) of the specialised firms he proposes to engage to carry out the specialized Works as his approved domestic sub-contractors. Only provisional sums to cover specialized Works by statutory authorities should be included in the Bills of Quantities.

(e) Summary

The Summary should contain a tabulation of the separate parts of the Bills of Quantities carried forward, with provisional sums for Daywork, for physical (quantity) contingencies, and for price contingencies (upward price adjustment) where applicable.
### SECTION NO. 1

#### PRELIMINARIES

**BILL NO. 1**

#### PARTICULAR PRELIMINARIES

**A ** **EMPLOYER**

The "Employer" is  
**Managing Director - Kenya Literature Bureau**  
P.O. Box 30022 - 00100, NAIROBI

The term "Employer" and "Government" wherever used in the contract document shall be synonymous

**B ** **DESCRIPTION OF THE WORKS**

The works to be carried out under this contract comprise **Space Optimization and Re-Organization of the Warehouse at the Kenya Literature Bureau**

**C ** **NOTES ON PRICING OF ITEMS OF PRELIMINARIES**

Items described in this section cover the minimum requirements and conditions necessary for the full proper execution of the contract. The tenderer is required to read and fully understand his obligations under each item and this assess his cost for complying with the same for the duration of the contract. Should no price be inserted against any item, it shall be assumed that the tenderer has covered any cost associated with that item elsewhere in the Bill of Quantities and shall nevertheless be required to comply with such and all items of preliminaries.

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<tr>
<th>Item</th>
<th>Description</th>
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<td><strong>Carried to Collections</strong></td>
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</table>
### LOCATION OF SITE

The site for the proposed Works is at the Kenya Literature Bureau, South C, K.L.B. Road, Nairobi, Kenya.

The Contractor MUST visit the site and acquaint himself with the conditions and if unable to do so apply to the Project Manager for directions to enable him to do so.

The Contractor must recommend to visit the site and he shall be deemed to have acquainted himself therewith as to its nature and position means of access, etc, and no claim in this connection will be allowed. No claim will be allowed for travelling or other expenses which may be incurred by the contractor in visiting the site preparing for the tender for the works.

### DEFINITION OF TERMS

i. **Employer:** The term 'Employer' wherever used hereinafter and in all Contract Documents shall mean **The Kenya Literature Bureau**

ii. **Project Manager:** The term 'Architect' wherever used hereinafter and in all Contract Documents shall mean **The Chief Architect (MOPW)**

iii. **Architect:** The term 'Architect' wherever used hereinafter and in all Contract Documents shall mean **Design Source Limited**

iv. **Quantity Surveyor:** The term 'Quantity Surveyor' wherever used hereinafter and in all Contract Documents shall mean **Swiftcost Consultants Limited**

v. **Engineer (Structural):** The term 'Engineer (Structural)' wherever used hereinafter and in all Contract Documents shall mean **Batiment Project Consulting Limited**

vi. **Electrical Engineer:** The term 'Electrical Engineer' wherever used hereinafter and in all Contract Documents shall mean **Building Services Group**

vii. **Mechanical Engineer:** The term 'Mechanical Engineer' wherever used hereinafter and in all Contract Documents shall mean **Building Services Group**

viii. **Contractor:** Means the person or firm named in the articles of agreement with whom the Employer has entered into contract and includes legal successor in title and permitted assigns

ix. **Works:** Means the permanent works designed by the Employer by the Architect or other agents for execution by the Contractor and as described in the contract document. It shall include work of all sub-contractors and suppliers as well as materials and goods supplied for incorporation in the Works

x. **Contract:** The term "Contract" wherever used hereinafter and in all contract

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**Particular Matters**

*Proposed Space Optimization for Kenya Literature Bureau*

*Nairobi*
documents shall mean the letter of award of Contract, Agreement and Conditions of Contract for Building Works, Drawings, priced and signed Bills of Quantities, the schedules and other documents forming part of the contract.

xi. **Contract Drawings:** The term “Contract Drawings” wherever used hereinafter and in all contract documents shall be deemed to imply the drawing referred to in these Bill of Quantities.

xii. **Site:** Means the place or places where the permanent Works are to be carried out and to which materials and goods are to be delivered and includes workshops or other places where materials, goods or work are being prepared for incorporation in the Works either by the Contractor, or sub-contractor or by others.

xiii. **Approved, Directed and Selected:** The terms “Approved”, “Directed” and “Selected” wherever used hereinafter and in all contract documents shall mean the approval, direction and selection of or by the Architect.

xiv. Singular and Plural words importing the singular only wherever used hereinafter and in all contract documents shall also include the plural and vice versa where the context requires. Persons shall include bodies corporate.

### A  FIRM PRICE CONTRACT

Unless otherwise specifically stated, this is a firm contract and the Contractor must allow in his tender rates for any increase in the cost of labour and/or materials during the currency of contract.

### B  SCOPE OF CONTRACT

The works generally consist of demolition works of the walls, columns and steel deck in the main warehouse; construction of a suspended concrete slab and a concrete plinth; Wall finishes include plaster and paint works. Floor finishes are epoxy to the floor area and screed to the suspended slab. Repair works to also include repairs on the roof cover and repair to the gutters. Services include plumbing, drainage and electrical installation.

### C  FLOOR AREA

Total floor area is 541 square meters and this is given for guidance only and without any warranty.

### D  BID SECURITY

The bid security shall be Kshs. 715,000/= from a reputable financial institution approved by the Central Bank of Kenya (CBK) or from an insurance company approved by Insurance Regulatory Authority (IRA)
### Bill of Quantities

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<tr>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>A</td>
<td>VALUE ADDED TAX (VAT)</td>
<td>All rates quoted shall be deemed to be inclusive of 16% VAT (whichever is applicable)</td>
</tr>
<tr>
<td>B</td>
<td>CONTINGENCY SUM</td>
<td>The miscellaneous items will be expensed by the Employer upon proof that their cost has been fully executed</td>
</tr>
<tr>
<td>C</td>
<td>MEASUREMENTS</td>
<td>In the event of any discrepancies between the Bill of Quantities and the actual works, the site measurements shall generally take precedence. However, such discrepancies between any contract document shall immediately be referred to the Project Manager.</td>
</tr>
<tr>
<td>D</td>
<td>CLAIMS</td>
<td>It shall be a condition of this Contract that upon it becoming reasonably apparent by 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 notice to the PROJECT MANAGER within the Contract Period. No claims shall be entertained upon the expiry of the said contract period.</td>
</tr>
<tr>
<td>E</td>
<td>MATERIALS FROM DEMOLITION</td>
<td>All materials arising from demolitions shall NOT be re-used except with express approval of the Project Manager. Materials arising out of Demolitions shall remain the property of the Employer.</td>
</tr>
<tr>
<td>F</td>
<td>CONTRACT COMPLETION PERIOD</td>
<td>The contract completion period in accordance with condition 31 of the conditions of contract must be strictly adhered to. The “PROJECT MANAGER” shall strictly monitor the Contractor’s progress in relation to the progress chart. and should it be found necessary, the “PROJECT MANAGER” shall inform the Contractor in writing that his actual performance on site is not satisfactory. In all such cases, the Contractor shall accelerate his rate of performance, production and progress by all means such as additional labour, plant e.t.c, and working overtime all at his cost.</td>
</tr>
<tr>
<td>G</td>
<td>TENDER DOCUMENTS</td>
<td>Tender documents are as listed in Clause 2.3 of the Instruction to Tenderer’s</td>
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-88-

**Particular Matters**

*Proposed Space Optimization for Kenya Literature Bureau*

*Nairobi*
### Bill of Quantities

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<th>Item</th>
<th>Description</th>
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<tr>
<td>A</td>
<td>SIGN BOARD</td>
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<td>B</td>
<td>HOARDING</td>
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<td>C</td>
<td>PROGRAMME PROGRESS CHARTS</td>
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<tr>
<td>D</td>
<td>PERFORMANCE SECURITY (BOND)</td>
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<tr>
<td>E</td>
<td>APPENDICES</td>
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<tr>
<td>F</td>
<td>SUFFICIENCY OF TENDER</td>
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**Particular Matters**

*Proposed Space Optimization for Kenya Literature Bureau*

*Nairobi*
## GENERAL SPECIFICATIONS

For the full description of materials, workmanship and method of execution of the works, the Contractor is referred to the Ministry of Works General specifications for building works 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 and Particular Preliminaries, Trade Preambles or other items in these Bills of Quantities.

In the event of such conflict, then the provisions of the General and Particular Preliminaries, Trade Preambles and these Bills of Quantities take precedence.

## TRAINING LEVY

The Contractor’s attention is drawn to Legal Notice No. 237 of October, 1971, which requires payment by the Contractor of Training Levy on all contracts of more than Shs.50,000/= in value and his tender must include for all costs arising or resulting therefrom.

## NUISANCE

The Contractor shall not directly or indirectly or otherwise by himself or through his agents cause nuisance to the activities taking place inside. Should he do so he shall be directly responsible for such acts.

## MOBILIZATION FEE

The Contractor shall allow in his Tender a sum as allowance for the Employer's Agents to cater for transport, reimbursable expenses and the clerk of works fee.

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<th>Item</th>
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<tbody>
<tr>
<td>A</td>
<td>GENERAL SPECIFICATIONS</td>
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<tr>
<td>B</td>
<td>TRAINING LEVY</td>
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<tr>
<td>C</td>
<td>NUISANCE</td>
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<tr>
<td>D</td>
<td>MOBILIZATION FEE</td>
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Particular Matters

*Proposed Space Optimization for Kenya Literature Bureau*

*Nairobi*
### Preliminaries

Bill No. 1

### Particular Matters

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**Particular Matters**

*Proposed Space Optimization for Kenya Literature Bureau*

*Nairobi*
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<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Amount</th>
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<tbody>
<tr>
<td>PROPOSED SPACE OPTIMIZATION &amp; REORGANIZATION OF THE PRINTING PRESS AREA FOR K.L.B. AT K.L.B. ROAD, SOUTH C, NAIROBI</td>
<td>SECTION NO. 1</td>
<td></td>
</tr>
<tr>
<td>PRELIMINARIES</td>
<td>BILL NO. 2</td>
<td></td>
</tr>
<tr>
<td>GENERAL PRELIMINARIES</td>
<td></td>
<td></td>
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<tr>
<td>DEFINITIONS AND ABBREVIATIONS</td>
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<tr>
<td>Terms used in these Bills of Quantities shall be interpreted as follows:</td>
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<tr>
<td>“Approved” shall mean approved by the Architect</td>
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<td>“as directed” shall mean as directed by the Architect</td>
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<tr>
<td>“B.S” shall mean the current British Standard specification published by the British Standards Institution, 2 Park Street, London W.1., England.</td>
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<td>“cm” shall mean Cubic Metres</td>
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<tr>
<td>“sm.” shall mean Square Metres</td>
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<tr>
<td>“lm” shall mean Linear Metres</td>
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<tr>
<td>“mm” shall mean Millimetres</td>
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<tr>
<td>“kg” shall mean Kilogramme</td>
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<tr>
<td>“No.” shall mean Number</td>
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General Matters

Proposed Space Optimization for Kenya Literature Bureau
Nairobi

Carried to Collections

-92-
**Bill of Quantities**

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<tr>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>A</td>
<td>BILLS OF QUANTITIES</td>
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<tr>
<td></td>
<td>All quantities contained in these Bills of Quantities are indicative of the volume and type of work to be executed.</td>
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<td></td>
<td>Where items of work are to be built in or covered up, these shall be left uncovered for a reasonable time to allow all measurements to be taken by the Quantity Surveyor. Immediately the work is ready for measurement, the Contractor shall give notice to the Quantity Surveyor.</td>
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<td></td>
<td>If the Contractor makes default in these respects he shall, if the Architect so directs, uncover the work at this own expense to enable the measurements to be taken.</td>
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<tr>
<td>B</td>
<td>PLANT, TOOLS AND VEHICLES</td>
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<td></td>
<td>Allow for providing all scaffolding, plant, tools and vehicles required for the works except in so far as may be stated otherwise herein and except for such items specifically and only required for the use of nominated Sub Contractors as described herein. No timber used for scaffolding, formwork or temporary works of any kind shall be used afterwards in the permanent work.</td>
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<td>C</td>
<td>TRANSPORT</td>
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<td>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</td>
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<td>D</td>
<td>MATERIALS AND WORKMANSHIP</td>
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<tr>
<td></td>
<td>All materials and workmanship used in the execution of the work shall be of the best quality and description unless otherwise stated. The Contractor shall order all materials to be obtained from overseas immediately after the Contract is signed and shall also order materials to be obtained from local sources as early as necessary to ensure that they are onsite when required for use in the works. The Bills of Quantities shall not be used for the purpose of ordering materials.</td>
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<tr>
<td>E</td>
<td>STORAGE FOR MATERIALS SUPPLIED</td>
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<td></td>
<td>The Employer shall provide space for storage of materials and security for the materials meant for the Works and at the cost of the Contractor.</td>
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**General Matters**

*Proposed Space Optimization for Kenya Literature Bureau*

*Nairobi*
### A SAMPLES

The Contractor shall fumish at his own cost any samples of materials or workmanship including concrete test cubes required for the works that may be called for by the PROJECT MANAGER for his approval until such samples are approved by the PROJECT MANAGER and the PROJECT ARCHITECT, may reject any materials or workmanship not in his opinion to be up to approved samples. The PROJECT MANAGER shall arrange for the testing of such materials as he may at his discretion deem desirable, but the testing shall be made at the expense of the Contractor and not at the expense of the PROJECT MANAGER. The Contractor shall pay for the testing in accordance with the current scale of testing charges laid down by the Directorate of Public Works.

The procedure for submitting samples of materials for testing and the method of marking for identification shall be as laid down by the PROJECT MANAGER.

### B GOVERNMENT ACTS REGARDING WORKS PEOPLE, E.T.O

Allow for complying with all Government Acts, Orders and Regulations in connection with the employment of Labour and other matters related to the execution of the works. In particular the Contractor’s attention is drawn to the provisions of the Factory Act 1950 and his tender must include for all costs arising or resulting from compliance with any Act, Order or Regulation relating to Insurances, pensions and holidays for workpeople or so the safety, health and welfare of the workpeople. The Contractor must make himself fully acquainted with current Acts and Regulations, including Police Regulations regarding the movement, housing, security and control of labour, labour camps, passes for transport, etc. It is most important that the Contractor, before tendering, shall obtain from the relevant Authority the fullest information regarding all such regulations and/or restrictions which may affect the information regarding all such regulations and/or restrictions which may affect the organization 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.

### C SECURITY OF WORKS, E.T.C

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.

### D PUBLIC AND PRIVATE ROADS

Maintain as required throughout the execution of the works and make good any damage to public or private roads arising from or consequent upon the execution of the works to the satisfaction of the local and other competent authority and the PROJECT MANAGER.

General Matters

Proposed Space Optimization for Kenya Literature Bureau
Nairobi

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**Carried to Collection:**

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### A EXISTING PROPERTY

The Contractor shall take every precaution to avoid damage to all existing property including roads, cables, drains and other services and he will be held responsible for and shall make good all such damage arising from the execution of this contract at his own expense to the satisfaction of the PROJECT MANAGER.

### B PHOTOGRAPHIC RECORD

A four weekly photographic record is to be provided by the Contractor, recording the state of progress of the Works. Two copies of each photograph, suitably mounted and annotated with the location and date, are to be made available to the Employer via the Architect.

### C VISIT TO SITE AND EXAMINE DRAWINGS

The Contractor is recommended to examine the drawings and visit the site, the location of which is described in the Particular Preliminaries hereof. He shall be deemed to have acquainted himself therewith as to its nature, position, means of access or any other matter which, may affect his tender.

No claim arising from his failure to comply with this recommendation will be considered.

### D ACCESS TO SITE AND TEMPORARY ROADS

Means of access to the Site shall be agreed with the PROJECT MANAGER prior to commencement of the work and Contractor must allow for building any necessary temporary access roads for the transport of the materials, plant and workmen as may be required for the complete execution of the works including the provision of temporary culverts, crossings, bridges, or any other means of gaining access to the Site. Upon completion of the works, the Contractor shall remove such temporary access roads; temporary culverts, bridges, etc., and make good and reinstate all works and surfaces disturbed to the satisfaction of the PROJECT MANAGER.

### E AREAS TO BE OCCUPIED BY CONTRACTOR

The area of the site which may be occupied by the Contractor for use of storage and for the purpose of erecting workshops, etc., shall be defined on site by the PROJECT MANAGER.

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<thead>
<tr>
<th>Item</th>
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<tbody>
<tr>
<td>A</td>
<td>EXISTING PROPERTY</td>
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<td>B</td>
<td>PHOTOGRAPHIC RECORD</td>
<td></td>
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<tr>
<td>C</td>
<td>VISIT TO SITE AND EXAMINE DRAWINGS</td>
<td></td>
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<tr>
<td>D</td>
<td>ACCESS TO SITE AND TEMPORARY ROADS</td>
<td></td>
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<tr>
<td>E</td>
<td>AREAS TO BE OCCUPIED BY CONTRACTOR</td>
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General Matters

*Proposed Space Optimization for Kenya Literature Bureau*

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<tr>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>A</td>
<td>OFFICE, E.T.C., FOR THE PROJECT MANAGER</td>
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<tr>
<td></td>
<td>The Contractor shall construct a temporary site office of type described and</td>
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<td>to the satisfaction of the Project Manager. He shall also provide a strong</td>
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<td>metal trunk complete with strong hasp and staple fastening and two 'keys.</td>
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<td>He shall maintain a lock-up type water or bucket closet for the sole use of</td>
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<td>the PROJECT MANAGER and shall provide services of cleaner and pay all</td>
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<td>conservancy charges and keep both office and closet in a clean and</td>
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<td>sanitary condition from commencement to the completion of the works and</td>
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<td>dismantle and make good disturbed surfaces. The Contractor shall make</td>
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<td>available on the Site as and when required by the &quot;PROJECT MANAGER&quot; a</td>
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<td>modern and accurate level together with levelling staff, ranging rods and</td>
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<td></td>
<td>50 metre metallic or linen tape.</td>
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<td></td>
<td>WATER AND ELECTRICITY SUPPLY FOR THE WORKS</td>
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<td></td>
<td>The Contractor shall make arrangements to provide all necessary water,</td>
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<td>electric light and power required for use in the works. No guarantee is</td>
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<td>given or implied that sufficient water will be available from mains and</td>
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<td>the Contractor must make his own arrangements for augmenting this supply</td>
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<td>at his own cost</td>
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<td>C</td>
<td>SANITATION OF WORKS</td>
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<td>The contractor shall make his own arrangements for sanitary conveniences</td>
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<td>for his workmen. Any arrangements so made shall be in conformity with the</td>
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<td>Public Health requirements for such facilities. He shall be solely liable</td>
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<td>for any infringement of the requirements.</td>
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<td>D</td>
<td>SUPERVISION AND WORKING HOURS</td>
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<td>The works shall be executed under the direction and to the entire</td>
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<td>satisfaction in all respects of the PROJECT MANAGER who shall at all times</td>
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<td>during normal working hours have access to the works and to the yards and</td>
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<td>workshops of the Contractor and sub-Contractors or other places where work</td>
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<td>is being prepared for the contract.</td>
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<td>E</td>
<td>DIRECT CONTRACTS</td>
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<td>Notwithstanding the foregoing conditions, the Employer reserves the right</td>
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<td>to place a &quot;Direct Contract&quot; for any goods or services required in the</td>
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<td>works.</td>
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General Matters

Proposed Space Optimization for Kenya Literature Bureau

Nairobi
### ATTENDANCE UPON OTHER TRADESMEN, E.T.C.

The Contractor shall allow for the attendance of trade upon trade and shall afford any tradesmen or other persons employed for the execution of any work not included in this Contract every facility for carrying out their work and also for use of his ordinary scaffolding. The Contractor, however, shall not be required to erect any special scaffolding for them. The Contractor shall perform such cutting away for and making good after the work of such tradesmen or persons as may be ordered by the PROJECT MANAGER and the work will be measured and paid for to the extent executed at rates provided in these Bills.

### INSURANCE

The Contractor shall insure as required in Conditions 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 Clauses have been complied with in all respects. Thereafter the PROJECT MANAGER shall from time to time ascertain that premiums are duly paid up by the Contractor who shall if called upon to do so, produce the receipted premium renewals for the PROJECT MANAGER's inspection.

### PROVISIONAL WORK

All work described as “Provisional” in these Bills of Quantities is subject to remeasurement in order to ascertain the actual quantity executed for which payment will be made. All “Provisional” and other work liable to adjustment under this Contract shall left uncovered for a reasonable time to allow all measurements needed for such adjustment to be taken by the PROJECT MANAGER. Immediately the work is ready for measuring, the Contractor shall give notice to the PROJECT MANAGER. If the Contractor makes default in these respects he shall if the PROJECT MANAGER so directs uncover the work to enable all measurements to be taken and afterwards reinstate at his own expense.

### PRIME COST RATES

Where description of items include a P.C. rate per unit this rate is to cover the net supply cost of the unit only. The Contractor’s price must include for the cost for the unit at the rate stated, plus waste, taking delivery, storage, fixing in position, profit and overheads.

The actual net cost per unit will be adjusted within the Final Account against the P.C. rate stated.

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**General Matters**

*Proposed Space Optimization for Kenya Literature Bureau*

*Nairobi*
### Item Description

**A** ALTERATION OF BILLS OF QUANTITIES, PRICING E.T.C.

Any unauthorized alteration or qualification made to the text of the Bills of Quantities may cause the Tender to be disqualified and will in any case be ignored. The Contractor shall be deemed to have made allowance in his prices generally to cover any items against which no price has been inserted in the priced Bills of Quantities. All items of measured work shall be priced in detail and the Tenders containing Lump Sums to cover trades or groups of work must be broken down to show the price of each item before they will be accepted.

**B** MATERIALS ARISING FROM ALTERATIONS

Materials of any kind obtained from the excavations shall be the property of the Employer. Unless the PROJECT MANAGER directs otherwise such materials shall be dealt with as provided in the Contract.

**C** HOARDING

The Contractor shall enclose the Site as required by the Local Authorities, with a hoarding 3.00 metres high, with opening as required, constructed of substantial timbers to approval and covered with marine plywood and security tapes. (Approximate length 150 metres)

**D** PROTECTION OF THE WORKS

Provide protection of the whole of the works contained in the Bills of Quantities, including easing, 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.

**E** CONCRETE TESTS

Concrete test cubes, i.e per set of three as later described, including testing fee, labour and materials, making moulds, transport and handling, etc

   Successful tests only (PROVISIONAL)
   Sets of three: 20 No. @ Shs.
   (Tenderer must insert rate and extend)

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<th>Item</th>
<th>Description</th>
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<tr>
<td>A</td>
<td>GUARANTEES AND MAINTENANCE INSTRUCTIONS/MANUALS</td>
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<td>The Contractor shall obtain and hand over to the Architect on Practical Completion all relevant guarantees, any operating and maintenance instruction manuals, data or instructions required by the Architect or provided by manufacturers, suppliers or Sub-Contractors.</td>
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<td>The Contractor shall ensure that all warranties and guarantees received fully ceded to the Employer on Final Completion, failing which the release of Surety Bond will be withheld until this is satisfactorily completed.</td>
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<td>The guarantees shall state that workmanship, materials and installations are guaranteed for a specified reckoned from the date of Practical Completion of the Works and that any defects in the workmanship, materials and installation that may arise during that period shall be made good at the expense of the firm doing the work upon written notice from the Architect or the Employer to do so.</td>
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<td>B</td>
<td>REMOVAL OF RUBBISH, E.T.C.</td>
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<td>Removal of rubbish and debris from the Buildings and site as it accumulates and at the completion of the works and remove all plant, scaffolding and unused materials at completion.</td>
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<td>C</td>
<td>WORK TO BE DELIVERED UP CLEAN</td>
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<td>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.</td>
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<td>D</td>
<td>GENERAL SPECIFICATIONS</td>
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<td>For the full description of materials and workmanship, method of execution of the work and notes for pricing, the Contractor is referred to the Ministry of Roads and Public Works and Housing General Specification dated 1976 or any subsequent revision thereof which is issued as a separate document, and which shall be allowed in all respects unless it conflicts with the General Preliminaries, Trade Preambles or other items in these Bills of Quantities.</td>
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General Matters
Proposed Space Optimization for Kenya Literature Bureau
Nairobi

-99-
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<th>Item</th>
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<tr>
<td>A</td>
<td><strong>MATERIALS ON SITE</strong></td>
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<td>All materials for incorporation in the works will be stored in the space provided by the employer within the building on site before payment is effected unless specifically exempted by the PROJECT MANAGER. The Main Contractor shall make arrangements with the Employer to secure the place for the safety of the Materials. This includes the materials of the Main Contractor and his domestic Sub-Contractors &amp; suppliers.</td>
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<td>B</td>
<td><strong>CONTRACTOR’S SUPERINTENDENCE</strong></td>
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<td>The Contractor shall constantly keep on the works a literate English speaking Agent or Representative, competent and experienced in the kind of work involved who shall give his whole experience in the kind of work involved and shall give his whole time to the superintendence of the works. Such Agent or Representative shall receive on behalf of the Contractor all directions and instructions from the Project Manager and such directions shall be deemed to have been given to the Contractor in accordance with the Conditions of Contract.</td>
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General Matters

*Proposed Space Optimization for Kenya Literature Bureau*
*Nairobi*
The Contractor shall be responsible for Nominated Sub-Contractors in every respect and in particular it shall be the Contractor’s responsibility to ensure that each Sub-Contractor commences and completes the work in such a manner and is ready on the Site with his materials, labour and special plant at such times so as to conform with the Progress Schedule, as specified previously, and to ensure satisfactory progress.

The Contractor shall also accept liability for and bear the cost of General attendance for the Nominated Sub-Contractors, which shall be deemed to include of:

Allowing the use of standing scaffolding, maintenance and alteration of all scaffolding, retention of all scaffolding until such time as all relevant Sub-Contractor’s works are complete and removal of all scaffolding on completion. Providing space for office accommodation, and for storage of plant and materials; allowing use of sanitary accommodation; the supply of all necessary water, and lighting; and clearing away all rubbish.

The items for “General Attendance” given hereinafter following P.C. Sums in respect of Sub-Contractors’ work shall be deemed to include all the above.

The Contractor shall also accept liability for and bear the cost of Special Attendance on Nominated Sub-Contractors, which shall include for one or more of the followings:

Unloading, storing, hoisting, placing in position, providing power, provision of special scaffolding.

The items of “Special Attendance” given hereinafter following P. C. Sums shall include any one or more of the above items as set out in the particular reference.

Cutting away for and making good after the work of Sub-Contractors as may be required will be measured and valued separately by the Quantity Surveyor.

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<th>Item</th>
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<td>A</td>
<td>NOMINATED SUB-CONTRACTORS</td>
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General Matters

*Proposed Space Optimization for Kenya Literature Bureau*

*Nairobi*
### NOMINATED SUPPLIERS

The Cost of “Fix Only” materials to be obtained from Nominated Suppliers which are covered by Prime Cost or Provisional Sums shall include for taking delivery where directed, checking with invoices or indents, reporting and claiming damages for shortages and damaged goods, defraying demurrage, signing for as having been received in good order, transporting, unloading, storing, covering and protecting until the time of fixing, unpacking, replacing anything lost or damaged, sorting, assembling, hoisting to required levels and fixing as described.

Before placing any orders with Nominated Sub-Contractors or Nominated Suppliers the Contractor must ascertain that the terms and conditions of the quotations and the dates of delivery of materials or execution of works comply with the terms of Contract and the Progress Schedule.

### SECURITY AT COMPLETION

At completion, the Contractor shall leave the Works secure with all accesses locked. The Contractor shall account for and hand over to the Architect all keys, properly labeled with an itemized schedule to be signed by the Architect as receipt.

### STANDARD LEVY

The Contractor's attention is drawn to Legal Notice No. 267 of 22nd June 1990, which requires payment, by the Contractor of Standard Levy. His tender must include for all costs arising or resulting.

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<tr>
<td>A</td>
<td>NOMINATED SUPPLIERS</td>
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<td>B</td>
<td>SECURITY AT COMPLETION</td>
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<td>C</td>
<td>STANDARD LEVY</td>
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General Matters

*Proposed Space Optimization for Kenya Literature Bureau*

*Nairobi*
| Preliminaries |  |
| Bill No. 2 |  |
| General Matters |  |

**COLLECTION**

| Total Brought Forward from Page No. |  |
|-------------------------------------|  |
| Page No | Amount Kshs |
| 92 |  |
| 93 |  |
| 94 |  |
| 95 |  |
| 96 |  |
| 97 |  |
| 98 |  |
| 99 |  |
| 100 |  |
| 101 |  |
| 102 |  |

Carried Forward to Summary of Section No. Kshs

**General Matters**

*Proposed Space Optimization for Kenya Literature Bureau*

*Nairobi*
### SECTION SUMMARY - Preliminaries

<table>
<thead>
<tr>
<th>Bill No</th>
<th>Particular Matters</th>
<th>General Matters</th>
<th>Page No</th>
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**Proposed Space Optimization for Kenya Literature Bureau**

**Nairobi**
Specifications
GENERAL DESCRIPTION OF MATERIALS AND WORKMANSHIP

Notes for preparing Specifications

1.0 Specifications must be drafted to present a clear and precise statement of the required standards of materials, and workmanship for tenderers to respond realistically and competitively to the requirements of the Employer and ensure responsiveness of tenders. The Specifications should require that all materials, plant, and other supplies to be permanently incorporated in the Works be new, unused, of the most recent or current models, and incorporating all recent improvements in design and materials unless provided otherwise in the Contract. Where the Contractor is responsible for the design of any part of the permanent Works, the extent of his obligations must be stated.

2.0 Specifications from previous similar projects are useful and may not be necessary to re-write specifications for every Works Contract.

3.0 There are considerable advantages in standardizing General Specifications for repetitive Works in recognized public sectors, such as highways, urban housing, irrigation and water supply. The General Specifications should cover all classes of workmanship, materials and equipment commonly involved in constructions, although not necessarily to be used in a particular works contract. Deletions or addenda should then adapt the General Specifications to the particular Works.

4.0 Care must be taken in drafting Specifications to ensure they are not restrictive. In the Specifications of standards for materials, plant and workmanship, existing Kenya Standards should be used as much as possible, otherwise recognized international standards may also be used.

5.0 The Employer should decide whether technical solutions to specified parts of the Works are to be permitted. Alternatives are appropriate in cases where obvious (and potentially less costly) alternatives are possible to the technical solutions indicated in tender documents for certain elements of the Works, taking into consideration the comparative specialized advantage of potential tenderers.

The Employer should provide a description of the selected parts of the Works with appropriate reference to Drawings, Specifications, Bills of Quantities, and Design or Performance criteria, stating that the alternative solutions shall be at least structurally and functionally equivalent to the basic design parameters and Specifications.
Such alternative solutions shall be accompanied by all information necessary for a complete evaluation by the Employer, including drawings, design calculations, technical specifications, breakdown of prices, proposed construction methodology, and other relevant details. Technical alternatives permitted in this manner shall be considered by the Employer each on its own merits and independently of whether the tenderer has priced the item as described in the Employer’s design included with the tender documents.
The following apply to all sections hereafter

ALTERATIONS, ADDITIONS AND EXTENSIONS

In alterations or extensions to existing buildings and/ or external works, new work is to match up in all respects to the existing work unless otherwise specified, shown on the Drawings or approved before - hand by the Architect.

QUALITY, SAMPLES, TESTING AND APPROVAL

MATERIALS

Materials, commodities, components and equipment are to be new and unused unless otherwise specified. Handle, store, fix and protect all commodities with care to ensure that they are in perfect condition when incorporated into the work and handed over on completion.

MANUFACTURER’S RECOMMENDATIONS

Handle, store and fix every commodity strictly in accordance with the printed or written recommendations of the manufacturers'

STANDARDS

Where commodities or workmanship are specified by reference to British Standards (B.S) or Codes of Practice (C.P) or International (I.S.O) or other standards, such standards are deemed to be the latest published at the time of tendering. The contractor will be deemed to have read and understood the standards specified, and no claim for want of knowledge will be allowed. The substitution of commodities or standards of workmanship complying with other standards may be allowed at the discretion of the Architect, but application for permission for such substitution must be made in writing in sufficient time to allow adequate investigation. Obtain Certificates of Compliance with standards and supply to the Architect on request.

LOCAL CONDITIONS

All materials, conditions, components and equipment must be suitable for use in tropical climates

SAMPLES

Where samples of conditions or specimens of finished work are specified, submit samples or specimens to the Architect and obtain his approval before confirming orders or carrying out the work. Retain approved samples and specimens on Site for Comparison with the finished work. Finished work must conform in all respects with the samples or specimens approved. Remove samples and specimens no longer required. The cost of supplying samples and specimens must be borne by the Contractor, but specimens may form part of the finished work where approved by the Architect

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
DEMOLITIONS AND ALTERATIONS

GENERALLY

The contractor is required to visit the existing buildings and ascertain for himself the nature of the works and no claim arising from lack of knowledge in this respect will be entertained. The dimensions and quantities given in this section are approximate and the Contractor is referred to the site to ascertain the exact nature and extent of the works.

The items of pulling down and alterations are to include for both labour and materials and for any shoring, needling and strutting and temporary works in connection therewith. The contractor must allow in his pricing for making good all works disturbed in all trades and for carting away all rubbish.

The contractor must give all the necessary notices and must exercise due care in the demolitions. He must not collapse large sections of walls, floors e.t.c, and must provide all necessary shoring and supports during the demolitions.

During demolition works the contractor shall keep the debris constantly watered to minimize the dust arising and this shall be included in his prices.

All materials arising from demolitions, unless specifically stated otherwise, are to become the property of the Contractor and any credit allowed for the value of such materials shall be shown in the space provided.

All materials, including rubbish, shall be removed from the site as soon as possible.

The contractor is to erect dust-proof screens to the approval of the Architect where deemed necessary and to remove them on completion of the work, all to the Architect’s satisfaction.

INTERPRETATIONS OF TERMS

“Demolish” shall be deemed to mean cutting away, breaking up, demolishing, pulling down, taking down, removing, etc., as the context requires and shall include in all cases temporarily strutting and supporting and making good remaining work as necessary, and clearing away and removing from site all debris, etc.

“Remove” shall mean taking down, hacking up, breaking down, removing etc. and clearing away from site and all other expenses thereby entailed.

“Make good” shall be deemed to mean all making good, fitting facing up, plastering, paving, repairing and painting to match and jointing to remaining existing work.

To “match” shall mean to be equal to relevant existing work in design, workmanship and all other respects.

“Re-fix” shall apply to existing materials arising from the Works and shall mean take from store and fix in new position, including making good, repairing and adjusting as necessary.

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
UNDERPINNING

FOUNDATIONS

The following sequence of construction will be followed for any underpinning work to foundations:

a) Excavate under foundation footing to a length of 1000 mm by 500 mm wide by 500 mm deep, 2000 mm centers.

b) Fill the excavated cavity with concrete mix 1:3:6

c) Allow the concrete to set for two days.

d) Repeat the above operation for the next panels until the whole foundation is underpinned.

e) Break off the projecting foundation and leave flush with mass concrete surface.

SUPPORT TO EXISTING SLAB

a) Prop up the first-floor slab next to the wall to be demolished until new walling or column is built to carry universal beam.

b) Erect in position universal beam to support existing slab as designed.

c) Remove props seven days after erection of the beam.
EXCAVATIONS

EXAMINE THE SITE

The Contractor is assumed to have examined the site carefully and ascertained, for himself its nature and the kind of materials to be excavated.

EXCAVATIONS

Excavations shall be to the widths and depths indicated on the Drawings or to such lesser or greater depths as the Architect may deem necessary and so instruct the Contractor in order to obtain satisfactory foundations.

Any difference in the quantity of work actually executed under such instruction and that provided in the Bills of Quantities shall be measured and valued by the Surveyor as a Variation under the relevant Conditions to Contract.

If, however, the Contractor excavates to any greater depths and widths than are shown on the Drawings or directed, then the Contractor shall, at his own expenses, satisfactorily fill in such extra depth and width with concrete similar to that described for foundations.

BOTTOMS OF EXCAVATIONS TO RECEIVE FOUNDATIONS

The contractor shall report to the Architect when secure bottoms to the excavations have been obtained. Any concrete or other work executed

SIDES OF EXCAVATIONS

Sides of excavations shall be maintained vertical by means approved by the Architect, and the Contractor shall also allow for keeping same free from fallen materials in his rates for excavations.

The Contractor shall also allow for keeping excavations free from, water and mud by baling, pumping or otherwise, in his rates for excavations

Specifications

Proposed Space Optimization for Kenya Literature Bureau

Nairobi
ROCK

Excavation in rock shall conclude all material, which can be removed by hand and does not necessarily require the use of compressors or other mechanical equipment although the Contractor may use such equipment to loosen the material for ease of its removal. All topsoils, black cotton and other clay soils, murrum and other fill and all similar materials will not be classified as rock.

Rock has been measured hereafter as extra over excavation for excavating in soft or hard rock.

Soft rock shall be deemed to mean any material which cannot reasonably be removed without the use of mechanical plant such as rippers, compressors, traxcavators, but which does not require drilling, wedging or blasting. Local tuffs, magadi highly consolidated laterite, weathered lavas, boulders or outcrops of harder rock not exceeding one cubic meter in volume, Nairobi building stone and similar material shall be classified as soft rock.

Hard rock shall be classified as material which is massive and geologically homogeneous and which requires the use of drilling, wedging geologically homogeneous or blasting for its removal such as black trap or similar material.

The Engineer’s decision shall be final with regard to the classification of excavated materials.

STARTING LEVEL

Unless otherwise described the starting level of all excavations has been measured from the level remaining after completion of reduced level excavation. However, the Contractor’s prices should include for carrying out the excavation work in any alternative sequence that he may require

BLASTING

No blasting will be permitted without the prior approval of Local Authorities and the Architect.

CART AWAY

All surplus excavated materials where so directed and all rubbish are to be removed from the site and the Contractor is to find his own dump and shall pay all charges

BORROW PITS

No borrow pits will be allowed to be opened on the site.
FILLING OBTAINED FROM THE EXCAVATIONS

Filling obtained from surplus excavated materials will only be incorporated if suitable material arises and is to be free from all weeds, roots, vegetable soil or other unstable materials and is to be filled in layers each of not more than 250 mm finished thickness. Each layer to be well wetted and consolidated as described hereafter.

HARDCORE FILLING

Hardcore for filling under floors, etc., shall be good hard stone ballast or quarry waste to the approval of the Architect broken to pass not greater than a 150 mm ring or to be 75% of the finished thickness of the layers being compacted, whichever is the lesser. Hardcore shall be free from all weeds, roots, vegetable soil, clay, black cotton soil or other unstable materials.

It shall be well graded with smaller stones and fine materials to give a dense compact mass after consolidation. Sufficient fine material shall be added to each layer to give gradation of material as necessary to obtain a solid compact mass after rolling. Hardcore filling is to be laid in layers each of a consolidated thickness not exceeding 250 mm. Each layer shall be compacted at least 8 passes of a 10 tonne smooth-wheeled roller or a 2 tonne vibrating roller until all movement ceases. Sufficient water is to be added to obtain maximum compaction to the Architect’s approval. To each layer a 25 mm thick layer of sand complying with the specification for fine aggregate for concrete shall be spread over the surface and forced into the hardcore by the use of a vibrating roller weighing not less than 2 tonnes; this operation should be carried out when the materials are dry and repeated whilst the sand is well watered. Should all the sand be absorbed the Architect may require a further layer to be applied and the process repeated.

The top surface of the hardcore shall be leveled or graded to fall as required, and shall be blinded with a layer of similar material broken to 25 mm gauge and finished with a 10 ton smooth-wheeled roller.
The surface so obtained shall be to the Architect’s approval

MATERIALS FOUND IN EXCAVATIONS

No, sand, aggregate, murram or other material found in the excavations is to be used in the Works without the written permission of the Architect.

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
RATES FOR EXCAVATIONS

The rates for excavation, including excavation in rock, MUST INCLUDE for trimming, leveling and preparing bottoms and all faces to receive concrete, etc., and for any extra excavation required for planking and strutting.

Prices shall, include for excavating in any material encountered unless specifically otherwise described, handling etc., of extra bulk after excavating, or before consolidating, any extra excavation required for formwork or planking and strutting, circular work, grubbing up any old drains, roots, etc., that may be encountered, for trimming sides and leveling and ramming bottoms, forming stepplings and trimming excavation or filling to embankments and batters as required.

In his prices for the item “Allow for keeping the whole of the excavations “free from water” the Contractor shall allow and make provisions for keeping the whole of the Works thoroughly drained and clear of water below the lowest level of any part of them so long as may be required and if considered necessary by the Architect, continuously day and night by petrol or hand pumps or other mechanical appliances, pipes, chutes, dams, manholes, sumps, diversions or any other means necessary for that purpose. Water pumped from the trenches shall not be allowed to run down the road channels but shall be conveyed to the nearest surface water sewer, ditch or river through troughs, chutes or pipes.

RATES FOR DISPOSAL

Rates for disposal of excavated material are to include for the selection of spoil as it arises and for all double handling and re-excavation from spoil heaps not specifically ordered by the Architect.

DIOTHENE SHEETING

Diothene sheeting shall be 500 gauge or 1000 gauge as shown, and as produced by Plastics Africa Limited, or other equal and approved. Joints in sheeting shall be treble folded with 150 mm fold and taped at 300 mm intervals with 50 mm wide black plastic adhesive tape as manufactured by Cellotape Limited. The sheeting shall not be stretched but shall be laid loose with sufficient wrinkles to permit shrinkage up to 15%.

CUTTING DOWN TREES

The Contractor must consult the Architect before cutting down or pruning any trees or shrubs encountered on the site.
CONCRETE WORK

ARCHITECT/ENGINEER

For the purposes of the concrete structure the Structural Engineer, hereafter referred to as “the Engineer” shall be deemed invested with the duties and be the representative of the Architect.

CODE OF PRACTICE

All workmanship, materials, tests and performances in connection with the reinforced concrete work are to be in conformity with the latest edition of the British Standard Code of Practice (C.P. 8110 for “The Structural use of concrete”) where not inconsistent with these Preambles.

SUPERVISION

A competent person approved by the Engineer shall be employed by the Contractor whose duty it will be to supervise all stages in the preparation and placing of the concrete. All cubes shall be made and site tests carried out under his direct supervision, in consultation with the Engineer.

CONTRACTOR’S PLANT, EQUIPMENT AND CONSTRUCTION PROCEDURES

Not less than 30 days prior to the installation of the Contractor’s plant and equipment for processing, handling transporting, storing and proportioning ingredients, and for mixing, transporting and placing concrete, the Contractor shall submit drawings for approval by the Engineer, showing proposed general plant arrangements, together with a general description of the equipment he proposes to use.

After completion of installation, the operation of the plant and equipment shall be subject to the approval of the Engineer.

Where these preambles, the Bills of Quantities or the Drawings require specific procedures to be followed, such requirements are not to be construed as prohibiting use by the Contractor of alternative procedures if it can be demonstrated to the satisfaction of the Engineer that equal results will be obtained by the use of such alternatives.

Approval of plant and equipment or their operation, or of any construction procedure, shall not operate to waive or modify any provision or requirements contained in these Preambles governing the quality of the materials or of the finished work.

Where suspended floor slabs are to be constructed without expansion joints, concreting is to be in panels of size and positions to the approval of the Engineer. To permit setting shrinkages to occur, some panels will be left unconcreted until 7 days or more after main areas have been concreted. The contractor must include for this method of construction in his pricing.
TOLERANCES

On all setting out dimensions of 5 metres and over a maximum non-accumulative tolerance of plus or minus 5 millimeters will be allowed. On all setting out dimensions under 5 meters a maximum non-accumulative tolerance of plus or minus 3 millimeters will be allowed. On the cross-sectional dimensions of structural members, unless otherwise required by the Drawings, a maximum tolerance of plus or minus 3 millimeters will be permitted.

The top surface of concrete floor slabs and beams shall be within 6 millimetres of the normal level and line shown on the Drawings. Columns shall be truly plumb and non-accumulative tolerance of 3 millimetres each storey and not more than 15 millimetres out of plumb in their full height will be permitted. The Contractor shall be responsible for the cost of all corrective measures required by the Engineer to rectify work, which is not constructed within the tolerances set out above.

MATERIALS GENERALLY

All materials which have been damaged, contaminated or have deteriorated or do not comply in any way with the requirements of these Preambles shall be rejected and shall be removed immediately from the site at the Contractor’s expense. No materials shall be stored or stacked on floors without the Engineers’ prior approval.

The sources of supply for all materials used for concrete work shall be approved by the Engineer before these materials are delivered on the site. All materials shall comply with the requirements of the latest whose approval shall be obtained in writing.

The suppliers of materials shall give the Engineer access to their premises when directed for the purpose of obtaining samples of the materials for testing.
SAMPLES

Samples of materials shall be submitted as soon as possible after the contract is let. No deliveries in bulk shall be made until the samples are approved by the Engineer. All condemned materials shall be removed from the site within 24 hours.

Every facility shall be provided to enable the Engineer to obtain samples and carry out tests on the materials and construction. If these tests show that any of the materials or construction do not comply with the requirements of this specification, the contractor will be responsible for the costs of the tests and the replacement of defective materials and/or construction.

Samples of all materials proposed to be used shall be submitted to the Engineer and shall be tested, where required, by the materials branch of the Ministry of Works or other approved testing place, and receive his approval prior to being delivered in bulk upon the Works.

The contractors’ attention is drawn to the fact that the testing of samples of aggregate, sand and cement by the materials branch, M.O.W, takes time and it is the utmost importance that the samples should be submitted for testing as soon as possible after the letting of the Contract. The ministry will not accept any responsibility whatsoever for delay in the commencement of the Contract due to delay on the part of the Contractor in submitting samples

CEMENT

Cement, unless otherwise specified, shall be Portland cement of a brand approved by the Engineer and shall comply with the requirements of B.S. 12 with the expectations that it may contain reactive volcanic ash (of not more than 10% of the total weight) and the quantity of insoluble residue permitted in B.S. 12 may be exceeded. A manufacturers’ certificate of Test in accordance with B.S 12 shall be supplied for each consignment delivered to site.

Should the contractor require to use cement of the rapid hardening variety, he shall obtain the approval

Specifications

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
AGGREGATES

The aggregates shall conform with the requirements of B.S. 882 and the sources and types of all aggregates are to be approved in all respects by the Engineer before work commences.

The grading of aggregates shall be one within the limits set out in B.S. 882 and as later specified and the grading, once approved, shall be adhered to throughout the Works and not varied without the approval of the Engineer. Fine aggregate shall be clean, coarse, siliceous sand of loam, dust, salt, organic matter and any other deleterious substances. It shall be graded within the limits of Zone 1 or 2 of Table 2 of B.S. 882

Course aggregate shall be good, hard, clean approved black trap or similar stone, free from dust, decomposed stone, clay and earthy matter foreign substances or friable thin elongated or laminated pieces. It shall be graded within the limits of Table 1 of B.S. 882 for its respective nominal size.

If in the opinion of the Engineer the aggregate meets with the above requirements but is dirty or adulterated in any manner it shall be screened and/ or washed with clean water if he so directs at the Contractor’s expenses.

Aggregates shall be delivered to the site in their prescribed sizes or grading and shall be stockpiled on paved areas or boarded platforms in separate units to avoid intermixing. On no account shall aggregates be stockpiled on the ground.

WATER

The water used for mixing concrete shall be from an approved source, clean, fresh and free from harmful matter and comply with the requirements of B.S. 3148

READY-MIXED CONCRETE

Ready-mixed concrete may only be used with the prior permission of the Engineer, subject to special additional conditions laid down by the Engineer

CONCRETE MIXES

Concrete mixes have been described either by the volumetric proportions or by the 28-day cube strength.
CONCRETE STRENGTHS

Concrete mixes shall have the following minimum strengths as given by Works Cube Tests:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Minimum Crushing Strength at 28 days N/mm²</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>33</td>
</tr>
<tr>
<td>B</td>
<td>28</td>
</tr>
<tr>
<td>C</td>
<td>22.5</td>
</tr>
<tr>
<td>D</td>
<td>22.5</td>
</tr>
</tbody>
</table>

The average strength obtained from cube tests shall be 10% higher than the minimum strengths shown above.

Works Cube Tests will not be required for Grade E blinding concrete which shall compromise 1:4:8 by volume.

Volumetric mixes shall comprise the following:

<table>
<thead>
<tr>
<th>Volumetric mix</th>
<th>Cement/Kg</th>
<th>Fine Aggregate/CM</th>
<th>Coarse Aggregate/CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:1:2</td>
<td>50</td>
<td>0.03</td>
<td>0.07</td>
</tr>
<tr>
<td>1:1:5:3</td>
<td>50</td>
<td>0.05</td>
<td>0.10</td>
</tr>
<tr>
<td>1:2:4</td>
<td>50</td>
<td>0.07</td>
<td>0.14</td>
</tr>
<tr>
<td>1:3:6</td>
<td>50</td>
<td>0.10</td>
<td>0.20</td>
</tr>
<tr>
<td>1:4:8</td>
<td>50</td>
<td>0.13</td>
<td>0.26</td>
</tr>
</tbody>
</table>

MEASURED PROPORTIONS OF CONCRETE

Cement

The quantity of cement shall be measured by weight. Where delivered in bags, each batch of concrete is to use one or more whole bags of cement.

Aggregates

Concrete aggregates shall be measured by weight in a weigh-batching machine.

Weigh batching machines shall be of an approved type and shall be properly maintained and checked for accuracy at regular intervals.
CONCRETE GRADES A, B, C & D

The weights of fine and coarse aggregate to be used in concrete Grades A to D shall be limited in accordance with the table below. The proportions of fine to course aggregate and cement which the Contractor proposes to use for each of the mixes specified shall first be approved by the Engineer. The Contractor will then be required to prepare Preliminary Test Cubes and have these cubes tested as described for Work Cube Tests. The test results should be submitted to the Engineer in sufficient time for further tests to be carried out should they prove unsatisfactory. Cube strengths in the Preliminary tests must show Crushing Strengths at least 25% higher than the strengths specified for Works Cube Tests. If the Contractor is unable to produce specified cube strengths, he will be required at his own cost to increase the cement content of the mix until satisfactory results are produced.

The Engineer may require at any time during the Contract the proportions of fine to coarse aggregate to be altered in order to produce a mix of greater strength or improved workability and providing that the total proportions of aggregate to cement remain unchanged, no claim for additional cost will be considered.

MINIMUM CEMENT CONTENT

<table>
<thead>
<tr>
<th>Concrete Grade</th>
<th>Minimum Cement Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade A</td>
<td>1 to 4.5</td>
</tr>
<tr>
<td>Grade B</td>
<td>1 to 5.5</td>
</tr>
<tr>
<td>Grade C</td>
<td>1 to 7</td>
</tr>
<tr>
<td>Grade D</td>
<td>1 to 7</td>
</tr>
</tbody>
</table>

WATER PROOF CONCRETE

Where water proof concrete is specified, “Sealopruf Integral Water-proofing Compound” and “Sealoplaz Concrete Plasticiser” as manufactured by Sealocrete Group Sales Ltd, Atlantic Works, Hythe Road, London NW10 5RD, England, are to be added to the mixing water strictly in accordance with the Manufacturer’s instructions and at the rate of 0.50 litres and 0.25 litres respectively to each 50 kg. Bag of cement are to be used unless otherwise approved by the Engineer.

EXPANSION JOINTING

Expansion joint filler shall be “Flexcell” as manufactured by Expandite Ltd., or “Resilex” as manufactured by Evomastics Ltd., or other equal and approved.

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
JOINT SEALER

Sealers shall be either hot or cold applied. Hot applied sealers shall comply with B.S. 2499. Cold mastics shall be applied by gun and where more than 12 mm deep shall include filling with loose packing yarn to within 2 mm from the outer face. All joint sealers are to be approved by the Engineer prior to their use.

WATERBAR

Waterbar shall be RVC water bar as manufactured by Expandite Ltd., or other approved type and shall be provided in the positions indicated on the Drawings.

Joints shall be heat welded in accordance with the manufacturers’ instructions and where the waterbar is to be fixed vertically, metal clips as manufactured by the supplier of the waterbar or of other approved design shall be provided to suspend the waterbar from the reinforcement.

Where waterproof concrete is used the Contractor shall adhere strictly to the position and type of construction joints as detailed on the Drawings. Any deviation from this procedure or the provision of additional construction joints will require the prior approval of the Engineer and any additional waterbar so required will be at the Contractor’s expense.

Formwork shall be designed with sufficient timber formers and blocking pieces to support the waterbar and to ensure that it is not displayed during concreting. In the case of horizontal joints in vertical walling and similar members the formwork shall be so constructed as to permit the starter or upstand of concrete surrounding the lower half of the waterbar to be poured in the same operation as the slab or other concrete from which it springs. Formwork to walls or similar members where the waterbar is positioned at the base of the lift shall have sufficient openings not less than 300 mm square at approximately 200 mm above the level of the waterbar to permit checking that the waterbar is correctly positioned and not displaced during concreting.

No concreting will be permitted to portions where upstand starters form an integral part until the formwork to the starter has been fixed and approved.

TESTING EQUIPMENT

The Contractor shall provide the following equipment for carrying out control tests on site:

(a) Straight edges 3 metres and 1 metre long for testing the accuracy of the finished concrete;
(b) A glass graduated cylinder for use in the silt test for organic impurities in the sand;
(c) Slump test apparatus;
(d) Four 150 mm steel cube moulds with base plates and tamping rods to B.S. 1881.

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
WORK CUBES TESTS

Work Cubes are to be made at intervals as required by the Engineer in accordance with C.P. 114, and the Contractor shall provide a continuous record of the concrete work. The cubes shall be made in approved 150 mm moulds in strict accordance with the Code of Practice.

Three cubes shall be made on each occasion.

Each cube shall be marked with a distinguishing number (numbers) to run consecutively and the date, and a record shall be kept on site giving the following particulars: -
(a) Cube No.
(b) Date made.
(c) Location in Work
(d) 7-day Test; Date; Strength
(e) 28-day Test; Date; Strength

Cubes shall be forwarded, carriage paid, to an approved Testing Authority, in time to be tested two at 7 days and the remaining one at the discretion of the Engineer. No cube shall be dispatched within 3 days of casting.

Copies of all Works Cube Tests shall be forwarded to the Engineer and one shall be retained on the site.

If the strengths required above are not attained, and maintained throughout the carrying out of the Contract, the Contractor will be required to increase the proportion of cement and/or substitute better aggregates so as to give concrete which does comply with the requirements of the contract. The Contractor may be required to remove and replace at his own cost any concrete which fails to attain the required strength ascertained by Works Cube Tests.

MIXING AND PLACING OF CONCRETE

The concrete shall be mixed only in approval power-driven mixtures of a type and capacity suitable for the work, and in any event not smaller that 0.40/0.28 cu.m. Capacity.

The mixer shall be equipped with an accurate water-measuring device. All materials shall be thoroughly mixed dry before the water is added and the mixing of each batch shall continue for a period of not less than two minutes after the water has been added and until there is a uniform distribution of the materials and the mass in uniform in colour.

The entire contents of the mixed drum shall be discharged before recharging. The volume of mixed materials shall not exceed the rated capacity of the mixer. Whenever the mixer is started, 10% extra cement shall be added to the first batch and no extra payment will be made on this account.

As a check on concrete consistency slump tests may be carried out and shall be in accordance with B.S. 1881. The Contractor shall provide the necessary apparatus and carry out such tests as are required. The slump of the concrete made with the specified water content, using dry materials, shall be determined and the water to be added under wet conditions shall be so reduced as to give approximately the same slump.

Specifications

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
The concrete shall be mixed as near to the place where it is required as is practicable, and only as much as is required for a specified section of the work shall be mixed one time, such sections being commenced and finished in one operation without delay. All concrete must be efficiently handled and used in the Works within twenty (20) minutes of mixing. It shall be discharged from the mixer direct either into receptacles or barrows and shall be distributed by approved means, which do not cause separation or otherwise impair the quality of the concrete. Approved mechanical means of handling will be encouraged, but the use of chutes for placing concrete is subject to prior approval of the Engineer.

Concrete shall be placed from a height not exceeding 1,500 mm directly into its permanent position and shall not be worked along the shutters to that position. Unless otherwise approved, concrete shall be placed in a single operation to the full thickness of slabs, beams, and similar members, and shall be placed in horizontal layers not exceeding 1,500mm deep in walls and similar members.

Concrete in columns may be placed to a height of 4 metres with careful placing and vibration and satisfactory results. Where the height of the column exceeds 4 metres suitable openings must be left in the shutters so that this maximum lift is not exceeded.

Concrete shall be placed continuously until completion of the part of the work between construction joints as specified hereinafter or of a part of approved extent. At the completion of a specified or approved part construction joint of the form and in the positions hereinafter specified shall be made. If stopping of concreting be unavoidable elsewhere, a construction joint shall be made where the work is stopped. A record of all such joints must be made by the Contractor and a copy supplied to the Engineer.

Any accumulation of set concrete on the reinforcement shall be removed by wire brushing before further concrete is placed.

The Contractor shall provide runaways for concreting to the satisfaction of the Engineer. Under no circumstances will the runaways be allowed to rest on the reinforcement.

Care shall be taken that the concrete is not disturbed or subjected to vibrations and shocks during the setting period.

Mixing machines, platforms and barrows shall be clean before commencing mixing and be cleaned on every cessation of work.

Where concrete is laid on hardcore or other absorbent materials, the base shall be suitable and sufficiently wetted before the concrete is deposited.

**COMPACTION**

At all times during which concrete is being placed the Contractor shall provide adequate trained and experienced labour to ensure that the concrete is compacted in the forms to the satisfaction of the Engineer.

Concrete shall not be placed at a rate greater than will permit satisfactory compaction nor to a depth greater than 400 mm before it is compacted.
During and immediately after placing, the concrete shall be thoroughly compacted by means of continuous tamping, spading, slicing and vibration. Vibration is required for all concrete of Classes 40, 35, 25 and 20.

Care shall be taken to fill every part of the forms, to work the concrete under and around the reinforcement without displacing it and to avoid disturbing recently placed concrete, which has began to set.

Any water accumulating on the surface of newly placed concrete shall be removed and no further concrete shall be placed thereon until such water is removed.

Internal vibrators shall be a frequency of not less than 7,000 cycles per minute and shall have a rotating eccentric weight of at least 0.50 kg., with eccentricity of not more than 12 mm. Such vibrators shall visibly affect the concrete within a radius of 250 mm from the vibrator.

Internal vibrators shall not be inserted between layers of reinforcement less than one and one half times the diameter of the vibrators apart. Contact between vibrators and reinforcement and vibrators and formwork shall be avoided.

Internal vibrators shall be inserted vertically into the concrete wherever possible at not more than 500 mm centers and shall constantly be moved from place to place. No internal vibrator shall be permitted to remain in any one position for more than ten seconds and it shall be withdrawn very slowly from the concrete.

In consolidating each layer of concrete the vibrating head shall be allowed to penetrate and re-vibrate the concrete in the upper portion of the underlying layer. In the area where newly placed concrete in each layer joins previously placed concrete more than usual vibration shall be performed, the vibrator penetrating deeply at close intervals along these contacts. Layers of concrete shall not be placed until layers previously placed have been vibrated thoroughly as specified.

Vibrators shall not be used to move concrete from place to place in the formwork.

At least one internal vibrator shall be operated for every 1.5 cubic metres of concrete placed per hour and at least one spare vibrator shall be maintained on site in case of breakdown during concreting operations.

External formwork vibrators shall be of the high frequency low amplitude type applied with the principal direction of vibration in the horizontal plane. They shall be attached directly to the forms at not more than 1,200 mm centers.

In addition to internal and external vibration the upper surface of suspended floor slabs shall be leveled by tamping or vibrating to receive finishes. Vibrating elements shall be of the low frequency high amplitude type operating at a speed of not less than 3,000 r.p.m
CONSTRUCTION JOINTS

Construction joints shall be permitted only at the positions pre-determined on the Drawings or as instructed on the site by the Engineer. In general they shall be perpendicular to the lines of principal stress and shall be located at points of minimum shear, viz., vertically at, or near, mid-spans of slabs, ribs and beams.

Suspended concrete slabs are generally to be cast using alternate bay construction in bays not exceeding 20 metres in length. No two adjacent bays are to be cast within a minimum period of 48 hours of each other. The joints between adjacent bays are to be in positions agreed with the Engineer.

Under no circumstances shall concrete be allowed to tail off, but it shall be deposited against stopping-off boards.

Before placing new concrete against concrete already hardened, the face of the old concrete shall be thoroughly hacked roughened and cleaned, and laitance and loose material removed there from, and immediately before placing the new concrete, the surface shall be saturated with water and covered with a coat of mortar at least 25 mm in thickness composed of cement and fine aggregate in the proportions used in the concrete.

CURING AND PROTECTION

Care must be taken that no concrete is allowed to become prematurely dry and the fresh concrete must be carefully protected within two hours of placing from rain, sun and wind by means of Hessian sacking, polythene sheeting, or other approved means. This protective layer and the concrete itself must be kept continuously wet for at least seven days after the concrete has been placed. The Contractor will be required to provide complete coverage of all fresh concrete for a period of 7 days. Hessian or polythene sheeting shall be in the maximum widths obtainable and shall be secured against wind. The Contractor will not be permitted and shall be secured against wind. The Contractor will not be permitted to use old cement bags, hessian or other material in small places.

Concrete in foundations and other underground work shall be protected from admixture with falling earth during and after placing.

Traffic or loading must not be allowed on the concrete until the concrete is sufficiently matured, and in no case shall traffic or loading be of such magnitude as to cause deflection or other movement in the formwork or damage to the concrete members. Where directed by the Engineer props may be required to be left in position under slabs and other members for greater periods than those specified hereafter.
FAULTY CONCRETE

Any concrete which fails to comply with these preambles, or which shows signs of setting before it is placed shall be taken out and removed from the site. Where concrete is found to be defective after it has set, the concrete shall be cut out and replaced in accordance with the Engineer’s instructions. On no account shall any faulty, honeycombed, or otherwise defective concrete be repaired or patched until the Engineer has made an inspection and issued instructions for the repair. The whole of the cost whatsoever, which may be occasioned by the need to remove faulty concrete, shall be borne by the Contractor.

ROD REINFORCEMENT

The steel reinforcement shall comply with the latest requirements of the following British Standards:

- Hot rolled bars for the reinforcement of concrete to B.S. 4449 (metric units)
- Cold worked steel for the reinforcement of concrete to B.S. 4461 (metric units)

The Contractor will be required to submit a test certificate of the rolling. Reinforcement shall be stored on racks above ground level. All reinforcement shall be free from loose mill scale or rust, grease, paint or other substances likely to reduce the bond between the steel and concrete.

FABRIC REINFORCEMENT

To be electrically cross-welded steel wire mesh reinforcement to B.S. 4483, 1969 and of the size and weight specified.

FIBREMESH REINFORCEMENT

Where fibremesh reinforcement is specified it shall be Fibremesh “FIBERMIX 7025” and Fibermix “HARBOURITE 6927” as manufactured by Fibremesh Europe Ltd., Smeckley wood close, Sheepbridge Chesterfield, S41 9PZ England and shall comply with British Board of Agreement (BBA) Certificate No. 92/2857 and shall be added the concrete mix in accordance with the manufacturer’s instructions.

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
FIXING ROD REINFORCEMENT

Reinforcement shall be accurately placed in position as shown on the Drawings, and before and during concreting, shall be secured against displacement by using No. 18 S.W.G. annealed binding wire or suitable clips at intersections, and shall be supported by concrete or metal supports, spacers or metal hangers to ensure the correct position and cover.

No concreting shall be commenced until the Engineer has inspected the reinforcement in position and until his approval has been obtained and the Contractor shall give two clear days’ notice of his intention to concrete.

The Contractor is responsible for maintaining the reinforcement in its correct position, according to the Drawings, before and during concreting. During concreting a competent steel fixer must be in attendance to adjust and correct the position of any reinforcement in its correct position of any reinforcement, which may be displaced. The vibrators are not to come into contact with reinforcement.

POSITION AND CORRECTNESS OF REINFORCEMENT

Irrespective of whether any inspection and/or approval of the fixing of the reinforcement has been carried out as above, it shall be the Contractor’s sole responsibility to ensure that the reinforcement complies with the details on the Drawings or Schedules and is fixed exactly in the positions shown therein and the positions to give the prescribed cover. The Contractor will be held entirely responsible for any failure or defect in any portion of the reinforced concrete structure and including any consequent delay, claims, third party claims, etc., where it is shown that the reinforcement has been incorrectly positioned or is incorrect in size or quantity with respect to the detailed Drawings or Schedules.

SPACER BLOCKS

Spacer blocks of approved size and shape made of concrete similar to that used in the surrounding construction and fixed to the reinforcement or formwork by No. 18 S.W.G. wires set into the spacer blocks or other approved means shall be provided where necessary to ensure that the requisite cover is obtained. Where hollow concrete block construction is used, spacer blocks are to be provided as shown on the Drawings. These will consist of concrete blocks as described above made to fit the width of the rib less 3mm tolerance and with single or double grooves (depending on the number of reinforcement bars used per rib) in the top surface with wire ties at each groove.

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
CONCRETE COVER TO REINFORCEMENT

Unless otherwise directed the concrete cover to rod reinforcement over main bars in any face shall be:

- Foundations against each face: 75 mm
- Foundations against blinding: 50 mm
- Columns: 40 mm
- Beams: 25 mm
- Slabs: 15 mm

FIXING FABRIC REINFORCEMENT

The fabric shall be free from scale, rust, grease or other substance likely to reduce the bond between the steel and the concrete and shall be laid with minimum 300 mm laps and bound with No. 18 S.W.G. annealed iron wire.

FIXTURES

No openings, chases, holes or other voids shall be formed in the concrete without the prior approval of the Engineer. Details of any fixtures to be permanently built into the concrete including the proposed position of all electrical conduits 25 mm and over in diameter shall be submitted to the Engineer for his approval before being placed.

CHASSES, HOLES, ETC. IN CONCRETE

The Contractor shall be responsible for the co-ordination with the Electrical and other Sub-Contractors for incorporating electrical conduit, pipes, fixing blocks, chases, holes and the like in concrete members as required and must ensure that adequate notice is given to such sub-contractors informing them when concrete members incorporating the above are to be poured. The Contractor shall submit full details of these items to the Engineer for approval before the work is put in hand. All fixing blocks, chases, holes, etc., to be left in the concrete shall be accurately set out and cast with the concrete.

Specifications

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
POSITION OF ELECTRICAL CONDUIT

Unless otherwise instructed by the Engineer all electrical conduits to be positioned within the reinforced concrete shall be fixed inside the steel cages of beams and columns and between the top and bottom steel layers in slabs and similar members.

The proposed position is all electrical conduits 25 mm and over in diameter which are to be enclosed in the concrete shall be shown accurately on a plan to be submitted to the Engineer, whose approval shall be obtained before any such conduit is placed.

FORMWORK

The method and system of formwork, which the Contractor proposes to use, shall be approved by the Engineer before construction commences. Formwork shall be substantially and rigidly constructed of timber or steel or precast concrete or other approved material.

All timber for formwork shall be good, sound, clean, sawn well-seasoned timber, free from warps and loose knots and of scantlings sufficiently strong for their purpose.

CONSTRUCTION OF FORMWORK

All formwork shall be of sufficient thickness and with joints close enough to prevent undue leakage of liquid from the concrete and fixed to proper alignment, level and plumb and supported on sufficiently strong bearers, shores, braces, plates, etc., properly held together by bolts or other fastenings to prevent displacement, vibration or movement by the weight of materials, men and plant on same and so wedged and clamped as to permit of easing and removal of the formwork without jarring the concrete. Where formwork is supported on previously constructed portions of the reinforced concrete structural frame, the Contractor shall by consultation with the Engineer ensure that the supporting concrete structure is capable of carrying the load and/or sufficiently propped from lower floors or portions of the frame to permit the load to be temporarily carried during construction.

Soffits shall be erected with an upward camber of 5 mm for each 5 metres of horizontal span or as directed by the Engineer.

Great care shall be taken to make and maintain all joints in the formwork as tight as possible, to prevent the leakage of grout during vibration. All faulty joints shall be caulked to the Engineers’ approval before concreting.

The formwork shall be sufficiently rigid to ensure that no distortion or bulging occurs under the effects of vibration. If at any time the formwork is insufficiently rigid or in any way defective the Contractor shall strengthen or improve such formwork as the Engineer may direct.

The Contractors’ attention is drawn to the various surface textures and applied finishes required and the faces of formwork next to the concrete must be of such material and construction and be sufficiently true to provide a concrete surface which will in each particular case permit the specified surface treatment or applied finish.

All surfaces which will be in contact with concrete shall be oiled or greased to prevent
adhesion of mortar. Oil or grease shall be of a non-staining mineral type applied as a thin film before the reinforcement is placed. Surplus moisture shall be removed from the forms to placing of the concrete.

Temporary openings shall be provided at the bases of columns, wall and beam forms and at any other points where necessary to facilitate cleaning and inspection immediately before the pouring of concrete. Before the concrete is placed the shuttering shall be trued-up and any water accumulated therein shall be removed. All sawdust, chips, nails and other debris shall be washed out or otherwise removed within the formwork. The reinforcement shall then be inspected for accuracy of fixing. Immediately before placing the concrete the formwork shall be well wetted and inspection openings shall be closed. The erection, easing, striking and removing of all formwork must be done under the personal supervision of a competent foreman, and any damage occurring through faulty formwork or its incorrect removal shall be made good by the Contractor at his own expense.

After removal of formwork, all projections, fins, etc., on the concrete surface shall be chipped off, and made good to the requirements of the Engineer. Any or honeycombing shall be treated as described in “Faulty Concrete”.

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
STRIPPING FORMWORK

All formwork shall be removed without undue vibration or shock and without damage to the concrete. No formwork shall be removed without the prior consent of the Engineer and the minimum periods that shall elapse between the placing of the concrete and the striking of the formwork will be as follows:

- Beam sides, wall and columns (unloaded) 2 days
- Slab soffits (props left under) 3 days
- Beam soffits (props left under) 7 days

**Removal of props (partly subject to 7 days concrete cube strength being satisfactory) to:**

- Slabs 10 days
- Beams 14 days
- Cantilevered beams and slabs 28 days

If the contractor wishes to take advantage of the shorter stripping times permitted for beam and slab soffits when props are left in place, he must so design his formwork that sufficient props as agreed with the Engineer can remain in their original positions without being moved in any way until expiry of the minimum time for removal of props. Stripping and re-propping will not be permitted.

The above times may be reduced in certain circumstances, at the discretion of the Engineer, provided an approved method is adopted at the Contractor’s expense to ensure that the required concrete strength is attained before the forms are stripped.

Solid strips in composite slabs shall be considered as beams. The tops of retaining walls shall be adequately supported with stout raking props at intervals required by the Engineer. These props are not to be removed until 7 days after casting of the floor slab over.

SUPPORTING PROPS TO WALL AND BEAM SOFFITS

Where directed by the Engineer supporting props to wall and beam soffits are to be left in position until completion of the whole of the reinforced concrete structure.

The props are to be to the approval of the Engineer and the Contractor must submit the suggested method of propping to the Engineer prior to removal of formwork to the relevant surfaces.

Specifications

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
EXPOSED CONCRETE FINISHES

GENERAL

Contractors will be required at an early stage in the Contract, to prepare samples for the approval of the Architect of the various concrete finishes specified hereafter. Samples are to be prepared using the same materials and the same methods of Construction, compaction, curing, etc., as the Contractor proposes to use for executing the full quantity of the work.

A record of the mix, water content, method of compaction, any additives used, etc., is to be kept for each sample prepared. When the Architect has approved a sample it will be kept on site in an approved location. The finishes in construction will be expected to be up to a standard equal to the approved sample. The Contractor is to include for all costs in preparing samples in his rates for that respective finish.

Consistency in cement colour and colour, grading and quality of aggregates must be maintained in all finished concrete work.

TAMPED FINISH

Areas so specified shall be finished at the time of casting with a tamped finish to Architect’s approval, produced by an edge board. Board marks are to be made to a true pattern and will generally be at right angles to the traffic flow. Haphazard or diagonal tamping will not be accepted.

CHAMBERS AND REBATES TO EXPOSED CONCRETE

Wherever concrete surfaces are to remain exposed and otherwise where specified or shown on the Drawings, rebates and chamfers are to be provided at junctions, corners, and changes in direction of concrete members.

Rebates and chamfers are to have a fair face finish.

Unless otherwise instructed concrete pours to columns and to other members where applicable are to terminate only at the pre-determined rebate positions.

FAIR FACE

Fair face surfaces shall be clean, smooth, even, true to form, line and level, and free from all board marks, joint marks, honeycombing, pitting, and other blemishes. Forms are to be provided with a smooth lining of plywood, steel, or other approved material, which will achieve the required finish without any general rubbing down. Rubbing down will only be permitted to remove any projecting fins at corners or joints.

Specifications

*Proposed Space Optimization for Kenya Literature Bureau*
*Nairobi*
FINE FACE

Fine face surfaces shall be as above but to a higher standard obtained from forms provided with an impervious sheet lining of metal or plastics faced plywood in large panels arranged in an approved pattern. Rubbing down shall only be permitted after inspection by the Engineer. The finished surface shall be capable of receiving a painted finish.

BRUSHED CONCRETE FINISH

Brushed concrete finish shall be provided to precast concrete members where specified or shown on the Drawings.

The surface is to be sprayed with water and brushed within 2 hours of casting to expose the aggregate to an extent to be approved by the Architect.

The brushed face will generally be contained within a surround of fair face concrete and the Contractor is to allow for retaining the fair face forms or otherwise protecting the surround whilst achieving the brushed finish.

BOARD-MARKED FINISH

The required finish is to be a board-marked pattern and the boards are to be arranged vertically or horizontally to the patterns shown on the Drawings or as otherwise agreed by the Architect.

Formwork shall be made from timber of sufficiently strong grain to the Architect’s approval in matching widths with straight sawn staggered joints. Short make-up lengths will not be permitted and boards shall generally be in the longest lengths practical. Construction joints shall be at predetermined positions and at recesses where so detailed.
CHISEL-DRESSED FINISH

Chisel-dressed finish is to be carried out on any grade of concrete but not until it is at least 30 days old.

The surfaces are to be fully chisel-dressed to remove a maximum of 12 mm (average 9 mm) of the surface by shearing and exposing the aggregate without excessive cracking of the surrounding matrix.

Arises of columns, beams, etc., are pre-formed fair face with timber fillets (which have been measured separately) set in the formwork and care must be taken in working up these to preserve a clean line.

For vertical surfaces of walls and columns particular care must be taken to remove all sharp projections. For beam soffits this requirement is not necessary.

All surfaces requiring this treatment are to have the margins chisel-dressed by hand for a minimum width of 75 mm commencing from the fillet edge. Thereafter mechanical chisel-dressing may be used but the Contractor must ensure that a uniform texture and even plane surface is achieved.

The use of sharply pointed steel tools for both hand and mechanical chisel-dressing is essential.

Upon completion the surfaces are to be thoroughly wire brushed and washed down.

PROTECTION OF FINISHES

Wherever possible, in-situ exposed concrete finishes should be commenced at the highest level and worked progressively down the building.

Precaution shall be taken to avoid staining or discoloration of previously finished concrete faces by leakage of grout from newly place concrete. The Contractor shall during all stages of construction adequately protect all concrete finishes from damage by leaking grout, knocking, paint stains, falling plaster, etc. In case of balustrade walls to staircases and members where damage is otherwise likely, concrete finishes shall be protected by cladding with timber, Celotex, or other approved sheeting. All Sub-contractors shall be informed accordingly on the precautions to be taken.
PRECAST CONCRETE

The maximum size of coarse aggregate in precast concrete shall not exceed 20 mm except for thickness less than 75 mm where it shall not exceed 10 mm.

The compaction of precast concrete shall conform with requirements given elsewhere in these preambles except for thin slabs where use of immersion type vibrators is not practicable. The concrete in these slabs may be consolidated on a vibrating table or by any other methods approved by the Engineer.

Steam curing of precast concrete will be permitted. The procedure for steam curing is used these times may be reduced subject to the approval of the Engineer.

Precast concrete units shall be constructed in individual forms. The method of handling the precast concrete units after casting, during curing and during transport and erection shall be subject to the approval of the Engineer, providing that such approval shall not relieve the Contractor of responsibility for damage to precast concrete units resulting from careless handling.

Repair of damage to the precast concrete units, except for minor abrasions of the edges, which will not impair the installation, and/or appearance of the units will not be permitted and the damage units shall be replaced by the Contractor at his own expense.

Except where precast work is described as “fair face” the moulds shall be made of suitably strong sawn timber true in form to the shapes required. Unless otherwise described faces are to be left rough from the sawn moulds.

Where precast work is described as “fair face” the moulds are to be made of metal or are to have metal or plywood linings or are to be other approved moulds which will produce a smooth dense fairface to the finished concrete suitable to receive a painted finish direct and free from all shutter marks, holes, pittances, etc.

The precast units shall be installed to the lines, gradients and dimensions shown on the Drawings or as directed by the Engineer.
CONCRETE SURFACE BEDS

The Concrete shall be placed as soon as possible after being mixed. In transporting the concrete adequate precautions shall be taken to avoid damage to the prepared base. The concrete shall be spread to such a thickness that when compacted it shall have the finished thickness as specified or shown on the Drawings. A layer of concrete 50 mm less than the finished thickness shall first be spread or struck off at the correct level to receive the top fabric reinforcement. The top layer shall be added. Not more than 30 minutes shall elapse between spreading the bottom layer and the start of the compaction of the top layer. The Contractor shall be responsible for maintaining the reinforcement in its correct position during the placing and compaction of the concrete.

The compacting and finishing of the concrete shall be effected by immersion vibrators and a hand or mechanical tamper weighing not less than 10 kg per linear metre and having a tamping edge shod with a steel strip 75 mm wide fixed to the tamper by countersunk screws. Immersion vibrators with “spade” attachments will be permitted. Compaction shall be continued until a dense, scaled surface finish is achieved. Over-compaction causing an excessive amount of fines to be brought to the surface shall be avoided.

The surfaces of the concrete shall be finished with a wood float finish to the levels, falls and crossfalls, as directed or shown on the Drawings shall be subject to the following tolerances:

1. The level shall be within + or - 6 mm of the levels directed.
2. The falls shall be within 10% of the falls directed.
3. The smoothness shall be such that departures from a 3 metre straight edge in any direction shall not exceed 3 mm.

Minor irregularities shall be made good by the use of a steel float but in no circumstances shall mortar be used to make good the surface. Before the concrete has finally set and after completion of the floating the concrete shall be brushed with a strong-headed broom to produce a grooved finish in parallel lines to the satisfaction of the Engineer.

As soon as the surface has been finished it shall be protected against too-rapid drying by means of damp Hessian, polythene sheeting or other approved means placed carefully on the surface and kept damp and in position for 7 days and the concrete shall be kept wet for a further 21 days. The most critical period is the first 24 hours after placing and curing during that time shall be very thorough. The Contractor is to obtain the Engineer’s approval to the material and method he proposes to use for curing and no concreting will be permitted until sufficient such materials on site.

Forms shall not be removed from freshly placed concrete until it is at least 24 hours old. Care shall be taken that in their removal no damage is done to the concrete, but should any damage occur the Contractor should be responsible for making it good.

Specifications

Proposed Space Optimization for Kenya Literature Bureau
Nairobi

-136-
HOLLOW CLAY POTS

The hollow clay pots for suspended floor shall be manufactured by messrs. Clay works Ltd., P.O Box 48202, Nairobi and shall be suspended floor units size 350 mm x 300 mm x 230 mm deep. Care shall be taken in unloading, stacking and placing hollow pots in position. Damaged units shall not be incorporated in the works and shall be removed from site.

HOLLOW BLOCK SUSPENDED FLOORS

The hollow blocks shall be set out to the dimensions shown on the drawings. Slip tiles will not be required. Care shall be taken when placing and vibrating the concrete to avoid damage to or displacement of the pots.

Specifications

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
NOTES CONCERNING PRICING

The Contractor must allow for all costs incurred during the progress of the contract for complying with the provisions concerning the preparation and use of graded mixes.

Prices for plain or reinforced concrete shall include for mixing, hoisting, depositing, compacting, curing and protection at the various levels required throughout the building, and shall also include for forming or hacking a satisfactory key for all faces receiving asphalt and plaster work. Prices for slabs shall include for forming construction joints at bay edges, including all necessary temporary formwork and supplying records of such joints to the Engineer.

Prices for steel rod reinforcement shall include for cutting to lengths and all labour in bending and cranking, forming hooked ends, handling, hoisting and fixing in position and for providing all necessary tying wire, spacer blocks and supports. Prices for fabric reinforcement shall include for all straight cutting and waste, handling, hoisting and fixing in position, providing all necessary tying wire, and supports and all extra material in laps.

The prices for formwork shall include for extra material at joints, extra labour and waste for narrow widths, small quantities, overlaps, passings at angles, straight cutting and waste, splayed edges, notchings, etc., and for fixing at the various levels including battens, struts, and supports and for bolting, wedging, easing, striking and removal. Prices for linear items such as boxing shall include for angles and ends.

Prices of all precast concrete shall include for all moulds, finishing as described, handling, reinforcement, hoisting and fixing at the required levels and for casting or cutting to the exact lengths required and any waste resulting from such cutting.

Prices for expansion joints shall include for cutting to size and all temporary supports and prices for expansions joint sealers shall include for all temporary battens or fillets required to form the necessary grooves.

Prices for hollow concrete block suspended construction must be “tall inclusive” to include for concrete hollow tiles, in-situ concrete ribs, concrete topping, concrete filling to open ends of hollow concrete tiles and solid concrete bearings and beams.

The Contractor is to allow in his prices for carrying out all tests as specified in this section apart from work cube tests for which a provisional item is included in the preliminaries section of these Bills of Quantities.

The prices for wrought formwork shall include for fair face finish either by rubbing down or by smooth lining, all as described in these Preambles.

Specifications

Proposed Space Optimization for Kenya Literature Bureau

Nairobi
WALLING

STONE

Stone for walling shall be hard, dense, stone from an approved quarry with accurately dressed faces on all sides.

Stonewalling described as load bearing shall have a minimum crushing strength of 14.00 Newton per square millimeters and shall comply with C.P. 111: Part 2.

CONCRETE BLOCKS

All hollow or solid concrete blocks for general use shall comply with B.S. 2028, Type A and with C.P. III: Part 2, of minimum crushing strength of 3.5 Newtons per square millimetre, and must be obtained from any approved manufacturer, equal to samples deposited with and approved by the Architect.

Concrete block walling described, as load bearing shall have a minimum crushing strength of 7.0 Newtons per square millimetre.

All concrete blocks must be cured for a minimum period of four weeks before use and all testing of blocks is to be carried out by the Ministry of Works Materials Testing Laboratory

WALL REINFORCEMENT

All walling of thickness 150mm and less shall be reinforced with hoop iron 25mm wide or similar reinforcement centrally in every alternate joint (vertically for the full length of the walls, lapped and crimped 300 mm at running joints and full width of wall at angles and intersections).

WALL TILES

20 Gauge hoop iron ties 25 mm wide x 450 mm long to be provided for every alternate course at all connections between block walls and reinforced concrete columns or walls. One end to be cast into concrete and other end bent and built into mortar joint of walling

CHASING

Chasing in load-bearing walling of electrical conduit, pipes, etc., is to be kept to a minimum size of cut and positions and runs of chases are to be approved by the Architect before any cutting is commenced. Horizontal runs will not be permitted

CEMENT

The Cement shall be as described in “Concrete Work”.

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
SAND

The sand for mortars shall be described in “Concrete Work” except that it shall be fine sand.

LIME

The lime for plastering shall comply with B.S. 890, Class ‘A’ for non-hydraulic lime and shall be as rich as obtainable and to approval. It must be freshly burnt and shall be slaked at least one month before being used by drenching with water, well broken-up and mixed and the wet mixture shall be passed through a sieve of sixty-four meshes to the square inch. Lime putty shall consist of freshly slaked lime as above described, saturated with water until semi-fluid and passed through a fine sieve; it shall then be allowed to stand until superfluous water has evaporated and it has become of the consistency of thick paste, in no case for a shorter period than one month before being used, during which it must be kept damp and clean and no portion of it allowed to become dry.

Alternatively, hydrated lime with 70% average calcium oxide content may be used and it must be protected from damp until required for use. It shall be soaked to putty at least 24 hours before use.

MORTARS

Cement mortar shall consist of one part of Portland cement, to three parts of sand by volume.

The cement/lime mortar shall consist of one part of Portland cement, one part of lime and six parts of sand by volume.

The ingredients of mortar shall be measured in proper gauge boxes on a boarded platform, the ingredients being thoroughly mixed dry, and again whilst adding water. In the case of cement/lime mortar the sand and lime shall be mixed first and then the cement added.

All mortar is to be thoroughly mixed to a uniform consistency with only sufficient water to obtain a plastic condition suitable for troweling. No mortar that has commenced to set is to be used or remixed for use.

SETTING OUT

The Contractor shall provide proper setting out rods and set out on the same all work showing openings, heights, sills and lintels and shall build the various walls and piers to the thickness, widths and heights shown upon drawings. No part of the walling shall be carried up more than one metre higher at one time than any other part and in such cases the jointing shall be made in long steps so as to prevent cracks arising and all walls shall be leveled round at floor and wall heads.

Specifications

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
BONDING WALLING

All blocks shall be properly bonded together and in such a manner that no vertical joint in any one course shall be within 100 mm of a similar joint in the courses immediately above and below. Alternative courses of walling at all angles and intersections shall be carried through the full thickness of the ad jointing walls.

All perpends, reveals, quoins and other angles and joints of the walls, etc., shall be built strictly true and square.

LAYING AND JOINTING

All bricks and blocks are to be well wetted before laying and tops of walls where left off shall be well wetted before commencing building. All joints are to be 10 mm thick and flush up and grouted in solid as the work proceeds.

All exposed faces of walls for plastering are to be left rough and the joints raked out while mortar is green to form adequate key.

All other faces shall be cleaned down on completion with a wire brush or as necessary and mortar droppings, smear marks, etc., removed and rates must include for this

PUTLOG HOLES

All putlog holes shall be carefully, properly and completely filled up on completion of walling and before plastering is commenced.

FAIR FACE

Walling described as fair-faced shall be built with selected blocks and pointed with neat flush joints. Stone walling shall be fine chisel dressed

BRICKS

All bricks shall be obtained from Clayworks Limited, P.O Box 45154, Nairobi, of all sizes as required and shall be hard, sound, square, well-burnt, uniform in shape and free from cracks, stones and other defects.

Samples of bricks shall be deposited and be approved by the Architect before being used and all subsequent bricks used in the Works shall be equal to the approved sample

DAMP-PROOF COURSES

Damp-proof courses shall be bituminous felt to B.S. 743 weighing 7 lbs. per square yard, free from tears and holes, and be laid with 150 mm minimum laps on and including a leveling screed of cement mortar

Specifications

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
PRICES TO INCLUDE

The rates for walling shall include for all reinforcement, all straight cutting, bonding, plumbing angles, forming reveals, pinning up to underside of concrete soffits and cutting up to sides of columns and building in ends of lintels and sills

BRICK WORK

Brickwork shall be built to a gauge of 4 courses to 340 mm of wall height including 10 mm bed joints.

Facing walls shall be built in stretcher bond and be tied to the block works or concrete-backing walls with 10-gauge galvanized wire wall ties, 500 mm girth, formed to a figure 8 and twisted together at the lap.

Three wall ties per square metre are to be used, wall tiles for concrete backing walls shall be cast into the concrete including all temporary fixing to formwork.

Facing walls shall be pointed as the work proceeds. External walls shall have recessed joints and internal walls shall have flush joints. Facing walls shall be kept perfectly clean and no rubbing down of blockwork will be allowed

FAIR FACE

Walling described as fair faced shall be built with selected bricks and pointed with neat recessed joints.

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
ROOFING

PREPARATION OF SURFACES

All surfaces to receive roofing shall be clean, dry, free from fins or projections and loose materials, and with cracks or voids filled with cement mortar.

LIGHTWEIGHT ROOF SCREEDS

Roof screeds will be executed to the approval of the Specialist Roofing Sub-Contractor and will consist of cement, sand and pumice (1:3:7) finished with 6 mm layer of cement and sand (1:4) topping. Screeds shall not be laid in areas exceeding ten square metres during any period of 24 hours. As bays are formed batten strips must be used to retain the exposed edge of the screed. Screeds shall be finished to falls and currents to receive roofing.

ASPHALT ROOFING

Asphalt roofing will be executed by an approved Specialist Roofing sub-contractor. Before any application of roofing, the Contractor is to ensure that all roof surfaces are thoroughly cleaned by sweeping.

Roofing asphalt to be B.S. 988/1966 Table 3, Column III, Tropical Mastic asphalt laid in two coats to a total thickness of 20 mm on and including black sheathing felt and finished with two coats aluminum paint to horizontal and vertical surfaces

GALVANISED CORRUGATED STEEL SHEETING

The roof sheathing shall be of the gauge specified and comply with B.S. 3083. The roof sheeting shall be laid and fixed with steel work hook bolts and nuts, steel roofing bolts and clips or steel roofing screws to B.S. 1494: Part 1.

GALVANISED LT5 LONG TROUGH STEEL SHEETS

Where specified the roof sheeting and fittings shall be 24-gauge LT5 galvanized steel long trough roofing as manufactured by MABATI LTD, P.O Box 46934, NAIROBI or other equal and approved manufacturer. The roof sheeting shall be laid and fixed with approved purpose made hook, bolts, washers, etc., to ‘Z’ purlins. Where so specified the roofing shall be pre-painted with a RESINCOT FINISH

Specifications

Proposed Space Optimization for Kenya Literature Bureau
NAIROBI
GALVANISED LT4 LONG TROUGH STEEL SHEETS

Where specified, the roof sheeting and fittings shall be 24-gauge IT4 roofing as manufactured by GALSHEET KENYA LTD, P.O Box 78162, NAIROBI OR other equal and approved manufacturer. The roof sheeting shall be laid and fixed with approved purpose made hook bolts, washers, etc. to ‘Z’ purlins. The ridge flashing sheets shall be IT4 profiled sheeting curved to the radii shown on the drawings. Where so specified the roofing shall be prepainted with a RESINCOT FINISH.

CORRUGATED ASBESTOS CEMENT ROOFING SHEETS

Where specified, the roof sheeting shall be as manufactured by Simbarite Ltd., P.O Box 90662, Mombasa. The roof sheeting shall be laid and fixed with approved hook bolts or roofing screws, complete with washers and caps.

CONCRETE TILE ROOFING

Concrete single lap tiles and fittings shall be to B.S. 473 & 550 Part 2, Group B of the colour, finish, type size and manufacturer approved by the Architect. A full range of fittings must be available to match the tiles. Tiles shall be 380 x 230 mm nominal unless otherwise specified. Tiles and fittings must be true to shape and of uniform structure. Surface coatings shall be firmly bonded.

MANGalore TIlE ROOFING

Mangalore clay tiles shall be “best” or selected quality as manufactured by the Miritini Brick and Tile works.

Tiles shall be well wetted before use and all dropped or broken tiles shall be rejected before carrying.

Cutting of tiles, where necessary at hips or valleys, shall be carefully and neatly carried out with properly sharpened tools.

Tilling shall be executed to the Architects’ satisfaction and roofs left watertight.

PROTECTION

All roof surfaces shall be kept clean and protected and handed over watertight at completion.
CARPENTRY, JOINERY AND IRONMONGERY

ALL TIMBER

All timber shall be in accordance with the latest approved Grading Rules issued by the Government of Kenya (Legal Notice No. 35B). Timber for carpentry shall be SECOND (OR SELECT) GRADE and timber for Joinery shall be FIRST (OR PRIME) GRADE.

GENERALLY

All timber as it arrives on the site shall be inspected by the Contractor, and any timber brought on the site and not complying with the Specification or not approved, must be removed forthwith from the site and only timber as approved shall be used in the works.

The Contractor shall upon signing the Contract purchase sufficient supplies of specified hardwoods to avoid possible shortages at a later date.

SPECIES OF TIMBER

The following timber shall be use.

<table>
<thead>
<tr>
<th>Standard Common Name</th>
<th>Botanical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cypress</td>
<td>Cypress spp.</td>
</tr>
<tr>
<td>Podocarpus</td>
<td>Podocarpus spp.</td>
</tr>
<tr>
<td>Cedar</td>
<td>Juniperus procera</td>
</tr>
<tr>
<td>E.A. Camphor wood</td>
<td>Ocotea usambarensis</td>
</tr>
<tr>
<td>African Mahogany (Munyama)</td>
<td>Khaya anthotheca</td>
</tr>
<tr>
<td>Mninga</td>
<td>Pterocarpus Angolensis</td>
</tr>
<tr>
<td>Mvule</td>
<td>Chlorophora excelsa</td>
</tr>
<tr>
<td>Elgon Olive</td>
<td>Olea welwitshii</td>
</tr>
</tbody>
</table>

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
TOLERANCES IN THICKNESS

Shall conform with the following extracts of Government of Kenya Grading Rules:

(1) Hardwood Grading: (First and Second Grades)

(a) 15 mm oversize on pieces up to 25 mm in thickness.
(b) 3 mm oversize on pieces over 25 mm and up to 50 mm in thickness.
(c) 6 mm oversize on pieces over 50 mm in thickness.

Undersize will not be permitted.

(2) Softwood Grading: Strength Grades (for Carpentry): First and Second Grades

Undersize not allowed.

Oversize: All timber to be sawn oversize by 1.5 mm for 25 mm thickness and width. Not more than 3 mm in thickness and not more than 6 mm in width.

(3) Soft wood Grading: Appearance Grades (for joinery)

First and Second Grades

All as for strength Grades above.

INSECT DAMAGE

All timber shall be free of live borer beetle or other insect attack when brought upon the site. The Contractor shall be responsible up to the end of the maintenance period for executing at his own cost of all work necessary to eradicate insect attack of timber which becomes evident, including the replacement of timber attacked or suspected of being attacked, notwithstanding that the timber concerned may have already been inspected and passed as fit for use.

SEASONING OF TIMBER

All timber shall be seasoned to moisture content of not more than 22% for carpentry and 15% for Joinery.

Specifications

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
PRESSURE IMPREGNATION PRESERVATIVE TREATMENT

All carpentry timbers, sawn joinery and timber grounds for fixing joinery shall be treated with pressure impregnated “Celcure” or “Tanalith” solution with a minimum nett retention of 0.35 lbs. of dry salt per cubic foot. If so required “charge sheets” issued after treatment with celture B” or “Wolmanol” solution brushed on.

The Contractor’s prices for such timber hereinafter must allow for the above treatment.

INSPECTION AND TESTING

The Architect shall be given facilities for inspection of all works in progress whether in workshop or on site. The Contractor is to allow for testing of prototypes of special construction units and the Architect shall be at liberty to select any samples he may require for the purpose of testing, i.e. for moisture content, or identification, species, strength, etc.; such tests will be carried out by the Forestry Department

CLEARING UP

The Contractor is to clear out and destroy or remove all cut ends, shavings and other wood waste from all parts of the buildings and the site generally as the work progresses and at the conclusion of the work.

This is to prevent accidental borer infestation and to discourage termites and decay

WORKMANSHIP

All carpenters’ work shall be accurately set out in strict accordance with the Drawings and shall be framed together and securely fixed in the best possible manner with properly made joints; all brads, nails and screws, etc., shall be provided as necessary, directed and approved and the Contractors’ prices shall allow for all the foregoing.

All workmanship shall be of the best quality.

All Carpenters’ work shall be left with sawn surfaces except where particularly specified to be wrought.

DIMENSIONS

Dimensions of timber for Carpentry left with sawn faces shall comply with previous Clause specifying tolerances in thickness. Dimensions for wrought members shall be as described in “Joinery.”

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
JOINTING

All timber shall be as long as possible and practicable to eliminate joints. Where joints are unavoidable surfaces shall be in contact over the whole area of the joint before fastenings are applied.

No nails, screws, or bolts are to be fixed in any split end. If splitting is likely, or is encountered in the course of any work, holes for nails are to be prebored at diameter not exceeding 4/5th of the diameter of nails. Clenched nails must be bent at right angles to the grain.

Lead holes are to be bored for all screws. When the use of bolts is specified the holes are to be bored from both sides of the timber and are to be of the diameter D+ D/16, where D is the Diameter of the bolt. Nuts must be brought up tight but care is to be taken to avoid crushing of the timber under the washers.
JOINERY

GENERALLY

All Joiner’s work shall be accurately set out on boards to full size for the information and guidance of the artisans before commencing the respective works, with all joints, iron work and other works connected therewith fully delineated. Such setting out must be submitted to the Architect and approved before such respective works are commenced.

All joiners work shall be cut out and framed together as soon after the commencement of the building as is practicable but not to be wedged up or glued until the building is ready for fixing same. Any portions that warp, wind or develop shakes or other defects within six months after completion of all other work which may be affected thereby, all at the Contractors’ own expense.

All work shall be properly mortised, tenoned, housed, shouldered, dovetailed, notched, pinned, bradded, etc., as directed and to the satisfaction of the Architect and all properly glued up with the best quality glue. All horns to be cut off neat and square with back of jambs before incorporating into the walls. The feet of all door jambs are to be cut off square with the floor finish and are to be dowelled to the structure with steel dowels.

Joints in joinery must be specified or detailed, and so designed and secured as to resist or compensate for any stresses to which they may be subjected. All nails, sprigs, etc., are to be punched and puttied. Loose joints are to be made where provision must be made for shrinkage, glued joints where shrinkage need not be considered and where sealed joints are required. Glue for load-bearing joints or where conditions may be damp must be of the resin type. For non-load bearing joints or where dry conditions may be guaranteed case in organic glues may be used.

All exposed surfaces of joinery work shall be wrought and all arises “eased off” by planning and sandpapering to an approved finish suitable to the specified treatment.

DIMENSIONS

All joinery has been described by nominal sizes and a 3 mm reduction off specified sizes will be allowed for each wrought face except where described as finished sizes in which case joinery shall hold up full dimensions

FIXING JOINERY

All beads, fillets and small members shall be fixed with round or oval brads or nails well punched in and stopped. All larger members shall be fixed with screws. Brass screws shall be used for fixing of all hardwoods, the heads let in and pelleted over with wood pellets to match the grain.

Specifications

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
BEDDING FRAMES, ETC.

The Contractor's rates must include for bedding frames, sills, etc., in mortar or dressing surfaces of walls, etc., in lieu

PLUGGING CONCRETE AND WALLS

Round wood plugs shall not be used. All work described as plugged shall be fixed with screws to plugs formed by drilling concrete, walls, etc., with a proper tool of suitable size at 750mm spacing and filling the holes completely with “Philplug” rawl plastic or “Rawlplugs” in accordance with the manufacturer’s instructions. Alternatively, and where so agreed the Architect, hardwood dovetailed fixing clips, dipped in “Wolmanol” or “Celcure B” solution cut and pinned or bedded in cement mortar (1:3) may be used.

FIBREBOARD

Fireboard shall be 12 mm “Celotex”, or other equal and approved termite-proofed softboard, cut to panels with V-edges

PLYWOOD

Plywood shall be manufactured to comply with B.S. 1455 (Grades 1 or 2, Type INT for “Interior work”, type WBP for “exterior work”). Marine plywood shall comply with B.S. 1088.

Plywood shall be manufactured to comply with B.S. 1455 (Grades 1 or 2, Type INT for “Interior work”, type WBP for “exterior work”). Marine plywood shall comply with B.S. 1088.

BLOCKBOARD

Blockboard shall be laminated board to approval, and exposed edges shall be lipped with 20 mm hardwood.

CHIPBOARD

Chipboard shall be manufactured to comply with B.S. 5669.

PLASTIC SHEETING

Plastic sheeting shall be “Formica” sheeting 1.5 mm thick and securely fixed with approved type waterproof adhesive, and in the colours approved by the Architect

Specifications

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
SELECTED FOR CLEAR FINISH

All timber and joinery work described as selected for clear finish shall be executed by a specialized joinery firm. The name of the firm shall be submitted to the Architect before any works commence.

PROTECT JOINERY

Any fixed joinery which in the opinion of the Architect is liable to become bruised or damaged in any way, shall be completely cased and protected by the contractor until the completion of the works. The casing shall “consist of two layers of polythene sheeting or plywood coverings.

FLUSH DOORS

Semi-solid flush doors shall be manufactured to the thickness specified and consist of 100 mm wide framing all round with minimum 25 mm thick horizontal core battens at not more than 75 mm centres, pressure impregnated as described and bored with 15 mm diameter ventilation holes at 300 mm centres. Doors shall have two lock blocks and be faced both sides with 6 mm plywood and have 25 mm mahogany twice rebated lipping all round and otherwise be equal to the requirements of B.S. 459 Part 2A, and equal to an approved sample.

BOTTOM EDGES

Bottom edges of doors shall be painted with one coat of approved primer before fixing.

IRONMONGERY

All locks and ironmongery shall be fixed with screws, etc., to match. Before the woodwork is painted, handles shall be removed, carefully stored and refixed after completion of painting and locks oiled and left in perfect working order. All keys shall be labeled with the door reference marked on labels before handing to the Architect on completion.

PRICES TO INCLUDE

Prices of items hereafter shall include for the foregoing labours, etc., and in addition the prices for linear items are to include all internal and external angles, either mitred or tongued, all fair, fitted, stopped, notched or returned ends, all similar incidental labours and all short lengths.
METAL WORK

ALL MATERIALS

All materials shall be of the best quality, free from defects. The materials in all stages of transportation, handling and pilling shall be kept clean and damage from breaking, bending and distortion prevented.

STRUCTURAL STEELWORK

Materials and workmanship shall conform with the requirements of B.S. 449. Steel frames, trusses and purlins shall be carried out by a Nominated Sub-contractor.

NAILS, SCREWS AND BOLTS

Nails, screws and bolts shall be of best quality mild steel of lengths and weights approved by the Architect. Nails shall be to B.S 1202 and bolts to B.S. 916.

Bolts shall project at least two threads through nuts and all bolts passing through timber shall have washers under heads and nuts.

WORKMANSHIP

All work shall be carried out in the most workmanlike manner and strictly as directed by the Architect.

Welding shall be neatly cleaned off and units shall be prefabricated in the workshop wherever possible, the minimum of site welding being employed.

All screwed work shall have full internal and external threads and holes shall have been cleaned off. Countersinking must be concentric.

RAINWATER GOODS

Prices shall include for building in, casting in or cutting mortices for fastenings, all making good, jointing, short lengths and all extra joints in the case of fittings.

Specifications

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
METAL WINDOWS AND DOORS

Metal windows and doors shall be manufactured to B.S. 990 from hot rolled mild steel sections produced by reputable mills and to be of dimensions and weights laid down in B.S. 990. Where specified all casements and doors are to be made from heavy sections. Corners of frames are to be mitred and welded, and glazing bars, etc., either tenon riveted or welded into frames. Top-hung casements are to be hung on steel hinges and fitted with Bronze peg stays. Side-hung casements are to be hung on projecting hinges and fitted with bronze single point handle and cabin hook with concealed sliding stays.

FIXING METAL WINDOWS, DOORS, ETC.

The Contractor’s prices for fixing metal windows, doors, etc., shall include for assembling and fixing, including screwing to wood frames or cutting mortices for lugs in concrete or walling and running with cement mortar (1:4), bedding frames in similar mortar and pointing in mastic, bedding sills, transoms and Mullions in mastic, making good plaster around both sides, and fixing, oiling and adjusting all fittings and frames.

QUALITY OF MATERIALS AND WORKMANSHIP

The quality and workmanship of materials used in this contract shall conform to the requirements of the following British Standards:-

- B.S. 15 Mild steel for general structural purposes
- B.S. 449 The use of structural steel in building
- B.S. 4 p.2 Hot rolled steel sections
- B.S. 994 Cold Rolled Steel Sections
- B.S. 938 General requirements for the metal Arc welding of structural Steel
tubes to B.S. 1775
- B.S. 1856 General requirements for the metal Arc welding of mild steel.
- B.S. 639 Covered Electrodes for the Metal Arc Welding of Mild steel.

Materials may be required at any time to be tested in accordance with the British Standards listed above.

The cost of successful tests will be borne by the client, but the Sub-Contractor shall supply at his own expense test specimens when required. The cost of tests, which do not comply with the Standard, will be borne by the Sub-contractor.

Specifications

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
STRUCTURAL HOLLOW SECTIONS

All hollow sections are to be connected by electric welding.

For butt welds the fusion surface of each member must be properly aligned and prepared

ELECTRIC WELDING

All welding is to be in accordance with the requirements of B.S. 1856 and 938 and the electrodes shall comply with B.S. 639.

Fusion faces shall be free from irregularities, which could interfere with the welding material. These faces shall also be free from any deleterious material such as rust, grease or paint.

All welds shall be of the specified finished sizes and the sequence of the welding shall be carried out in a manner that will give minimum distortion to the welded parts.

Edges for welding shall be prepared by planning or machine flame cutting.

During welding all parts will be maintained in their correct position.

Welds shall be carried out with each run closely following the one prior with sufficient time between to allow for removal of slag.

Each run of weld is to be inspected and the Sub-contractor shall ensure that unsatisfactory welds are cut out or remade to the required standard.

The minimum size of fillet weld shall be 6 mm.

All completed welds shall have a regular and smooth surface. The weld material shall be solid with complete fusion throughout the weld and to the farecut metals.

Any defects shall be cut out or made good to approval.

External faces of butt welds to be ground smooth.

PAINTING

All steel is to be wire brushed and any loose scale, dirt or grease shall be removed before any painting is commenced. One coat of red oxide primer Type A to B.S. 2523 shall be applied at the shop.

Any damage to the priming paint shall be made good to the Architect’s satisfaction

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
PLASTERWORK AND OTHER FINISHING MATERIALS

CEMENT

The cement shall be as previously described in “Concrete Work”.

SAND

The sand shall be as described for fine aggregate but that for plastering shall be light in colour and well graded to a suitable fineness in accordance with the nature of the work in order to obtain the finish directed

LIME

The lime for plastering shall comply with B.S. 890 Class “A” for non-hydraulic lime and shall be as rich as obtainable and to approval. It must be freshly burnt and shall be slaked at least one month before being used by drenching with water, well broken up and mixed and the wet mixture shall be passed through a sieve of sixty-four meshes to the square inch. Lime putty shall consist of freshly slaked lime as above described, saturated with water until semi-fluid passed through a fine sieve; it shall then be allowed to stand until superfluous water has evaporated and it has become of the consistency of thick paste, in no case for a shorter period than one month before being used, during which it must be kept damp and clean and no portion of it allowed to become dry.

Alternatively, hydrated lime with 70% average calcium oxide content may be used and it must be protected from damp until required for use. It shall be soaked to a putty at least 24 hours before use.

LIME PLASTER

Lime plaster shall consist of a backing coat in cement, lime and sand (1:2:9) and a finishing coat of lime putty skim with 10% cement added

POLISHED GRANOLITHIC

Polished granolithic shall consist of one part cement (by volume) coloured light brown with an approved dye, to two parts (by volume) of metamorphic coral chippings graded from 6 mm down to 3 mm with not more than 15% to pass a No. 40 B.S. sieve

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
POLISHED TERRAZO

All terrazzo work shall be carried out by an approved Sub-contractor. Polished terrazzo shall consist of a first coat of cement and sand (1:3) and a 12 finishing coat of “Snowcrete” and marble chippings (1:2), coloured with cement stone No.1” colouring compound six in proportions of 1:10, compound to cement. The overall thickness will as specified in the measured work.

Where terrazzo paving is specified as incorporating especially selected large aggregate the thickness of the finishing coat shall be increased as required

VINYL ASHESIOS TILES

The vinyl asbestos floor tiles shall be 300 x 300 x 2 mm thick and shall comply with B.S. 3260. They shall be of selected pattern and colour from the “Marleyflex” Tile range or equal and approved.

GLAZED WALL TILES

White glazed wall tiles shall be size 150 x 150 x 6 mm thick, manufactured to comply with B.S. 1281.

QUARRY TILES

Quarry tiles shall be manufactured to B.S. 1286 type A and shall be chosen from the manufacturer’s standard colour range

PRECAST TERRAZO TILES

Precast terrazzo tiles are to be as manufactured by the Linotic Flooring Company Ltd., P.O Box 42290, Nairobi, or equal and approved.

ASHESTOS CEMENT PROMENADE TILES

Shall be as manufactured by Eternit Building Products Ltd

MARBLE GLOMERATE TILES

Marble glomorate tiles shall be as manufactured by the Linotic Flooring Company Ltd. All edges shall be square and faces polished, or equal and approved

BEDS AND BACKINGS

Beds and backings shall be composed of cement and sand in the volumetric proportions stated in the measured work.

Specifications

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
WORKMANSHIP

GENERALLY

All screeds and pavings shall be finished smooth, even and truly level unless otherwise specified and paving shall be steel troweled.

Rendering and plastering shall be finished plumb, square, smooth, hard and even, and junctions between surfaces shall be perfectly true, straight and square.

At the junction of all concrete work and block walling a 150 mm wide strip of expanded metal lathing must be included to avoid plaster cracks.

All surfaces to be paved or plastered must be brushed clean and well wetted before each coat is applied. All cement paving and plaster shall be kept continually damp in an interval between application of coats for seven days after the application of the final coat.

Where dubbing out is required, shall be composed of one-part cement to six parts of sand.

Partially or wholly set materials will not be allowed to be used or remixed. The plaster, etc., mixes must be used within two hours of being combined with water

SAMPLES

The Contractor shall prepare samples minimum one square metre of each of the screeds, pavings and plastering for the approval of the Architect, after which all work executed shall conform with the approved samples

LIME PLASTERING

Lime plastering shall be carried out in two coats having a total thickness of not less than 15 mm to walls and 10 mm to ceilings.

The first coat shall be troweled to a perfectly true and even surface and finished with a wood float, the surface being sprinkled with water from a brush during the process and before it has set thoroughly scratched to form a key. The finishing coat shall not be less than 1.5 mm thick, thoroughly worked with a steel trowel, sprinkled with water as before and be brought to a uniform smooth and hard surface

TYROLEAN RENDERING

Tyrolean rendering shall consist of trowelled backing coat in cement and sand mortar (1:4) gauged with 10% lime, to a thickness of 10 mm and a finishing coat of cement sand mortar (1:4) applied with an approved machine to a thickness of between 5 and 10 mm, to provide an even and uniform texture. Coloured cement or pigment is to be used if so directed by the Architect.

Specifications

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
GRANOLITHIC AND TERRAZO PAVING

Granolithic and terrazzo paving shall be spread and well compacted and given only sufficient trowelling to produce a perfectly level surface immediately after laying. When the granolithic or terrazzo has stiffened sufficiently so that a hard surface can be obtained without laitance, then the surface shall be machine ground to a perfectly even and smooth surface. On no account will dusting with neat cement to the surface be permitted.

VINYL TILLING

Vinyl asbestos floor tiles shall be stored and laid in accordance with the manufacturer’s written recommendations using a bitumen-based adhesive. The tiles shall be laid with butt joints straight both ways. Tilling shall start from centre of a room or area.

QUARRY TILING

Quarry tiles shall be bedded in 10 mm thick cement mortar (1:3) with 10 mm joint laid straight both ways. The joints shall be filled with cement mortar neatly flush pointed. The tiles are to be soaked in water before laying.

MARBLE TILES AND TERRAZO TILES

The tiles are to be bedded in 10 mm thick cement mortar (1:3) with fine butt joints. The surface is to be washed and polished on completion.

CERAMIC WALL TILES

Wall tiles shall be fixed with a cement-based adhesive with 3 mm wide joints straight both ways. When an area of tile is complete the joints should be grouted with white cement.

BEDS AND BACKINGS

Floor screeds shall not be laid in areas exceeding ten square metres during any period of 24 hours. As bays are formed steel edge strips must be used to retain the exposed edge of screed.

The thickness and mixes of the screeds shall be adjusted to suit the various top dressings and the contractor must first ascertain what finish is intended to each specified area before the work of laying screeds is put in hand.

Screeds shall be finished with a wood float for wood blocks and steel trowel for thermoplastic and similar tiles.

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
MAKING GOOD

All making good shall be cut out to a rectangular shape, the edges undercut to form a dovetail key and finished flush with the face of surrounding paving or plaster. Cut out and make good all cracks, blisters, and other defects and leave the whole of the work perfect on completion.

PRICES GENERALLY

In addition to the foregoing, prices of superficial items are to include for work in narrow widths, all linear labours, angles and arrises, all fair edges, for making good up or stopping to a line at the required level at top of skirting or dados where directed and for making good up to windows, door frames and similar.

The prices for all linear items unless otherwise measured are to include for all short lengths, angles and arises, mitres, and ends of every description.

Prices for paving are to include for adequate covering and protection during the progress of the works to ensure that the floors are handed over in perfect condition on completion.

Prices for all pavings and plastering, etc., shall include for hacking concrete surfaces and for raking out joints of walls 12 mm deep for cross-scoring undercoats to form a proper key.

Plastering on walls, generally shall be taken to include flush faces of lintels, beams, etc., in same.

PROTECTION

The Contractor’s rates for all finishings shall allow for adequate protection against damage by all following trades or any other causes, to the satisfaction of the Architect
GLAZING

GLASS

All glass shall be manufactured complying with B.S. 952, free from flaws, bubbles, specks and other imperfections.

Glass panes shall be cut to sizes to fit the openings with not more than 1.5 mm play all round and where puttied shall be sprigged to wood or clipped to metal frames.

Clear sheet glass shall be ordinary glazing (O.Q) quality. Polished plate glass shall be (G.G.) quality.

Anti-bandit glass shall be 9 mm thick laminated glass of approved type.

PUTTY

Putty for glazing in wood frames shall be composed of pure linseed oil and powdered whiting free for grittiness in accordance with B.S. 544 Type 1 in putty.

Putty for glazing in metal frames shall be quick hard-setting tropical putty specially manufactured for use with steel windows.

Rebates of metal frames receiving glass shall be prepared and treated with primer for putty prior to glazing and putty shall be primed ten days after glazing.

BEDDING STRIPS

Bedding strips shall be of plastic or wash-leather approved by the Architect and shall be cut to fit exactly the line of frame and beads.

ON COMPLETION

Remove all broken, scratched or cracked panes and replace with new to the satisfaction of the Architect. Clean inside and out with an approved cleaner. On no account shall windows be cleaned by scraping with glass.

Specifications

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
PLUMBING

EXECUTION OF THE WORKS

The works shall be carried out strictly in accordance with:

a) By-laws of the Local Authority
b) British Standard Code of Practice C.P. 301: 1971, Building Drainage
d) British Standard Code of Practice C.P. 304: 1968, Sanitary pipework
e) British Standard Code of Practice C.P. 305: 1974, Sanitary
g) All other relevant British Standard Specifications and Codes of Practice (hereinafter referred to as B.S. and C.P. respectively)
h) The working Drawings.
i) The Architects’ instructions.

EXTENT OF WORKS

The works include, unless otherwise specified, the supply, installation, testing and commissioning, and delivery up clean and in working order of the installations shown on the drawings and specified in the Specifications, including all details such as:

Cold and hot water pipes, discharge pipes, (the term discharge pipe is used as a comprehensive all-embracing description in place of the traditional soil and waste terms), drain and ventilating pipes, valves, firefighting installations and equipment, thermal insulation, etc., and all labour, materials, tools, instruments and scaffolding necessary to execute the work in a first-class manner.

The Contractor shall undertake all modifications demanded by the Authorities in order to comply with the current regulations and produce all certificates, if any from the Authorities without extra charge.

EXTENT OF THE CONTRACTOR’S DUTIES

At the commencement of the work, the Contractor shall investigate and report to the Architect the availability of all materials and equipment to be used in the work. If not available, the Contractor shall at this stage place orders for the materials in question and copy the orders to the Architect. Failure to do so shall in no way relieve the Contractor from supplying the specified materials and equipment in time.

The Contractor shall be responsible for verifying all dimensions relative to his work by actual measurements taken on the site.

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
RECORD DRAWINGS

During the execution of the works on the site the Contractor shall, in a manner approved by the Architect, record on working drawings and Contract Drawings all information necessary for preparing Record Drawings of the Installed Contract Works. Marked-up Drawings and other documents shall be made available to the Architect as he may require for inspection and checking.

Record Drawings may, subject to the approval of the Architect, include approved Working Drawings adjusted as a correct record of the installation of the Contract Works.

Record Drawings shall be prepared on approved translucent linen or plastic material suitable for reproduction by the Dyeline process or similar

MATERIALS AND WORKMANSHIP GENERALLY

All materials, equipment and accessories are to be new in accordance with the requirements of the current rules and regulations where such exist, or in their absence with the relevant B.S.

Uniformity of type and manufacture of equipment or accessories is to be preserved as far as practicable throughout the whole work.

The Contractor shall, if required by the Architect, submit samples of materials to the Architect for his approval before placing an order.

Where particular item is specified as a particular firm’s product “or similar” it is to be clearly understood that this is to indicate the type and quality of the equipment required. No attempt is being made to give preference to the equipment supplied by the firm whose name or products are quoted.

Where particular manufactures are specified herein, no alternative make will be considered, and the Architect shall be allowed to reject any other makes.

The Contractor will be entirely responsible for all materials, apparatus, equipment, etc., furnished by him in connection with his work, and shall take all special care to protect all parts of finished work from damage until handed over to the Employer.

The work shall be carried out by competent workmen under skilled supervision. The Architect shall have the authority to have any of the work taken down or changed, which is executed in an unsatisfactory manner.

TUBING GENERALLY

All tubing exposed on faces of walls shall, unless otherwise specified, be fixed at least 25 mm clear of adjacent surfaces with approved holderbats built into walls, cut and pinned to walls in cement mortar; where fixed to woodwork, suitable clips shall be used.

All tubing specified as fixed to ceilings, roofs or roof structures shall be fixed with approved mild steel hangers cut and pinned to ceilings, roofs or roof structures. Where three or more tubes are fixed to

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
ceilings, roofs or roof structures close to each other, they shall be fixed in positions, which leave the lower surfaces at the same horizontal level, unless otherwise specified.

Where insulated, tubing shall be fixed with the insulation at least 25 mm clear of adjacent surfaces and with at least the same clearance between insulated pipes.

Tube fixings and supports shall, if nothing else is specified, be arranged at intervals not greater than those given in the following tables:

**Mild Steel Tubing**

<table>
<thead>
<tr>
<th>Diameter of Pipe in mm</th>
<th>Maximum Spacing of Fixing in mm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Horizontal Runs</td>
</tr>
<tr>
<td>15</td>
<td>1,800</td>
</tr>
<tr>
<td>20</td>
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<tr>
<td>32</td>
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</tr>
<tr>
<td>40</td>
<td>3,000</td>
</tr>
<tr>
<td>50</td>
<td>3,000</td>
</tr>
<tr>
<td>65</td>
<td>3,600</td>
</tr>
<tr>
<td>80</td>
<td>3,600</td>
</tr>
<tr>
<td>100</td>
<td>4,000</td>
</tr>
</tbody>
</table>

**Unplasticised P.V.C. Pipes**

<table>
<thead>
<tr>
<th>Diameter of Pipe in mm</th>
<th>Maximum Spacing of Fixing in mm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Horizontal Runs</td>
</tr>
<tr>
<td>12</td>
<td>300</td>
</tr>
<tr>
<td>19</td>
<td>400</td>
</tr>
<tr>
<td>25</td>
<td>400</td>
</tr>
<tr>
<td>32-152</td>
<td>500</td>
</tr>
</tbody>
</table>

Each support shall take its due proportion of the weight of the tube or pipe and shall allow free movement for expansion and contraction.

Full allowance shall be made for the expansion and contraction of pipework, precautions being taken to ensure that any forces produced by pipe movements are not transmitted to valves, equipment or plant.

All tubing specified as chased into walls shall have the wall face neatly cut and chased, the tubing wedged and fixed and plastered over.

Where tubing is laid in trenches care shall be taken to ensure that fittings are not strained.

All water systems shall be provided with sufficient drain points 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 a position as to be difficult to reach from a short stepladder, extension spindles with

*Specifications*

*Proposed Space Optimization for Kenya Literature Bureau*

*Nairobi*
floor or wall pedestals shall be provided.

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.

All formed bends shall be made so as to retain the full diameter of the pipe.

Sleeves shall be provided where tubes pass through walls and solid floors to allow movement of the tubes without damage to the structure. The overall length of the sleeve shall be such that it projects at least 2 mm beyond the finished thickness of the wall or partition.

Tubing shall be cut by hacksaw or other method, which does not reduce the diameter of the tube or form a bead or feather, which might restrict the flow.

GALVANISED MILD STEEL TUBING

Galvanized mild steel tubing shall be in accordance with B.S. 1387: 1967 with screwed and socketed joints; medium-duty for pipes above ground, heavy-duty for pipes underground, cast into concrete or chased into walls.

Fittings for the same shall be galvanized malleable iron to B.S. 1940 : 1965, with threads to B.S. 21: 1957

Joints shall be made with fine hemp and an approved jointing compound or tape. Compound containing red lead must not be used.

Long screw connectors and flat-faced unions shall not be used, unless otherwise specified.

Where laid underground or cast in concrete, galvanized mild steel tubing shall be protected by “Densotape” or similar, wound on at least two layers thick, or given two coats of approved bitumen. Minimum earth cover to underground tubing shall be 450 mm.

Where chased into walls or cast in concrete, galvanized mild steel tubing carrying hot water shall be wrapped with hair felt secured by copper wire.

The fixing of galvanized mild steel tubing shall use: -

a) Malleable iron “schoolboard” pattern brackets for building in or for screwing to structure, OR.

b) Malleable iron pipe rings, with either back plate, plugs or girder clips; OR

c) Purpose-made straps to the Architects’ approval.
UNPLASTICISED P.V.C. PIPES

Unplasticised p.v.c. Discharge and ventilating pipes and fittings shall be to B.S. 4514: 1964, Grade 2.

U.P.V.C ventilating pipes passing through roofs shall terminate at least 300 mm above the roof level and shall be protected against insect penetration by a copper wire mosquito-proof balloon grating securely bound on the top of the pipe with stout copper wire.

Joints of U.P.V.C discharge and ventilating pipes shall be spigot and socket joints which incorporate synthetic rubber rings or they shall be closely fitting spigots and sockets jointed together by means of a solvent solution provided by the pipe maker.

Joints of U.P.V.C. discharge and ventilating pipes to cast iron drain pipes shall be by means of purpose-made cast iron sleeves jointed with tarred yarn and fibrous lead yarn properly caulked into the wetted sockets. Joints to pitch fibre drainpipes shall be made with approved adaptors.

The fixing of U.P.V.C. pipes shall use holderbats of metal, or plastic-coated metal, care being taken that they do not damage the pipe when tightened. Where anchor points are specified to control thermal movement, the holderbats fitted to the pipe barrel shall be such as to allow thermal movement to take place.

At the foot of all U.P.V.C. Ventilating stacks and where shown on the Drawings and in other positions as directed or necessary for cleaning, inspection pipes with door shall be provided, with a bolted oval recess door, shaped internally to bore of pipe.

VALVES, COCKS, TAPS, ETC.

Draw-off taps and stop valves shall comply with B.S. 1010: 1959.

Brass ball valves shall comply with B.S. 1212: 1953 and copper floats for ball valves shall comply with B.S. 1968: 1953, and plastic floats for some shall comply with B.S. 2456: 1954

Sluice valves shall comply with B.S. 1218: 1946
Gate valves on main supply shall comply with B.S. 3465

Manually operated mixing valves for ablutionary and domestic purposes shall comply with B.S. 1415:1955

Drain taps shall comply with B.S. 2879: 1957

Safety valves, stop valves and other safety fittings for air receivers and compressed air installations shall comply with B.S. 1123: 1961

Safety valves for thermal storage water heaters shall comply with B.S. 959: 1967

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
THERMAL INSULATION

Thermal insulating material for hot and cold-water supply installation shall conform to B.S. 1334: 1966, unless otherwise specified. The Contractor shall ensure that the thermal insulating materials used conform to the requirements of the Local Fire Authority.

All thermal-insulating materials shall be delivered to the site in a dry condition and housed in a store until drawn upon for use.

All surfaces to be insulated shall be cleaned carefully before fixing the insulating material.

The installation of insulating materials shall be entrusted only to operatives skilled in the work. All insulating material, however fixed, shall be in close contact with the surface to which it is applied, and all joints shall be sealed after ensuring that edges or ends of any section are built up close to one another. Edges or ends shall be cut or sharpened on site as necessary. Supporting bands shall be either non-corrodible material or adequately protected against rust.

Each pipe or item shall be insulated separately.

Fixing of insulating material shall suit the progress of other installation works in the building.

Insulation, where pipes are fixed exposed, shall be pre-formed rigid sections with approved finish. Where pipes are fixed in close ducts, above false ceilings, etc., mats cut in suitable sections on the site shall be used, well secured with copper or galvanize wire, finally covered with asphalt roofing paper.

Where subject to outside weather or other potentially damp or wet conditions, the insulation shall be adequately protected against moisture pick-up.

If nothing else is specified, the minimum thickness of insulating material for cold and hot water pipes shall be as specified in B.S. 1588: Table 1.

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
SANITARY APPLIANCES

The installation of sanitary appliances shall be in accordance with C.P. 305: 1952 and B.S. 3202: 1959

The appliances shall be fixed in the positions shown on the Drawings or as directed by the Architect.

For all sanitary appliances, the necessary number of supports, brackets, plugs, screws, washers, jointing materials, etc., shall be provided.

Where supports, brackets etc., are screwed to wall or structures, “Raw plugs” or similar shall be used.

No traps for any appliance whatsoever shall have a seal less than 75 mm.

Fixing shall, if required by the Architect, include for temporarily erecting appliances in the required position of service and discharge pipes, taking down, storing and permanently fixing after completion of wall finishing and connecting to service and discharge pipes.

Care shall be taken at all times and particularly after fixing, to protect appliances from damage.

Upon completion of the work, all appliances shall be cleaned of plaster, paint, etc., and carefully examined for defects.
FIRE FIGHTING EQUIPMENT

The specified firefighting equipment shall be supplied and installed by the Contractor in the position shown on the Drawings.

Portable fire extinguishers shall comply with the following B.S.:

a) Water type (Soda acid) - B.S. 138: 1948
b) Foam type (Chemical) - B.S. 740: Part 1: 1948

FIRE HOSES AND EXTINGUISHERS

c) Foam type (gas pressure) - B.S. 740: Part 2: 1952
d) Water type (gas pressure) - B.S. 1382: 1948

e) Halogenated hydrocarbon type (Carbon tetrachloride and Chlorobromomethane) - B.S. 1721: 1968
f) Carbon dioxide type - B.S. 3326: 1960
g) Dry powder type - B.S. 3465: 1962

h) Water type (stored pressure) - B.S. 3709: 1964

Fire hose couplings and ancillary equipment shall comply with B.S. 336: 1965

Hose reels: Hoses to be 20 mm reinforced red rubber canvas double braided, to comply with B.S. 3169: 1970. Waterway pressure castings machined throughout. Hose plates 560 mm diameter steel. Inlet valve with inlet screwed ¾” B.S.P. Controllable plastic jet spray pattern and shut-off. Test pressure: 2.5 kg/Square Centimetre. Finish fire red.

The installation of fire extinguishers shall be in accordance with C.P. 402: Part 3: 1964

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
TESTING

The whole of the water and discharge installation shall be tested to the satisfaction of the Architect and the Local Authority. The Contractor shall provide all necessary testing apparatus and facilities for testing the installations and any defective work shall be replaced immediately and shall be the subject of re-testing until found satisfactory.

Where pipes are to be lagged, chased into walls or otherwise concealed, the work shall be tested prior to lagging, making good chases, etc.

All hot and cold water installations shall, if nothing else is specified, be tested to 1.5 times normal working pressure, minimum 4 kg/cm squared, and compressed air systems tested with minimum 10 kg/cm squared.

The test pressure shall be applied by means of a manually-operated test pump or in case of long mains or mains of large diameter, by a power-driven test pump. Pressure gauges shall be recalibrated before the test.

The test pressure shall be maintained by the pump for about one hour and a leak as specified in C.P. 310, Section 502 J, shall be approved, but any visible individual leak shall be repaired.

Valves, cocks and taps shall be absolutely tight under the test pressure for the corresponding pipes as well as under a small pressure.

Testing of discharge pipes shall be carried out in accordance with C.P. 301: 1950

Tests shall, if necessary be done in sections as work proceeds without extra payment.

All tests shall be carried out in the presence of a representative of the Local Authority and/or the Architect or his representative.

Upon completion of the work, including re-testing if necessary, the installation shall be thoroughly flushed out.

STERILISATION OF WATER SUPPLY PIPES

Sterilization shall be carried out strictly in accordance with C.P. 310: 1965. The sterilization will not be approved unless the final test for residual chlorine mentioned in the above C.P. proved positive.
COMMISSIONING

Before handing over, the Contractor shall confirm the Installation has been examined, tested, is ready for use, that it will operate and can be maintained efficiently.

When handing over, the Contractor shall demonstrate to the Employer the methods of operation, limitations, and the maintenance requirements and safety precautions to be observed; and shall also hand over any tools for operating, cleaning, testing and maintenance of the installation.

MEASUREMENT

Prices for tubing shall include for all short lengths and sockets. Connectors, elbows, bends, formed bends, tees, reducing pieces and other fittings are measured separately and are to include for any extra joints and other extra labour required. The prices for the reducing tees shall include for any extra reducing pieces which may be required if the correct reducing tee is not available.

All pipes have been measured over all bends, tees and other fittings and the Contractor shall include in his prices for all cutting and waste
DRAINAGE

SETTING OUT

Lines of drains shall be accurately set out and trenches excavated, and bottoms trimmed to accurate gradients to approval before pipe laying commences.

DRAIN TRENCHES

Excavation shall be made to such depths and dimensions as may be required by the Architect to obtain proper falls and firm foundations. No permanent construction shall be commenced on any bottom until the excavation has been examined and approved by the Architect. Should the Contractor in error, or without the instructions of the Architect, make any excavation below the required level of the drain or bed, as the case may be, he will be required to refill such excavation to the correct levels with class 15 concrete at his own expense.

Prices for excavation must include for excavating in all materials met with and for trimming bottoms to the necessary falls and for any extra excavation required for planking and strutting and working space, all as described under “Excavation”. Excavation in hard rock requiring the use of the compressors or wedging is measured separately.

KEEP EXCAVATION DRY

The Contractor shall keep the whole of the trenches or other excavations free from water, and he shall execute such works and install such pumps as may be required to keep the excavations dry at all times. No sub-soil water shall be discharged into the sewers without the written permission of the Architect.

UPVC DRAIN PIPES AND FITTINGS

UPVC drain pipes and fittings shall comply in all respects with B.S. 4660, golden brown in colour and with jointing by lip seal socketed fittings. The natural rubber for lip seal joints shall be to B.S. 2494.

Laying and jointing shall be carried out strictly in accordance with the manufacturer’s instructions. Pipe barrels shall be continuous contact with the trench bed when laid.

All materials for bed and side fill to UPVC drain pipes shall be hard granular material passing 20 mm sieve containing not more than 5% fines passing 3 mm sieve, composed of crushed stone, quarry waste, ballast or gravel with a compaction factor of 0.3 or less.

CAST IRON DRAIN PIPES

Cast iron drainpipes shall be coated cast iron spigot and socket pipes conforming to B.S. 437 in all respects and with fittings to B.S. 1130. Pipes shall be jointed with asbestos yarn and caulked with molten lead or jointed with special jointing compound, all to approval.

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
SPUN CONCRETE CYLINDRICAL DRAINPIPES AND FITTINGS

Spun concrete drainpipes shall be to B.S. 556, Part 2, of approved manufacture.

Flexibly jointed pipes shall have spigot and socket joints made with rubber joint rings to B.S. 2494, Part 2.

Rigidly jointed pipes shall have spigot and socket joints made with proprietary rubber gasket or three turns of tarred gasket or talled yarn caulked to not more than one quarter or the socket joint and cement mortar 1:2 struck off at 45 degrees.

UPVC DRAINPIPES AND FITTINGS

UPVC drain and fittings shall be to B.S. 4660 of approved manufacturer, with leap seal socketed joints, laid strictly in accordance with the manufacturer’s instructions.

BACKFILLING

The first backfilling of pipe trenches is to be of soft material free from stones and shall be watered and carefully tamped over and around the pipes in 300 mm layers until they are covered to a depth of 600 mm. Subsequent filling is to be in 150 mm layers, watered and rammed. Only materials approved by the Architect are to be used as backfilling.

Where hardcore is used for backfilling it is not to exceed 150 mm gauge and all interstices shall be properly filled with small pieces and fine binder. Surplus excavated materials are to be removed from the site.

If, in the opinion of the Architect, care has not been exercised in refilling trenches, he may order a fresh test to be made on the drain. In the event of the drain failing to pass the test of the Contractor will be required to remedy the fault at his own expense.

CONCRETE BEDS AND SURROUNDS

Concrete beds and surrounds shall be Class 25 concrete to the thickness and widths specified.

Where pipes are specified to be haunched, the concrete shall be carried up from the outside edge of the bed to meet the pipe barrel tangentially.

Where pipes are specified to be surrounded, the concrete shall be carried up from the bed in a square section with a minimum of 150 mm in thickness over the barrel of the pipe.

Rates for beds and surrounds shall include for forming recesses and filling with concrete, for mortar layer, etc., and for any necessary formwork.

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
LAYING PIPES

Each pipe shall be carefully examined on arrival; any defective pipes shall be removed immediately from the site and not used in the works. Minor damage to the protective coating of cast iron pipes shall be made good by painting with hot tar; if major defects in the coating exist, such pipes shall be rejected and removed from site.

Drains shall be laid in straight lines and to even gradients as required and to the satisfaction of the Architect.

Great care shall be exercised in setting out and determining the levels of the pipes and the Contractor shall provide suitable instruments and set up and maintain all straight rails, boning rods and bench marks, etc.,

All drains shall be kept free from earth, debris, superfluous cement and other obstructions or water during laying until completion of the contract when they shall be handed over in a clean condition.

Pipes shall be laid with sockets leading uphill and shall rest on solid and even foundations for the full length of the barrel. Socket recesses shall be formed in the foundation, as short as practicable but sufficiently deep to allow the pipe jointer room to work right round the pipe. Such recesses shall be filled with cement mortar (1:4) on completion of laying.

INSPECTION CHAMBERS

Inspection chambers shall be constructed in the positions indicated on the Drawings or as required by the Architect. Such chambers shall be to the depths required to obtain even gradients in the drain and of sufficient size to contain the requisite main channel and any branches thereto and all to the entire satisfaction of the Architect and the Local Authority.

Rendering shall be trowelled smooth, coved at all internal angles and rounded on arrises.
TESTING

Each length of drain and manhole shall be tested as described hereinafter and approved by the Engineer before any backfilling of the trench takes place.

Testing shall not be carried out until at least 12 hours have elapsed after the jointing of the last pipe.

The test shall be as follows: -

(i) The lower end of the pipe and all junctions shall be securely stoppered and the whole length under test filled with water.

(ii) When full, a further stopper shall be inserted at the top leaving a pipe attached to the drain plug. This pipe shall be bent through 90 degrees and shall terminate in a header tank 225 mm square. The vertical distance between the centre line of the drain plug and the top of the header tank shall be not less than 900 mm.

(iii) Water shall then be poured into the header tank, which shall be kept full for a minimum period of 3 hours to allow absorption to take place. At the expiration of this period the header tank shall be topped up and the testing of the drain commenced. If, after a further period of 30 minutes, the water level in the header tank has not fallen by more than 2 mm the test will be considered satisfactory.

(iv) In the event of a pipe failing to withstand the test, the point of failure shall be completely surrounded, at the Contractors’ expense, with Class 25 concrete 19 mm maximum aggregate, so that there is a minimum cover of 150 mm in all directions. The length shall then be re-tested.

(v) Immediately a length of drain has been approved the trench shall be backfilled for a depth of at least 300 mm above the top of the pipes.

GULLEYS

Gulleys shall be approved 100 mm salt glazed stoneware or cast iron trapped gulleys with 150 x 150 mm cast iron gratings to receive the wastes from waste fittings. Bed the gulley on and surround with Class 25 concrete 100 mm thickness, carried up to form a 75 x 75 mm kerb with all exposed surfaces finished in cement and sand (1:2) trowelled hard and smooth and all angles rounded. Make good cement joint to drain pipe and run drain to adjacent manhole.

MEASUREMENT

Drain pipes have been measured over all bends, junctions and other fittings, and the Contractor shall include in his prices for all joints, short lengths, cutting and waste. Prices for bends, junctions, etc., shall include for the extra joints, cutting and waste and any extra labour required.

Specifications

*Proposed Space Optimization for Kenya Literature Bureau*

*Nairobi*
PAINTING AND DECORATING

APPROVED SPECIALIST

An approved Specialist must execute all work under this trade.

GENERALLY

The Contractor shall so arrange his programme of work that all other trades are completed and away from the area to be painted, when painting begins. Before painting the Contractor must remove all concrete and mortar droppings and the like from all work to be decorated and remove all stains from and obtain uniform colour to work to be oiled and polished.

All plaster, metal, wood or other surfaces that are to receive finishes of paint, stain, polish, distemper or paintwork of any description are to be carefully inspected by the Contractor before he allows any of his painters to commence work. The Contractor will be held solely responsible for all defective work condemned as a result of his Painters’ failure to insist on receiving from the other trades surfaces in the proper condition to allow first-class finishes of the various kinds specified being applied to them.
PAINTING GENERALLY

All materials are to be of the best quality and shall be of an approved proprietary brand selected from the latest Schedule of Approved Paints issued by the Ministry of Works.

All materials to be applied externally shall be of exterior quality and/or recommended by the manufacturers for external use.

All materials shall be delivered on Site intact in the original sealed drums or tins and shall be mixed and applied strictly in accordance with the manufacturers’ instructions and to the approval of the Architect.

Unless specially instructed or approved by the Architect, no paints, distemper, etc., are to be thinned, or otherwise adulterated, but are to be used as supplied by the manufacturers and direct from the tins.

If required by the Architect the Contractor is to provide at his own expense samples of paints, etc., with containers and cases to be forwarded carriage paid by the Contractor for analysis to a laboratory.

The priming, undercoats and finishing coats shall each be of differing tints and the priming and undercoat shall be the correct brands and tints to suit the respective finishing coats, in accordance with the manufacturer’s instructions. All finishing coats shall be of colours and tints selected by the Architect. Each coat must be approved by the Architect before the next coat is applied.

Each coat shall be properly dry and in the case of oil or enamel paints shall be well rubbed down with fine glass paper before the next coat is applied. The paintwork shall be finished smooth and free from brush marks.

Colour cards of all paints, etc., shall be submitted to, and samples prepared for approval of the Architect before laying on, and such samples, when approved, shall become the standard for work.

All paints, emulsion paints, and distempers shall be applied by means of a brush or spray gun or rollers of an approved type, where so agreed by the Architect.

No painting is to be done in wet weather or on surfaces, which are not thoroughly dry.

Prices of paint, distemper, etc., shall include for preparation of surfaces, rubbing down between each coat, stopping, knotting, etc., and all other work in connection and as described and as necessary to obtain a first-class and proper finish to approval.

Emulsion paint on ceilings and all undercoats of emulsion paint and complete oil painting on walls shall be completed before thermoplastic flooring laid. Final coats of emulsion paints on walls shall be applied after such flooring has been laid complete.
SAMPLES

The Contractor shall furnish at the earliest possible opportunity before work commences and at his own cost, samples of painting for the Architects’ approval and any further samples in case of rejection until such samples are approved by the Architect and such samples, when approved, shall be the minimum standard for the work to which they apply.

The Architect may reject any materials or workmanship not in his opinion up to the approved sample, and these must be removed from the site without delay.

WOOD PRESERVATIVER

All woodwork in contact with waling of plaster shall be treated after cutting and preparation but before assembly or fixing with one coat of “TIMCIDE” wood preservative manufactured by Timsales Ltd., P.O Box 18080, Nairobi. The solution is to be brushed on all faces of all timbers, unless exposed to view and painted.

The Contractor shall note that this solution is POISONOUS and shall take all necessary precautions and instruct his workmen accordingly

WAX POLISH

Wax polish shall be furniture polish of an approved brand and wood surfaces shall be clean, smooth, and free from oil or grease or any other blemishes. A minimum of two coats shall be applied to approval.

PREPARATION AND PRIMING OF PLASTER, ETC., SURFACES

Plaster surfaces shall be perfectly smooth, free from defects and ready for decoration. All such surfaces shall be allowed to dry for a minimum period of six weeks, stopped with approved plaster compound stopping and rubbed down flush, as necessary, and then be thoroughly brushed down and left free from all efflorescence, dirt and dust immediately prior to decorating.

Plaster surfaces which are to be finished with emulsion, oil or enamel paint, shall be primed with an alkali resisting primer complying with the particular paint manufacturer's specification and applied in accordance with their instructions.

Fibreboard or similar surfaces shall be lightly brushed down to remove all dirt, dust and loose particles and have all nail holes or other defects stopped with an approved plaster compound stopping rubbed down flush and left with a texture to match surrounding material and shall receive on coat petrifying liquid as last

Specifications

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
PREPARATION AND PRIMING OF METAL, ETC

All surfaces shall be thoroughly brushed down with wire brushes and scapped where necessary to remove all scale, rust, etc., immediately prior to decorating. Where severe rust exists and if approved by the Architect a proprietary de-rusting solution may be used in accordance with the manufacturer’s instructions.

Shop-primed and unprimed surfaces shall be given one coat of metal chromate primer.

Galvanized surfaces already treated with bituminous solution shall be scraped to remove soft parts and then receive two isolating coats of aluminum primer or other approved anti-tar primer.

PREPARATION AND PRIMING OF WOODWORK

All woodwork shall be rubbed down, all knots covered with a thick coat of good shellac or aluminum knotting; primed with one coat of approved ready-mixed proprietary wood primer and all cracks, nail holes, defects and uneven surfaces, etc., stopped and faced with hard stopping rubbed down flush.

PREPARATION OF PREVIOUSLY PAINTED METAL SURFACES

Thoroughly wash down with water containing an approved cleansing agent and rinse with clean water. Wire brush to remove all rust and loose paint and touch up bare patches with Zinc-rich primer.

PREPARATION OF PREVIOUSLY PAINTED WOODWORK

Thoroughly wash down with water containing an approved cleansing agent and rinse with clean water. Lightly rub down with glass paper and prime and bring forward all bare patches for decoration.

PREPARATION OF PREVIOUSLY PAINTED PLASTER, ETC., SURFACES

Thoroughly wash down with water containing an approved cleansing agent and rinse with clean water. Cut out small cracks and other blemishes and fill with an approved plaster compound stopping rubbed down flush. Bring forward all bare patches for decoration.

EMULSION PAINT

After preparation as specified above a minimum of THREE coats, unless otherwise specified, shall be applied using a thinning medium of water only if and as recommended by the manufacturer.

An approved plaster primer tinted to match may be substituted for the first coat in three-coat work.

ENAMEL PAINT

Apply two undercoats and one finishing coat, after preparation and priming as specified above.

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
CLEAR POLYURETHANE VARNISH

Surfaces are to be treated with “Ronseal” or other equal and approved, in three coats. The first coat is to be applied with a linen pad and well rubbed in and second and successive coats are to be applied by brush. The first and second coats are to be lightly rubbed with Grade ‘O’ and Grade ‘OO’ wire wool respectively.

POLYURETHANE CLEAR LACQUER

To be applied strictly as per the manufacturer’s instructions.

IRONMONGERY

All ironmongery shall be removed from joinery, steel windows and louvers before painting is commenced, and shall be cleaned and renovated if necessary and refixed after completion of painting.

PAINTING ITEMS

Painting items, as billed hereafter shall include for preparing all priming surfaces as above described.

COVER UP

Cover up all floors, fittings, etc., with dust sheets when executing all painting and decorating work.

CLEAN AND TOUCH UP

Paint splashes; spots and stains shall be removed from floors, woodwork, etc., any damaged surfaces touched up and the whole of the work left clean and perfect upon completion.

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
EXTERNAL WORKS

DRIVEWAY AND PARKING AREAS

EXCAVATIONS

Excavations to areas to receive bitumen macadam or other road or paved finish shall be carried out in a manner ensuring that excavation plant and vehicles do not cause shear failure more than 250 mm in the sub-grade. Wheel loads and tyre pressures shall be limited and work shall be interrupted to let the sub-grade dry out as necessary to avoid such sub-grade failure

COMPACATION

The Sub-grade shall be compacted by a smooth-wheeled roller of 8 to 10 tons weight or vibrating roller of minimum 1,300 kg., or other approved plant. The number of coverages shall be at least 10 and there shall be a 50% overlap of successive coverage’s. If so instructed by the Engineer, water shall be added during compaction to obtain optimum water content. Filling shall be compacted as above but in maximum 200 mm deep layers

SUB-GRADE SURFACE FINISH

The surfaces of the sub-grade shall be finished to the levels, falls and cross falls shown on the Drawings within the following tolerances: -

(i) The level shall not be above and not more than 50 mm below the level shown on the drawings.

(ii) The falls shall be within 10% of the falls shown on the Drawings.

(iii) The smoothness shall be such that departures from a 3 metre straight edge laid in any direction shall not exceed 50 mm and there shall be no ponding of water.

COARSE AGGREGATE

Coarse aggregate for the base shall be crushed stone or rock conforming to the following requirements: -

(i) It shall be from sound, hard, igneous rock, limestone, quartzite or hard coral, and shall be free from weathered or disintegrated stone, clay, organic or other foreign matter.

(ii) The shape shall be roughly cubical and the grading shall conform to: -

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>75 mm</td>
<td>100%</td>
</tr>
<tr>
<td>38 mm</td>
<td>20-80%</td>
</tr>
<tr>
<td>19 mm</td>
<td>0-20%</td>
</tr>
</tbody>
</table>

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
CRUSHER DUST

Crusher dust shall mean material in accordance with the table for 5 mm nominal maximum size below.

<table>
<thead>
<tr>
<th>B.S. Sieve Size</th>
<th>Percentage Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 mm</td>
<td>100</td>
</tr>
<tr>
<td>No. 7</td>
<td>80 - 100</td>
</tr>
<tr>
<td>No. 14</td>
<td>50 - 80</td>
</tr>
<tr>
<td>No. 25</td>
<td>30 - 60</td>
</tr>
<tr>
<td>No. 52</td>
<td>20 - 45</td>
</tr>
<tr>
<td>No. 200</td>
<td>10 - 25</td>
</tr>
</tbody>
</table>

Notes:
(i) Not less than 10% shall be retained between each pair of successive sieves specified for use, excepting the larger pair.

(ii) The material passing the No. 36 sieve shall have the following characteristics (B.S. 1377):

- Liquid limit not exceeding 25%
- Plasticity index not exceeding 8%

CRUSHER FINES

All materials in crusher fines shall pass the 13 mm B.S. sieve and be retained on the No. 25 B.S. sieve, evenly graded with no excess of any size

SUB-BASE

The material for use in the sub-base shall consist of crusher dust as described, or other approved material. It shall be placed in one layer of such thickness that when compacted it shall attain the finished thickness shown on the Drawings. The material shall be watered as necessary and compacted as described. The sub-base material shall have a CBR value (unsoaked) of not less than 25
BASE

The materials for use in the basecourse shall consist of one layer of coarse aggregate as described of which the interstices are filled with fine material consisting either of crusher dust or a mixture of crusher fines. The proportions of crusher dust and crusher fines in the fine material shall be such as to obtain the maximum density of basecourse when compacted.

The procedure for construction shall be as follows: The coarse aggregate shall be placed in a layer of such thickness so as to obtain the required thickness after compaction. It shall then be compacted lightly until the Engineer is satisfied that a layer true to shape and level has been obtained. The fine material shall then be spread over the layer by hand or by mechanical means. The application of fine materials shall be made gradually in successive layers not exceeding 25 mm in thickness and each layer shall be worked into the voids in the coarse aggregate before the application of the succeeding layer. The fine material shall be laid as described and brushed into the coarse aggregate and rolled and consolidated by an approved vibrating roller to feed fines to the bottom of the layer.

Additional blinding material shall be applied as above until the surface will accept no more. In no case shall the blinding material be applied so thickly that it cakes or bridges on the surface in such a manner as to prevent the direct bearing of the roller or other compacting plant on the stones.

Final compaction shall be an 8 - 10 tonnes smooth wheeled roller until there is no visible movement under the action of the roller and until the required tolerances are achieved. Water may be applied during final compaction subject to the Engineer’s approval.

Compaction shall in any case achieve 100% maximum dry density in accordance with B.S. 1377.

QUARRY WASTE

Quarry waste shall mean material to the same specification as crusher dust, except as follows: -

(i) The plasticity index taken on material passing the No. 36 sieve shall not exceed 16%.
(ii) The material may have up to 35% of stones not larger than 38 mm, provided that the material passing the 5 mm sieve is within the limits specified.

Quarry waste shall be clean and completely free from earth, organic or other foreign matter.

Specifications

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
BASECOURSE FINISH

The surface of the basecourse shall be finished to the levels, falls and crossfalls shown on the Drawings subject to the following tolerances:

(i) The level shall be within + 0 or - 12 mm of the levels shown on the Drawings.
(ii) The falls shall be within 10% of the falls shown on the Drawings.
(iii) The smoothness shall be such that departures from a 3 metre straight edge laid in any direction shall not exceed 12 mm.

The surface of the basecourse shall be inspected and approved by the Engineer before bitumen paving is commenced.

BITUMEN PRIMING COAT

Immediately before applying the priming coat, the surface of the basecourse shall be brushed free from dust and loose stones. The material for the priming coat shall be cutback bitumen of M.C.O. grade or other approved.

Approximately 30 minutes before applying the priming coat the surface of the basecourse should be made slightly damp by use of a water spray. The priming coat shall be applied at a temperature of 100 - 150 degrees Fahrenheit and at a rate of 0.60 litres per square metre.

After application of the primer, a period of at least two days shall elapse before the road surfacing is applied. During this period all traffic shall be kept off the treated surface.

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
BITUMEN MACADAM SURFACING

A single course open graded premix of 30 mm to 40 mm compacted thickness shall be used with a seal coat.

Course aggregate shall be crushed black trap with particles having a cubicle shape to the Engineer’s approval and shall be washed free from dust.

The course aggregate grading shall be:

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Percentage Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>19 mm</td>
<td>100</td>
</tr>
<tr>
<td>13 mm</td>
<td>60 - 100</td>
</tr>
<tr>
<td>10 mm</td>
<td>45 - 70</td>
</tr>
<tr>
<td>6 mm</td>
<td>30 - 50</td>
</tr>
<tr>
<td>4 mesh</td>
<td>25 - 40</td>
</tr>
<tr>
<td>8 mesh</td>
<td>15 - 25</td>
</tr>
<tr>
<td>200 mesh</td>
<td>2 - 5</td>
</tr>
</tbody>
</table>

The binder shall be shellmac MC/RC2 or other approved. The percentage by weight of binder shall be 4.5%. Mixing shall be in an approved mixer and mixing shall proceed until the stone is evenly coated with binder. The temperature (at mixing) shall be within the following range:

<table>
<thead>
<tr>
<th>Aggregate</th>
<th>Binder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixing Temperature</td>
<td>500 - 95 Fº</td>
</tr>
</tbody>
</table>

The laying temperature shall be not less than 20 F below the mixing temperature.

The mix shall be spread evenly over the primed surface and shall be thoroughly compacted by rolling with a minimum of 6 passes. A smooth wheeled roller of not less than 5 tonnes weight and with rear wheel loading of 0.25 Kg. Per square millimeter width shall be used.

ROLLING

Any longitudinal joints shall be rolled first, after which rolling shall start longitudinally at the side and proceed towards the centre of the carpet. Each pass of the roller shall overlap the preceding one by at least one half width of the rear wheel. Alternate passes of the roller shall be of varying length. Immediately following initial compaction, the surface shall be checked with a straight edge to ensure that it meets the surface finish requirements. Minor variations shall be corrected by rolling, but major imperfections shall be compacted by adding or taking away mix while it is still workable.

Specifications

Proposed Space Optimization for Kenya Literature Bureau

Nairobi
SURFACE FINISH

The surface of the bitumen macadam shall be finished to the levels, contours and slopes shown on the Drawings with the following tolerances:-

(i) The level shall be within + or - 6 mm of the level shown on the Drawings.
(ii) The gradient shall be within 10% of the gradient shown on the Drawings.
(iii) The smoothness shall be such that departures from a 3 metre straight edge laid in any direction shall not exceed 6mm.

SEAL COAT

The seal coat shall consist of precoated fines consisting of crushed blackstrap stone graded from 3 mm to dust, or coarse sand. The binder shall consist of 4.5% by weight of MC/RC2. The seal coat shall be spread and brushed into the macadam surface at the rate of 180 square metres per tonne and compacted by rolling as for the macadam.
FENCING

CONCRETE POSTS AND STRUTS, GENERALLY

Concrete posts and struts shall be manufactured to B.S. 1722: Part 1, Appendix A by an approved manufacturer, using concrete Class 20 (10 mm) and reinforced in accordance with the following table:

<table>
<thead>
<tr>
<th>Description</th>
<th>Reinforcement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intermediate post not exceeding 2450 mm</td>
<td>4 No. 6mm bars</td>
</tr>
<tr>
<td>Intermediate posts exceeding 2450 mm</td>
<td>4 No. 8mm bars</td>
</tr>
<tr>
<td>Straining posts not exceeding 2450 mm</td>
<td>4 No. 8mm bars</td>
</tr>
<tr>
<td>Straining posts exceeding 2450 mm</td>
<td>4 No. 10mm bars</td>
</tr>
<tr>
<td>Struts not exceeding 2450 mm</td>
<td>4 No. 6mm bars</td>
</tr>
<tr>
<td>Struts exceeding 2450 mm</td>
<td>4 No. 8mm bars</td>
</tr>
</tbody>
</table>

Bars shall be made up into cages with 12 swg stirrups at centres not exceeding 380mm. Bars shall extend to 25 mm from the end of the post or strut and have minimum cover of 16 mm.

CONCRETE POSTS AND STRUTS FOR CHAINLINK FENCES

Concrete posts and struts for chain-link fences shall be to B.S. 1722: Part 1, Table 3

CONCRETE POSTS AND STRUTS FOR STRAINED WIRE FENCES

Concrete posts and struts for strained wire fences shall be to B.S. 1722: Part 1, Table 2.

STEEL, ANGLE POSTS AND STRUTS GENERALLY

Steel angle posts and struts shall be to B.S. 1722: Part 1 & 3. Angles shall be to B.S. 4 : Part 1 and B.S. 4360 with ends ragged for casting in and supplied primed with one coat of red oxide to B.S. 2524.

STEEL HOLLOW SECTION POSTS AND STRUTS

Steel hollow section posts and struts shall be to B.S. 1722: Part 1 & 3. Sections shall be to B.S. 4: Part 2 and B.S. 4360 with ragged ends for casting in and supplied primed with one coat of red oxide to B.S. 2524.

STEEL TUBE POSTS AND STRUTS

Steel tubes for posts and struts shall be to B.S. 1775, with ragged ends for casting in and supplied primed with one coat of red oxide to B.S. 2524.

Specifications

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
STEEL ANGLE, HOLLOW SECTION AND TUBE POSTS AND STRUTS FOR CHAINLINK FENCING

Steel angle, hollow section and tube posts and struts for chain link fencing shall be to B.S. 1722: Part 1, Tables 4A and 4B.

TIMBER POSTS AND STRUTS FOR STRAINED WIRE FENCING

Timber posts and struts for strained wire fencing shall be cedar of diameters specified, reasonably straight and free from bark and excessive sapwood with tops cut at a slight angle to shed water. Straining posts shall be notched for struts

GALVANIZED LINE WIRE

Galvanized line wire for chain link fencing shall be to B.S. 4102 of the following diameters:-

- Medium Pattern chain link 3 mm
- Heavy pattern chain link 3.55 mm
- Extra heavy pattern chain link 4 mm

Galvanized line wire for strained wire fencing shall be to B.S. 4102- and 4-mm diameter

GALVANIZED TYING WIRE

Galvanized tying shall be to B.S. 4102- and 2-mm diameter.

GALVANIZED BARBED WIRE

Galvanized barbed wire shall be to B.S. 4102 of two strands of 2.5 mm line wire with barbs of 2 mm point wire at centres not exceeding 90 mm

GALVANISED CHAINLINK

Galvanized chain-link shall be to B.S. 4102: Table 6 of the pattern specified, of 50 mm mesh and of the following wire diameters: -

- Medium pattern chain link 2.5 mm
- Heavy pattern chain link 3 mm
- Extra heavy pattern chain link 3 mm

Specifications
Proposed Space Optimization for Kenya Literature Bureau
Nairobi
EXTENSION ARMS

Extension arms for barbed wire shall be of mild steel to B.S. 1722: Part 1, cranked at 45 degrees and slotted for three strands of barbed wire at centres not exceeding 150 mm.

Arms for concrete steel and, steel and timber intermediate posts shall be of 35 x 6 mm mild steel flat. Arms for concrete and timber straining posts shall be of 50 x 50 x 6 mm mild steel angle. Arms for steel training posts shall be of similar section to the post.

SUNDRIES

Galvanised steel eyebolt strainers and winding brackets shall be to B.S. 1722.

Bolts, nuts and washers shall be ISO metric to B.S. 4190.

Galvanised wire staples shall be to B.S. 1494: Part 2: - 9 s.w.g. x 32 mm.

Black bitumen coating solution shall be to B.S. 3416: Type 1.

PREPARING POSTS

Timber posts shall be drilled for line wire at the height specified, notched for struts in the top third of the exposed pole, and coated at the bottom end with bitumen to a height 300 mm above ground level.

Steel posts and struts shall be drilled for connection by two 10 mm diameter bolts at a point in the top third of the exposed post.

FIXING POSTS

Straining posts shall be provided at all ends and changes of direction or level and in straight runs at intervals not exceeding 50 metres.

Struts shall be fitted to straining post in the direction of each line of fencing. Intermediate posts shall be provided at intervals not exceeding 3 metres.

Post and strut holes shall be excavated not less than 450 x 450 mm on plan: 600 mm deep for fences not exceeding 1400 mm high and 750 mm deep for fences exceeding 1400 mm high.

Concrete bases shall be as specified and not less than half the depth of the postholes.

Wires and fencing shall not exert strain until at least seven days after posts are fixed in bases.

Specifications

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
FIXING LINE WIRES

Lines wires shall be threaded through posts, connected to eyebolt strainers at ends and angles and strained taut to approval.

FIXING BARBED WIRE

Barbed wire shall be slotted into steel extension arms, stapled to timber posts or wired firmly to concrete posts as specified and strained taut to approval.

FIXING CHAIN LINK

Chain link fencing shall be wired firmly to each line wire at horizontal centres not exceeding 600 mm.
LANDSCAPING

GENERAL PLANTING PREPARATION

a) All imported red soil and manure must be free of roots, weeds and debris. Manure is to be dry and well rotted. It must be horse, cow or chicken manure.

b) Remove all stones, branches and debris, etc., from planting areas.

c) All lawn areas should be 15 mm higher than adjacent shrub beds and paved areas.

d) Where possible, all planted areas must slope gently (1% slope) away from built structures unless specified.

e) Grass seedlings/root cuttings must be free of weeds and any other species of grass.

f) Trees and shrubs must be in a healthy condition and free from pests and diseases, with a well-developed root-ball.

LAWN INSTALLATION

a) Remove all natural debris and rocks larger than 40 mm in diameter.

b) Cultivate to a depth of 250 mm to break up large lumps of soil. Mix the imported red soil with black cotton soil in 1:1 ratio (where necessary).

c) Add 15 mm of very dry rotted manure to the surface of the soil and cultivate into the soil to a depth of 150 mm. Add 10gm of general fertilizer DAP per square metre and work into the soil.

d) Grade and rake the surface of the soil to a smooth surface.

e) Plant grass seedlings at a depth of 50 mm, exposing only a small amount of leaf, 100 mm apart.

f) Water thoroughly.

g) Water as required and remove weeds as soon as they appear.

Specifications

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
TREE, SHRUB

a) Excavate a hole not less than 750 mm deep and 900 mm wide for each shrub and 1000 mm deep and 1500 mm wide for each tree. (Where there are several shrubs planted together in a shrub bed, the entire area of the shrub bed is to be excavated). For groundcover, a depth of 300 mm is adequate.

b) Remove soil and prepare a planting mixture as follows:

- 6 parts good red topsoil
- 1 part dry well rotted manure
- 250g general fertilizer (20:20:20) for shrubs and 500g for trees.

c) Water the hole prior to backfilling.

d) Return two-thirds of the soil mixture to the hole and make sure there are no air pockets.

e) Remove plant from Container and place in hole so that the soil mark around the stem of the plant is level with the top of the hole.

f) Add rest of the soil mixture, firming gently.

g) Raise the surface around the rim of the original hole to create a saucer for watering.

h) Water the plant thoroughly.

j) Stake the trees on windward side where necessary.
Warehouse
**Bill of Quantities**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Quantity</th>
<th>Unit</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>200mm thick walls; 3000mm high</td>
<td>75</td>
<td>m2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Allow for making good demolished surfaces</td>
<td>Item</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**SECTION NO. 2**

**WAREHOUSE**

**BILL NO. 1**

**DEMOLITION WORKS**

Notes:

All useable materials arising from the demolitions shall remain the property of the Employer but the Contractor may take away any materials not so required by the Employer and shall allow a credit for the same in the credit column indicating value for all such materials that are reusable. All debris arising therefrom shall be carried away and dumped where directed by the Employer while all reusable materials shall be delivered where directed.

The works shall be executed in such order and sequence as the Architect may direct and as little disruption and inconvenience as possible shall be caused to the client, staff and other users of existing facilities.

Demolitions

*Proposed Space Optimization for Kenya Literature Bureau*

Nairobi
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Quantity</th>
<th>Unit</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>100mm thick solid slab Vibrated Reinforced Concrete Grade 25-20mm gauge in:</td>
<td>123</td>
<td>m2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>100mm thick solid slab Sawn formwork to:</td>
<td>123</td>
<td>m2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Edges of slabs exceeding 75mm but not exceeding 150mm Mesh Reinforcement</td>
<td>193</td>
<td>m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>BRC fabric mesh reinforcement No. A142 weighing 3.95 kgs per square metre</td>
<td>309</td>
<td>m2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>100mm Thick suspended slab consisting of reinforced concrete Class 25 on Gauge 26 Super V profile decking sheets fixed to existing beams with and including all necessary accessories</td>
<td>63</td>
<td>m2</td>
<td></td>
<td></td>
</tr>
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</table>

Carried Forward to Summary of Section No. 2

Frame

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
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<td>SECTION 2</td>
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<td>WAREHOUSE</td>
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<td>BILL NO. 3</td>
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<tr>
<td></td>
<td>WALLING</td>
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<tr>
<td></td>
<td>Gypsum Partitions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gyproc standard dry wall partition system consisting of 50mm steel drywall studs spaced at 450mm centres, clad both sides with one layer of 12mm tapered edge gypsum board with staggered joints between boards, in-filled with 50mm thick rockwool insulation; to be fitted into cavity and fixed with drywall screws spaced at 220mm centres in accordance with the manufacturer's instructions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>76mm thick gypsum partition complete with steel channels/ timber framing internally finished with 12.5mm thick gypsum boards to both sides: tapering to joints to receive skimming and paint (m.s)</td>
<td>m2</td>
<td>118</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aluminium Partitions</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>B</td>
<td>Partition framing in100x45x2mm anodised powder coated approved spacing, aluminium rectangular hollow section frames as &quot;General aluminium fabricators&quot; or equal and approved complete with 8mm thick laminated clear sheet glass infill</td>
<td>m2</td>
<td>111</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Carried Forward to Summary of Section No. 2

Walling

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
<table>
<thead>
<tr>
<th>Item</th>
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<th>Unit</th>
<th>Quantity</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SECTION 2 WAREHOUSE BILL NO. 4 DOORS Toughened Frameless Glass Door</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>10mm thick toughened frameless glass doors with polished edges and fixed with and including stainless steel patch fittings as per manufacturer’s instructions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Single door overall size 900 x 2400mm high: as per details</td>
<td>No</td>
<td>7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Carried Forward to Summary of Section No. 2

Doors
Proposed Space Optimization for Kenya Literature Bureau Nairobi

Kshs
<table>
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<tr>
<th>Item</th>
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<th>Unit</th>
<th>Quantity</th>
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<tr>
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<td><strong>SECTION 2</strong></td>
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<td><strong>WAREHOUSE</strong></td>
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<tr>
<td></td>
<td><strong>BILL NO. 5</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td><strong>FINISHES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mild Steel balustrades and Handrails to terraces and staircase</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>A</strong> 900mm high balustrade consisting of 75mm diameter x 3mm circular</td>
<td>m</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>hollow section, top rail, bottom rail and main balusters at 1000mm centres</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>built into mortice in concrete, 25 x 25 x 2mm intermediate balusters at</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>125mm centres all welded together</td>
<td></td>
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<tr>
<td></td>
<td><strong>Floor Finishes</strong></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Cement and sand (1:3) beds and backing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>B</strong> 32mm thick screed to receive floor finish</td>
<td>m2</td>
<td>319</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>C</strong> 2mm thick to floors</td>
<td>m2</td>
<td>319</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Ceiling Finishes</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Gypsum Board to BS 1230 or other equal and approved</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>D</strong> 12mm decorative moulded suspended gypsum ceiling fixed with and</td>
<td>m2</td>
<td>273</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>including metal hangers</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td><strong>Painting and Decoration</strong></td>
<td></td>
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<tr>
<td></td>
<td><strong>Carried to Collection</strong></td>
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<tr>
<td></td>
<td>Finishes</td>
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<td>Proposed Space Optimization for Kenya Literature Bureau</td>
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</table>
**Bill of Quantities**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Prepare surfaces and apply undercoats and two finishing coats silk vinyl emulsion paint as “Corn Paints” or other approved on plastered masonry or concrete surfaces: to</td>
<td>m²</td>
<td>236</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Gypsum walling</td>
<td></td>
<td>273</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Gypsum ceiling</td>
<td></td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Prepare and apply three coats of gloss paint as “Crown Paints” or other similar and approved on:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>To balustrades</td>
<td></td>
<td>13</td>
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</tbody>
</table>

**Carried to Collection**

**Finishes**

*Proposed Space Optimization for Kenya Literature Bureau*

*Nairobi*
<table>
<thead>
<tr>
<th>Warehouse</th>
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<tbody>
<tr>
<td>Bill No. 5</td>
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<tr>
<td>Finishes</td>
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</table>

**COLLECTION**

<table>
<thead>
<tr>
<th>Page No</th>
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<tbody>
<tr>
<td>198</td>
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<tr>
<td>199</td>
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</tbody>
</table>

Total Brought Forward from Page No.

Carried Forward to Summary of Section No. 2

Finishes

*Proposed Space Optimization for Kenya Literature Bureau*

*Nairobi*
<table>
<thead>
<tr>
<th>Bill No</th>
<th>Description</th>
<th>Page No</th>
<th>Amount Kshs</th>
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<tbody>
<tr>
<td>1</td>
<td>Demolitions</td>
<td>194</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Frame</td>
<td>195</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Walling</td>
<td>196</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Doors</td>
<td>197</td>
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</tr>
<tr>
<td>5</td>
<td>Finishes</td>
<td>200</td>
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</tbody>
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Carried to Final Summary

Proposed Space Optimization for Kenya Literature Bureau
Nairobi
Prime Costs & Provisional Sums
### SECTION NO. 3

**PRIME COSTS AND PROVISIONAL SUMS**

**BILL NO. 1**

**PRIME COSTS**

#### Electrical Installations

A. Provide a Prime Cost Sum of **Kenyan Shillings Thirty-One Million, Seven Hundred and Twelve Thousand Only (Ksh. 31,712,000.00)** for Electrical Installations

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Unit</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td>Item</td>
<td></td>
<td>31,712,000.00</td>
</tr>
</tbody>
</table>

Add for profit (%)

Allow for general attendance on electrical installations

#### Data & Structured Cabling

B. Provide a Prime Cost Sum of **Kenyan Shillings Three Hundred and Ninety-Four Thousand Only (394,000.00)** for Data and Structured cabling Installations

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Unit</th>
<th>Rate</th>
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</thead>
<tbody>
<tr>
<td>B</td>
<td></td>
<td>Item</td>
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<td>394,000.00</td>
</tr>
</tbody>
</table>

Add for profit (%)

Allow for general attendance on for Data and Structured cabling Installations

---

**Carried Forward to Summary of Section No. 3**

- **Kshs**

**Prime Costs**

*Proposed Space Optimization for Kenya Literature Bureau*

*Nairobi*
<table>
<thead>
<tr>
<th>Item</th>
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<tr>
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<td><strong>PRIME COSTS AND PROVISIONAL SUMS</strong></td>
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<td><strong>BILL NO. 2</strong></td>
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<td><strong>PROVISIONAL SUMS</strong></td>
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</tr>
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<td></td>
<td><strong>Temporary Structure</strong></td>
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</tr>
<tr>
<td>A</td>
<td>Allow a Provisional Sum of Kenyan Shillings Two Hundred and Fifty Thousand Only (Kshs. 250,000.00) for the construction of a temporary structure for printing machine’s extractor</td>
<td>Item</td>
<td></td>
<td>250,000.00</td>
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<td>Allow a Provisional Sum of Kenyan Shillings Twenty Thousand Only (Kshs. 20,000.00) for the construction of steel staircase</td>
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<td>Provide for contingencies a Provisional sum of Kenya Shillings Four Million Four Hundred and Fifty Thousand Only (Kshs. 4,450,000.00) be omitted or expended in whole or in part at the discretion of the Architect.</td>
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Proposed Space Optimization for Kenya Literature Bureau
Nairobi
Final Summary
### FINAL SUMMARY

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### TOTAL SUMMARY

*Proposed Space Optimization for Kenya Literature Bureau*

*Nairobi*